



Compatibility Determination - Commercial Fishing on Felsenthal NWR

USE: Fishing (commercial)

REFUGE NAME: Felsenthal National Wildlife Refuge (NWR)

DATE ESTABLISHED: 1975

ESTABLISHING AND ACQUISITION AUTHORITIES:

- 16 U.S.C. 664 (Fish and Wildlife Coordination Act)
- 16 U.S.C. 460k-1 (Refuge Recreation Act)
- 16 U.S.C. 460k-2 (Refuge Recreation Act (16 U.S.C. 460k-460k-4), as amended)

REFUGE PURPOSES:

- "shall be administered by him [Secretary of the Interior] directly or in accordance with cooperative agreements ... and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife, resources thereof, and its habitat thereon" 16 U.S.C. 664 (Fish and Wildlife Coordination Act).
- "the Secretary ... may accept and use ... real ... property. Such acceptance may be accomplished under the terms and conditions of restrictive covenants imposed by donors" 16 U.S.C. 460k-2 (Refuge Recreation Act (16 U.S.C. 460k-460k-4), as amended).
- "suitable for (1) incidental fish- and wildlife-oriented recreational development, (2) the protection of natural resources, (3) the conservation of endangered species or threatened species" 16 U.S.C. 460k-1 (Refuge Recreation Act).

NATIONAL WILDLIFE REFUGE SYSTEM MISSION:

The mission of the National Wildlife Refuge System (Refuge System), as defined by the Refuge System Improvement Act of 1997, is:

... to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.

DESCRIPTION OF USE:

(a) What is the use? Is the use a priority public use?

The use is an existing use of commercial fishing. It is not a priority public use as defined by the Refuge System Improvement Act of 1997. Commercial fishing, including use of any commercial fishing tackle as defined in state regulations, by the public is allowed on portions of the refuge via a special use permit (SUP). Commercial fishing is utilized to remove fish commonly known as rough fish from the refuge streams and oxbow lakes. The species targeted for removal (identified as commercial species by the state) include German carp (*Cyprinus carpio*), silver carp (*Hypophthalmichthys molitrix*), big head carp (*Hypophthalmichthys nobilis*), grass carp (*Ctenopharyngodon idella*), black carp (*Mylopharyngodon piceus*), buffalo (*Ictiobus* spp.), and American paddlefish (*Polyodon spathula*). The five carp species are exotics which, as a group, have impacted and, to some degree, replaced the native fisheries within the refuge and ecosystem. The overly abundant native buffalo occur and are common throughout the U.S. However, the American paddlefish, once common throughout the Mississippi River basin, have seen population declines throughout its range and are classified as endangered, threatened or as a species of concern in several states. U.S. paddlefish population began to decline shortly after commercial harvest of paddlefish peaked around 1900. Currently, only a few southern states still allow the commercial harvest of paddlefish, including Arkansas. However, USFWS efforts have played a critical role in conservation. The National Fish Hatchery System participates in the monitoring and stocking of paddlefish within the U.S. (USFWS), In addition, the commercial take of this species is regulated by the Arkansas Game and Fish Commission.

(b) Where would the use be conducted?

Closed areas, no hunting zones, sanctuaries or other specially designated areas where human disturbance could be detrimental to wildlife may be restricted seasonally to avoid impacts to sensitive wildlife,. The use would be conducted in navigable waters (non-refuge waters) and non-navigable waters (refuge waters) within the boundary of the refuge. Non-refuge and refuge waters can significantly expand in acreage in any particular year with seasonal flooding associated with the Ouachita River. By regulation, all of the refuge, including open waters, are open to the public, except where a portion of the refuge is seasonally closed as a waterfowl sanctuary. Recently, floodwaters expanding from the normal confines of the river have inundated low elevations of the refuge for extended periods, thereby expanding access for commercial fisherman. During normal years, the open water acreage is approximately 15,000 acres. However, only about 5,000 of the 15,000 acres comprising the Felsenthal navigation pool are suitable for commercial fishing due to a shallow, log- and vegetation-choked condition. The Felsenthal navigation pool water level is normally prescribed at 65' mean sea level (msl). With the development of the Habitat Management Plan and Environmental Assessment (EA, USFWS Felsenthal Habitat Management Plan 1985), new objectives were developed to mimic natural flooding regimes. Accordingly, Objective 2.5. Moist Soil/Felsenthal Pool Drawdown - prescribes the drawdown of the Felsenthal Pool every three years. The Pool would be gradually lowered from 65' msl to 64' msl to improve habitat conditions and create an increase in food quality and quantity for waterfowl species. This change in pool levels every three years would likely further restrict the areas navigable by commercial fishermen on a temporary basis. During

periods of extreme flooding, as much as 90 percent of the refuge is inundated with water and at least marginally available to commercial fishing.

(c) When would the use be conducted?

The use would be conducted year-round, except for in the waterfowl sanctuary area that is closed from November through February. The main channel of the Ouachita River and the borrow pits along State Highway 82 are open for commercial fishing year-round.

(d) How would the use be conducted?

An SUP is required to carry out commercial fishing on the refuge. SUPs are obtained by contacting the Refuge Headquarters with a request for a commercial fishing permit. The fee for this use is \$50.00 for those individuals with a current Commercial Fishing License and Sport Fishing License. Those individuals who hold a State Roe Taker/Seller License in addition to commercial fishing permit will be assessed a \$100.00 SUP fee. This use is carried out utilizing motorized or non-motorized boats and commercial fishing tackle, as defined by state regulations. Refuge boat ramps and access areas throughout the refuge are utilized by commercial fishermen.

(e) Why is this use being proposed?

This use is a longstanding, traditional activity for local and regional residents. The use of commercial tackle to catch rough fish and American paddlefish for sale is longstanding. Commitments to continue this use, subject to refuge regulations, were made at public meetings held concerning the establishment of the refuge in the early 1970s. This use was further evaluated with the Comprehensive Conservation Plan (CCP) and EA process in 2010. During this process, commercial fishing was evaluated through appropriate use and compatibility determination processes. The use of commercial fishing on the refuge was determined to be appropriate and compatible.

One of the primary objectives of the refuge and the Refuge System is to remove exotics from refuge waters and to restore native fish populations. Removal of exotic fish populations by commercial fishing is a management practice aimed at reducing the competition and adverse impacts to native species. A reduction in rough fish (mainly exotic) may potentially be an added benefit of reducing turbidity and promoting submerged aquatic vegetation, which benefits aquatic organisms and migratory birds (Richardson and Roy, 1995).

The mandatory 10-year reevaluation date for this use is September 21, 2020. Environmental conditions have changed since the approval of these uses in the CCP/EA—namely, flooding. The timing and severity of flooding of bottomland hardwoods (Ouachita River Basin) have been magnified over the last several years. Flooding of bottomland hardwoods has occurred earlier in the season and has persisted beyond recent historical time periods. This change in environmental conditions expands the areas available to commercial fishing beyond that described in the CCP 2010. However, in our best professional judgement, the impacts of commercial fishing to wildlife resources have likely not changed significantly. Fish and wildlife are more widely dispersed during flooding conditions. Concurrently, waterfowl numbers are often reduced with

less food available due to high water conditions. Recent flooding conditions are not necessarily permanent and, therefore, there is no reason to reassess commercial fishing use within the context of changes to the environment. Thus, further evaluation through an EA and Finding of No Significant Impact is not needed at this time.

AVAILABILITY OF RESOURCES

Resources involved in the administration and management of the use: Staff time to review, manage, and monitor this use occur when the use is required to be reevaluated, when negative impacts are identified, or significant environmental changes have occurred. A small amount of time is also required to administer the program with the issuance of SUPs. Compatibility reevaluations and/or environmental assessments may be required, which would require additional time. Up to now, no issues have been identified that require a non-routine reevaluation or additional EA processes. Refuge staff and refuge law enforcement officers monitor the use in association with their normal duties.

Special equipment, facilities maintenance or improvements necessary to support use: Materials needed to support this use include those used in maintaining access roads, parking areas, gates, roadside pull-offs, signs, and boat launching areas. The use of these facilities is directly related to other existing uses, such as hunting and recreational fishing. Hunting- and fishing-related facilities receive the majority of refuge visits each year. SUPs for commercial fishing average about 15 -30 each year, depending on environmental and commercial conditions. Maintenance costs for signage, road, and boat ramp maintenance for commercial fishing does not reflect an increase for the refuge as this use is the same maintenance required for other existing (approved) priority recreational uses, primarily hunting and recreational fishing. Allowing the use of commercial fishing is consistent with the level of resources available to administer the refuge public use and management programs.

Monitoring costs: This determination is subject to the current public participation level and complexity of refuge programs. This use is ongoing and currently occurs at relatively low levels since it is closely tied to environmental conditions and economic factors. If these two factors shift, the level of activity could potentially increase, requiring the staff to expend significant additional time or resources above that currently expended. If public participation or complexity increases, additional funding for facility improvements may be available from challenge cost-share projects, grant funds, and contributions. Compliance with refuge regulations regarding commercial fishing is handled within the regular duties of the refuge law enforcement officer(s).

Offsetting Revenue: The refuge SUP fee assessed for commercial fishing is currently \$35 and has remained the same price since the early to mid-90s. The current fee will be raised to \$50 for fisherman with standard commercial catch/tackle. Those individuals who hold a Roe Taker/Seller Permit in addition to a commercial fishing license will be assessed an SUP fee of \$100. The increase in fees from previous years is needed because of increases in roe demand, commercial users, and enforcement and administrative burdens.

Summary of Cost Analysis:

Category	Cost
<u>Administration (staff and volunteer time to administer the use)</u>	<u>\$2000</u>
<u>Special equipment, facilities, or improvements necessary to support the use (new construction costs and improvement costs)</u>	<u>N/A</u>
<u>Maintenance costs associated with the use (e.g., trail maintenance and mowing, signing, garbage pickup or sanitation costs, parking areas, road repair or grading, building or structure repair, including blinds, boat ramps, kiosks)</u>	<u>\$7500</u>
<u>Monitoring costs (to assess the effects of the use over time on natural resources and quality of the visitors' experience)</u>	<u>\$1000</u>
<u>Offsetting revenue</u>	<u>\$1300</u>
Total Cost	\$9200

The refuge can cover the costs of this use with existing operating budgets, and the offsetting revenues will be used to ensure the safe administration of the use.

ANTICIPATED IMPACTS OF THE USE:

This is a re-evaluation of an existing use. Commercial fishing was evaluated during the CCP process in 2010 with appropriate use and compatibility determination (CD) documents completed and reviewed by the refuge and regional office (FWS) (USFWS 2010). During the development of the initial CD for commercial fishing, public review of the use occurred prior to the approval of the CCP and EA under the requirements of the National Environmental Policy Act (NEPA). A Finding of No Significant Impact was issued September 21, 2010. Thus, the use of commercial fishing was fully described, evaluated, and approved in 2010 with the completion of the CCP and EA.

Short-Term and Long-Term Impacts:

The primary short-term impact is the removal of exotic, non-game rough fish. The program involves reducing numbers of these fishes (because eradication is not feasible) and reducing their negative impacts to aquatic habitats and sport fishes. Studies completed on carp (rough fish) removal on various water bodies have shown positive effects for sport fishery populations. At Lake Mattamuskeet in North Carolina, the removal of carp was shown to have positive effects on the sport fishery and an improvement in water quality and submerged aquatic vegetation (Cahoon 1953). Another study on the effects of removing carp at East Okoboji Lake in Iowa (Rose and Moen 1953) found that this led to increases in game fish and higher catch rates. The effects of commercial netting on sport fish (Timmons et al. 1989) found that commercial types of seine netting had little impact on game fish. A study conducted on the impacts that carp have on the aquatic environment (King and Hunt 1967) determined that the growth of submergent vegetation was retarded with high populations of carp through actions of uprooting and feeding.

Although the type of commercial tackle permitted under state and refuge regulations is designed to reduce non-target capture, occasionally non-target species, such as certain sport fishes, turtles, or even to the lesser degree, alligators, could be captured. Any mortality, however, is considered

minor and not a detriment to the non-target species. There is no expected long-term adverse impact to habitat or native fish and wildlife populations.

The largest disturbance with commercial fishing is likely related to the use of boating. Boating has been shown to disturb wildlife through noise and movement (Knight and Cole, 1995). Wildlife disturbance and impacts from boating, which is a tool used in commercial fishing is covered under a recreational boating Compatibility Determination and has been determined to be appropriate and compatible. This use and the subsequent disturbances will be regulated through issuance of Special Use Permits. Commercial fishing has been ongoing since 2010, though the number of visits may be reduced due to recent flooding conditions (best professional judgement). Commercial fishermen have almost year-round access to 5,000-15,000 acres of the refuge, depending on water levels. These large areas normally provide wildlife with much-needed isolation for feeding and resting. To add additional protection for wildlife, a waterfowl sanctuary has been established by regulation and signage to provide waterfowl and other wildlife with an undisturbed area that is seasonally closed to the public.

Numerous studies have been completed that examine the effects of boating on wildlife resources (Klein, Humphrey, and Percival 1995). A classic case illustrating the conflicts between boaters and waterfowl was described in “Wildlife Values Versus Human Recreation: Ruby Lake National Wildlife Refuge” (Bouffard 1982). In this study, it was determined that recreational boating had a significant negative impact on nesting waterfowl. Changes in boating regulations were implemented to reduce impacts to nesting waterfowl. The U.S. Fish and Wildlife Service (Service) Waterfowl Management Handbook 13.2.15 contains a section on “Human Disturbances of Waterfowl: Causes, Effects, and Management (Korchegen and Daulgren 1992). Boating was identified as a disturbance to waterfowl primarily through noise and rapid movement. Further, this disturbance was noted to have impacts on waterfowl migration patterns. A similar refuge environment to Felsenthal NWR is the Upper Mississippi River NWR. A report on disturbance of waterfowl by boaters on the Upper Mississippi River (Rasmussen and Simpson 2010) determined that boating disturbance caused increased energy expenditures by waterfowl. Waterbird behavior and the effects from motorized boating were studied (Rodgers and Schwikert 2002) with a determination that adverse behavior varied by species. In this study, buffer areas were suggested to be 180 meters for wading birds to reduce impacts.

The degree of wildlife disturbance varies with the species, time of year, behavioral activity, level of visitation, boat type, boat operator, and the juxtaposition between boaters and wildlife. Therefore, the refuge expects that commercial fishing will have direct short-term and long-term impacts on wildlife using the refuge, but disturbance should be minimal because of the relatively small number of active commercial fishing permits issued annually by the refuge. The level of use, however, is not automatically tied to the number of SUPs issued. Weather and economics are important factors in the numbers of visits each year to the refuge by commercial fishermen. Short-term impacts are immediate responses to disturbance from boating. Many of these disturbances include temporary disturbance to waterfowl and other waterbirds. Birds may move to other areas of the refuge to seek refuge, expending unnecessary energy. Nesting disturbance to Bald eagles has also been linked boating and fishing activity. However, bird responses are short-term and typically recolonize after disturbance (York, 1994) Long-term impacts may occur with changes in habitat usage with regular daily disturbances. If chronic, long-term disturbance could

result in permanent relocation or habitat use changes from wildlife may occur. This could result in the movement of rookeries, change in habitat and nesting locations (Knight and Cole 1995). However, these impacts may be minimized because of the relatively large area of water available and the diverse access locations distributed throughout the refuge and availability of sanctuary.

Waterfowl are a priority species of management concern for the refuge. Thus, a waterfowl sanctuary has been established by regulation to protect waterfowl during the winter. This sanctuary also provides undisturbed areas for waterbirds, the Bald eagle, and other important migratory birds. Sanctuary areas are designated through regulation, signage, and monitored by law enforcement to allow waterfowl to have undisturbed access and sanctuary conditions on these areas during critical winter months. Objectives for waterfowl and waterbirds are described in the 2010 CCP/EA. Objectives for habitat are described in the 2015 Habitat Management Plan.

Commercial Fishing is an important management tool to reduce the presence of exotic fish, to promote native sport fisheries, and to reduce damage to aquatic vegetation. Commercial harvest of exotic fish should enhance water quality and survival of native fishes and other fish species that are considered more desirable to sport anglers (perhaps increasing recreational fishing opportunities), contribute local economic benefits from a sustainable resource, and provide table fare for users and non-users of the refuge.

Cumulative Impacts:

Other uses that could influence cumulative effects include other fishing uses, waterfowl hunters, and boating enthusiasts. Conflicts and increased disturbance could arise with additional commercial fishing use such as increased boat access at boat ramps. However, of the 30,000 visits from boating-based users annually, commercial fishing users only account for 0.03% of the total use (RAPP data, 2020).

Because of its minimal use, when combined with other refuge uses, commercial fishing is not expected to significantly impact native plants, wildlife, or their habitats; cultural resources; other refuge resources; the biological integrity, diversity, and environmental health of the refuge and the Refuge System; priority public uses; other public uses; or public safety. This use may have an indirect effect on other recreational users, such as hunters, fishermen, and visitors engaged in wildlife observation in close proximity to commercial fishing activities.

As mentioned, any negative impacts to the refuge will be negligible and short-lived, while the positive impacts will be improved water quality, increased game fish populations, enhanced quality of fisheries habitat, and increased appreciation of the refuges by the public, which may result in greater support for refuge management programs. Refuge staff will monitor this use to quickly identify any changes that might lead to significant adverse impacts to wildlife and habitat. If found, refuge staff will reevaluate this use and consider implementing additional measures to reduce wildlife impacts.

PUBLIC REVIEW AND COMMENT:

A Notice of Availability for Comment on the Draft CD for Commercial Fishing was posted at Felsenthal NWR headquarters and visitor center for public review and comment for a period of 15 days starting on [February 25, 2021](#) and ending at close of business on [March 5, 2021](#). Copies of the Draft CD were also made available to the public at the Refuge office and an information bulletin announcing the availability of the documents for public review and comment were provided to local newspapers. A copy of the Notice of Availability and Draft CD were also posted on the refuge website.

DETERMINATION (CHECK ONE BELOW):

USE IS NOT COMPATIBLE

USE IS COMPATIBLE WITH FOLLOWING STIPULATIONS

NEPA Compliance for Refuge Use Decision: Place an X in appropriate space.

Categorical Exclusion without Environmental Action Statement

Categorical Exclusion and Environmental Action Statement

Environmental Assessment and Finding of No Significant Impact

Environmental Impact Statement and Record of Decision

This CD can be categorically excluded from further NEPA analysis under 40 CFR §1508.4, and the following [DOI and/or FWS Categorical Exclusions](#):

516 DM 8, 8.5 (7) Minor changes in the amounts or types of public use on Service or state-managed lands, in accordance with existing regulations, management plans, and procedures.

Further, the actions do not trigger an extraordinary circumstance as outlined under 43 CFR §46.215. The commercial fishing is consistent with the 2010 CCP and associated EA (USFWS 2010) and Finding of No Significant Impact (USFWS 2010) for the refuge. Environmental conditions for commercial fishing have not changed substantially since that analysis. This CD updates and replaces the 2010 CD for commercial fishing.

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

1. Effective enforcement of refuge regulations and state and Federal boating regulations.
2. Fishing for commercial purposes or with commercial tackle requires a refuge SUP.
3. Commercial fishing is open year-round on navigable waters and from September 30 – May 1 on non-navigable waters. Navigable waters include the main channel of the Ouachita River and Highway 82 borrow pits. Exception: Waterfowl sanctuary areas are closed to all public from November through February.

4. Fishermen must meet all local, state, and Federal license/permit requirements and comply with all regulations.
5. Refuge staff will periodically review the level of use and revise the conditions under which this activity can be continued and discontinue this activity, if necessary, to eliminate significant impacts.
6. Gill and trammel nests must be checked daily and any non-target species must be released.

LITERATURE CITED:

- Bouffard, S. H. 1982. Wildlife values versus human recreation: Ruby Lake National Wildlife Refuge. Kenneth Sabol (ed.). U.S. Fish and Wildlife Service. Transactions of the Forty-Seventh North American Wildlife and Natural Resources Conference.
- Cahoon, W. G. 1953. Commercial carp removal at Lake Mattamuskeet, North Carolina. *The Journal of Wildlife Management*, 17(3):312-317.
- King, D. R. and Hunt, G. S. 1967. Effect on carp on vegetation in a Lake Erie Marsh. *The Journal of Wildlife Management* 31(1):181-188.
- Klein, M. L., Humphrey, S. R., and Percival, H. F. 1995. Effects on ecotourism on distribution of waterbirds in a wildlife refuge. *Conservation Biology*, 9(6):1454-1465.
- Knight, R. L, and Cole, D. N.1995. Wildlife Responses to Recreationist: Coexistence Through Management And Research, 51-56.
- Korchegen, C. E., and Daulgren, R. B. 1992. Human disturbances of waterfowl: causes, effects, and management. U.S. Fish and Wildlife Service, Waterfowl Management Handbook 13.2.15.
- Rasmussen, H., and Simpson S. 2010. Disturbance of waterfowl by boaters on Pool 4 of the Upper Mississippi River National Wildlife Refuge. *Society and Natural Resources*, 23(4):322-331.
- Rodgers, J. A. Jr., and Schwikert, S. T., 2002. Buffer-zone distances to protect foraging and loafing waterbirds from disturbance by personal watercraft and outboard powered boats. *Conservation Biology*, 16(1):216-224.
- Rose, E. T. and Moen T. 1953. The increase in game-fish populations in East Okoboji Lake, Iowa, following intensive removal of rough fish. *Transactions of the American Fisheries Society*, Vol. 82, Issue 1, pp. 104-114.
- Timmons, T. J., Hoffnagle, T., Hale, R. S., and Soldo, J. S. 1989. Incidence of sport fishes in the commercial catch from Kentucky Lake, Kentucky and Tennessee. *North American Journal of Fisheries Management*, 9(2):209-212.

- York, Darryl. 1994. Recreational Boating Disturbances of Natural Communities and Wildlife: An Annotated Bibliography.
- U.S. Fish and Wildlife Service (USFWS). 1983. Felsenthal National Wildlife Refuge Fishery Management Plan. Atlanta, GA.
- U.S. Fish and Wildlife Service. 2010. Felsenthal and Overflow National Wildlife Refuges Comprehensive Conservation Plan/Environmental Assessment. Atlanta, GA.
- U.S. Fish and Wildlife Service. 2015. Felsenthal National Wildlife Refuge Habitat Management Plan/Environmental Assessment. Atlanta, GA.
- U.S. Fish and Wildlife Service. 2020. Felsenthal National Wildlife Refuge Refuge Annual Performance Planning. Atlanta, GA.

