The Federation of Fly Fishers (FFF) notes that throughout North America, native fish populations have declined from historical levels due to the cumulative detrimental effects of overharvest, water management, land use practices (agriculture, forestry, mining, etc.), habitat alteration or degradation, past fisheries management practices, and the widespread introduction of non-native fish and other invasive species. Today, the goal of many fisheries management agencies and programs is to preserve or restore native fish species to some portion of their historical native range. These goals have been driven in part by the legal mandates of the Endangered Species Act (ESA) and by the increased value that anglers, fisheries managers, conservation organizations, and other concerned citizens recently have placed on native fishes in native habitats.

The FFF Native Fish Conservation Area Policy, described herein, complements FFF’s existing Native Fish Policy and calls for establishment of a national system of fish conservation areas that would protect core populations of native fish species and the watersheds and aquatic systems upon which they depend. The FFF Native Fish Conservation Area Policy (NFCA Policy) sets forth clear principles to enable FFF members, clubs, and councils to speak with a consistent voice regarding the identification of potential fish refuges and to work constructively with fisheries and resource agencies toward the designation of NFCAs for specific fish species and watersheds. Such a system of conservation areas would protect important biological diversity across fish species, protect natural resource agencies from unnecessary and frivolous ESA petitions, and ensure sustainable public access to the protected species and watersheds in perpetuity.

Policy Elements

1. **FFF supports the establishment of a national system of watershed-level conservation areas intended to protect important native fish species and the aquatic systems upon which they depend.**

   FFF defines a native fish conservation area as an aquatic system at the watershed or sub-watershed level that contains one or more native fish species, where the watershed is managed for the protection and long-term conservation of the native fish species, while

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1 The term “native” refers to indigenous species and forms, and does not include non-indigenous naturally reproducing wild fish. We also use the terms non-indigenous and exotic as synonymous with non-native.

2 We use the term “conservation area” to include other similar terms such as reserve, refuge, preserve, and sanctuary.

3 Watersheds can be defined using the US Geological Survey’s HUC (Hydrological Unit Code) system.
allowing or encouraging an array of human uses that are consistent with the conservation goals of the refuge.

Native fish conservation areas should occur where clusters of genetically intact native fish populations or assemblages of native fish species and high quality habitat coexist.

A system of native fish conservation areas would provide multiple benefits, including

a. providing clean water and clean air at the level of the watershed and airshed,
   b. protecting and conserving native fish communities and thereby reducing the need to list species under the Endangered Species Act, and
   c. providing a conservation legacy for future generations equivalent to National Park and National Wildlife Refuge systems.

The Federation of Fly Fishers recognizes the intrinsic value and biodiversity found in native fish species and the aquatic communities upon which they depend. The Federation also recognizes that human growth and development of natural resources are likely to continue, the climate will change in many areas, and these factors will place increasing pressure on native fish species and their aquatic habitats. Therefore, FFF supports the establishment of a national system of conservation areas that is designed to protect and conserve important native fish species and the aquatic systems in which they exist.

2. **FFF supports a science-based management approach within the proposed fish conservation areas. Management in the conservation areas needs to focus on habitat and watershed protection that maintains or restores the natural ecological processes that support the fishes’ life cycle and promotes the expression of life history diversity within the native fish species.**

The Federation of Fly Fishers supports a management approach for the proposed native fish conservation areas that relies on habitat protection and restoration, control of non-native aquatic and riparian species, and the reintroduction of native species into habitats where they have been extirpated. This approach is consistent with the FFF Native Fish Policy and could result in a limited and case-specific role for artificial production in the restoration of native fish species.

Two critical biological objectives must be achieved for a fish conservation area to meet the goal of sustainability of the intended native fish species and its aquatic ecosystem.

a. Watershed scale processes that create and maintain habitat complexity, diversity, and connectivity must be restored and protected. This may also involve restoring a more complete suite of natural disturbance processes, even though these may appear to have short-term risks.

b. The purpose of watershed scale restoration would be to restore the mosaic of natural habitats necessary for the target species to complete its life cycle, including the potential for expression of multiple life history patterns (e.g., anadromous, adfluvial, fluvial, and resident life history patterns for some species).

3. **FFF recognizes that if native fish conservation areas are to persist and achieve their mutual goals of conservation and sustainability, they must have adequate institutional structure, policies, legal framework, and programs to operate and maintain the aquatic systems as intended.**
A third critical objective – social and institutional in nature, rather than biological – also must be achieved for a fish conservation area to become sustainable. A native fish conservation area must be established by an appropriate process that provides adequate institutional structure, stakeholder commitment, biologically-sound policies, opportunities for stakeholders to participate in monitoring activities, legal framework, stable long-term funding, and documentation that provides guidance for long-term management, monitoring, and periodic program review.

The International Association of Fish and Wildlife Agencies recently developed a model intended to provide a framework for engaging stakeholders in a collaborative process for developing management agreements to address conservation needs of species and their habitats.\footnote{Brogden, Mette. 2001. State Conservation Agreements, Creating Effective Partnerships for Proactive Conservation. International Association of Fish and Wildlife Agencies.} Fundamental to the model was the specific need to maximize management flexibility and benefits to stakeholders and minimize the need for listing and regulation under the ESA. This model could have valuable application for developing the institutional structure for establishing native fish conservation areas.

4. **FFF supports an approach to establishing native fish and aquatic conservation areas that conserves existing life history and genetic diversity in native fish species. Designation of fish conservation areas will need to occur on a case-by-case basis with respect to individual species and site-specific watersheds.**

Using a system of fish conservation areas as a conservation tool to protect important life history and genetic diversity in native fishes demands that the identification and selection of the conservation areas themselves occur within a larger context of information on native fish species’ status and distributions, including measures of life history and genetic diversity. Ideally, the fish species and populations protected in a native fish conservation area should represent an important subset of the biological diversity and evolutionary legacy of the species’ overall diversity.

The process of identifying and designating native fish conservation areas should be a collaborative one involving FFF Clubs and Councils, working with state, federal, and tribal natural resource agencies, as well as other stakeholders and conservation organizations. The identification of potential native fish conservation areas and the subsequent designation of specific watersheds as native fish conservation areas will most likely occur on a case-by-case basis.

The FFF vision is to establish a series of native fish conservation areas across the US, and eventually all of North America, that would systematically protect native fish biodiversity and associated habitats. That vision might best be served if FFF’s initial efforts focused on identifying native fish conservation areas for species and watersheds where existing land use and management practices already provide some measure of protection. One example of such a conservation area exists on Bureau of Land Management (BLM) land in southeastern Oregon, where the Redband Trout Refuge on the Donner und Blitzen River protects an area surrounding 16 miles of the river where all management decisions are reviewed with respect to their effect on redband trout.
Many other *de facto* native fish conservation areas already exist within the large system of federal and Tribal lands in the western and north-central US and in the large private forests and watersheds in the eastern and north-central US. Where ecological attributes are primarily intact, these aquatic systems function as *de facto* conservation areas because of the existing protective land use and fisheries management policies. Examples include Idaho’s Lochsa, Selway, Clearwater, and Middle Fork of the Salmon Rivers (steelhead and westslope cutthroat trout), Yellowstone and Glacier National Parks (Yellowstone and westslope cutthroat trout, respectively), and various watersheds in the desert Southwest where the Rio Grande cutthroat trout and the Apache and Gila trout exist. Opportunities for native fish refuges also occur for brook trout in the spring pond systems in northern Wisconsin, in New Hampshire’s Nash Stream Forest, and in small watersheds in Great Smoky National Park for southern Appalachian brook trout. Conservation area opportunities for warmwater species include the Black bass in Florida’s Suwannee River system and the Guadalupe bass in west Texas.

FFF believes that a logical and feasible first step toward creating a national fish conservation area system may be to focus initially on these and other opportunities where existing management policies already provide a measure of the protection for specific native fish species and their aquatic habitats envisioned in the proposed fish refuge system.

5. **FFF supports multiple use activities within the proposed fish conservation areas, providing such activities are consistent with the conservation goals of the conservation area.**

A central part of the FFF vision for native fish conservation areas is that multiple use activities can be compatible with aquatic conservation goals within the proposed area; however, the primary goal of management should be to restore and maintain ecological processes necessary to maintain the integrity and diversity of aquatic habitats. Within this concept, other uses may be compatible and such practices should be allowed and encouraged.

The FFF envisions a wide range of recreational activities occurring within the proposed fish conservation area such as hiking, camping, boating, fishing, and bird-watching. Some commercial activities may be compatible with sustained persistence of the fish population and its required ecological needs; however other activities may not be.

Consequently, all proposed activities and management decisions for the conservation areas would need to be reviewed with respect to their effect on the native fish species and the aquatic system targeted for conservation. The primary purpose for the fish conservation areas is to protect and conserve the native fish population(s) and its habitats; therefore, decisions regarding compatible uses within the area or watershed must be made with respect to their effects on the fish species. Ongoing and proposed activities may need to be modified or even discontinued depending upon their effect (or potential effect) on the fish species and the watershed.

6. **FFF recognizes and supports the need for special fishing regulations within the proposed native fish conservation areas.**

The Federation of Fly Fishers recognizes that sustained management of many native fish species within the proposed conservation areas will require special fishing regulations that
may include the use of barbless hooks, catch-and-release angling or slot limits / trophy regulations in order to avoid mortality rates that will adversely affect population structure and spawning escapement numbers. For this reason, FFF supports catch-and-release angling for native species as an important component of sustainable management within the proposed system of native fish conservation areas.

7. **FFF supports a variety of implementation strategies to establish a national system of native fish refuges.**

FFF recommends partnering with diverse stakeholders such as the the Fisheries Conservation Foundation, Trout Unlimited, the Western Native Trout Initiative, National Fish Habitat Action Plan, state agencies and private land owners to establish native fish conservation areas. Further, FFF supports the creation of native fish conservation areas in specific locations that may provide additional state agencies with a model to implement new NFCAs. FFF recognizes in areas with limited public land ownership but ideal native fish populations or intact watershed potential, facilitating or guiding private land owners to develop NFCA would be beneficial to native fish populations.

The Federation of Fly Fishers can provide critical leadership, first by supporting a policy statement similar to FFF Native Fish Policy that supports the concept of Native Fish Conservation Areas and describes the critical elements of a fish conservation area, and then by working with key partners to help develop a system of fish conservation areas.

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*Native Fish Sub-Committee*
*FFF National Conservation Committee*
*Federation of Fly Fishers*

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5 Catch-and-release angling incurs a low level of mortality. Much of this mortality can be further reduced through proper playing, handling, and releasing of hooked fish. Anglers should use heavy enough tackle that the fish can be landed as quickly as possible. Handle the fish as little as possible, keeping it in the water; wet hands or net before landing the fish. Use long-nosed pliers or hemostat to back the hook out of the entrance hole. The use of barbless or circle hooks makes it easier to quickly unhook a fish. Hold the fish gently moving it back and forth until it revives and swims from your hands.