

Boating (Motor and Human-Powered) Draft Compatibility Determination

Title

Draft Compatibility Determination for Boating (Motor and Human-Powered) on Tensas River National Wildlife Refuge

Refuge Use Category

Boating

Refuge Use Types

Boating (Motor and Human-Powered)

Refuge

Tensas River National Wildlife Refuge (NWR, refuge)

Refuge Purposes and Establishing and Acquisition Authorities

In an effort to conserve the largest privately owned tract of bottomland hardwoods remaining in the Mississippi Delta, Congress authorized the Secretary of the Interior to establish the Tensas River NWR by Public Law 96-285 on June 28, 1980. Tensas River NWR was established for various purposes:

“For the preservation and development of the environmental resources ... to conserve the diversity of fish and wildlife and their habitat ... for the conservation and development of wildlife and natural resources, the development of outdoor recreation opportunities, and interpretative education,” and “to give special consideration to management of the timber on the refuge to insure [ensure] continued commercial production and harvest compatible with the purposes for which the refuge is established and the needs of fish and wildlife which depend upon the dynamic and diversified hardwood forest” (94 Stat. 595, dated June 28, 1980);

“For the development, advancement, management, conservation, and protection of fish and wildlife resources” [16 U.S.C. 742f(a)(4)] “for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude” [16 U.S.C. 742f(b)(1) (Fish and Wildlife Act of 1956)];

“For conservation purposes” [7 U.S.C. 2002 (Consolidated Farm and Rural Development Act)]; and

“To conserve (A) fish or wildlife which are listed as endangered species or threatened species or (B) plants” [16 U.S.C. 1534 (Endangered Species Act of 1973)].

National Wildlife Refuge System Mission

The mission of the National Wildlife Refuge System, otherwise known as Refuge System, 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 (Pub. L. 105-57; 111 Stat. 1252).

Description of Use

Is this an existing use?

Yes. This Compatibility Determination (CD) reviews, updates, and replaces the 2009 CD for boating that was included in the Tensas River NWR Comprehensive Conservation Plan (USFWS 2009).

What is the use?

Motorized boating is travel by boat powered by fossil fuel or electricity (including solar powered). Human-powered boating is travel by canoe, kayak, raft, rowboat, paddleboard, or similar boat propelled through the water by oars, paddles, poles, or other human-powered devices. Boating is not a priority public use as defined in the Refuge System Improvement Act of 1997, but it improves access for four out of six the priority wildlife-dependent uses: hunting, fishing, wildlife observation, wildlife photography, environmental education and interpretation (U.S. Fish and Wildlife Service [USFWS] 2009).

Is the use a priority public use?

No

Where would the use be conducted?

Boating occurs in all accessible water bodies on the refuge. The Tensas River and many sloughs, creeks, and oxbow lakes provide diverse aquatic habitats for fishing and hunting opportunities. Popular fishing areas include Rainey, Africa and Little Bear Lakes as well as the Tensas River. Rainey Lake has a developed fishing pier and mechanical and chemical treatments have been used to improve boat access and

fishing opportunities in this area. There is an unimproved boat launch site located near the Rainey Lake Fishing Pier. The Ben Lilly Boat Ramp by New Bridge is a popular area to access the Tensas River. Africa Lake has a concrete boat ramp, which allows easy access to the lake. Entry on all or portions of individual areas may be temporarily suspended by posting upon occasions of unusual or critical conditions affecting land, water, vegetation, wildlife populations or public safety. Fee title acres within the acquisition boundary have increased from 74,622 acres when the CCP was approved in 2009 to 77,868 acres today. The additional acres will not substantially increase boating opportunities.

When would the use be conducted?

Motorized and human-powered boating is allowed year-round on the refuge in accordance with state and refuge-specific regulations. The refuge is accessible from 4 am until 2 hours after legal sunset every day during hunting season but closed at night except for raccoon and frog hunting. Outside of hunting season, the refuge is open from one hour prior to sunrise until one hour after sunset. Peak boating use occurs from November through April in conjunction with optimal hunting and fishing conditions.

How would the use be conducted?

Tensas River NWR had 198 boat launches recorded in 2021 (USFWS RAPP 2022). Those boat users may be accessing the refuge for fishing, hunting, wildlife observation, or other approved recreational activities on the refuge. A Self-Clearing Daily Visitor Registration Permit is required for all boat users who park a vehicle and/or launch anywhere on the refuge. This permit can be obtained at refuge entry points and at the Visitor Center. Refuge staff maintain parking lots, boat ramps and piers. If hunting or fishing occurs in conjunction with boating, the Annual Public Use Permit (USFWS 2021a) is required as well.

Visitors provide their own boats, life jackets, and other equipment. State boating regulations apply. Boats may not be left overnight on the refuge. We allow human-powered boats, electric motors, and outboard motors not greater than 10 HP to be operated in all refuge lakes, streams and bayous with the exception of Indian Lake and the Tensas River. Outboard motors greater than 10 HP may be used in Indian Lake and the Tensas River according to state regulations. Vehicles and trailers used for hauling boats must be parked in parking lots.

Why is this use being proposed or reevaluated?

Boating is being reevaluated pursuant to the National Wildlife Refuge System Improvement Act of 1997 (603 FW 2.11 H, USFWS 2000). While boating is not a priority

public use, boating provides access to fishing, hunting, wildlife observation and photography, which are priority public uses. Boating supports the refuge's Visitor Services Goal D: "Develop and implement a quality, compatible wildlife-dependent public use program that leads to a greater understanding and appreciation of the natural resources found in the Tensas River Basin" (USFWS 2009). Vehicular access is limited on the refuge due to frequent flooding, heavy clay soils, lack of road infrastructure and the Tensas River itself. Due to the lack of roads throughout the refuge, boating allows access to otherwise inaccessible areas.

Availability of Resources

The analysis of cost for administering and managing each use will only include the incremental increase above general operational costs that we can show as being directly caused by the proposed use. Adequate resources (including financial, personnel, facilities, and other infrastructure) exist or can be provided by the Service or a partner to properly develop, operate, and maintain the use in a way that will not materially interfere with or detract from fulfillment of the refuge purposes and the System mission.

One-time costs:

- **Facilities**- New construction costs of the Africa Lake and Ben Lilly Boat Ramps total \$10,000.

Annual/recurring expenses:

- **Administration and Management** - A Full Time Equivalent Employee (FTE) refuge manager and wildlife biologist spend 40 hours per year (\$2,500) collectively to interact with boat users and answer questions regarding water levels and access points.
- **Maintenance** - Every 3 to 5 years the annual maintenance costs may increase in order to provide gravel for parking lots and roads and to replace signs. Maintenance of existing boat ramps and roads and trails leading to boat ramps is necessary to maintain access. Estimated cost would be on average \$6,000-\$8,000 every 3-5 years in order to maintain these public use areas. Staff hours would equal approximately 60 hours of a FTE wage grade employee's time annually (\$2,700) to maintain the boat ramps and parking lots for boating access.
- **Monitoring** - Costs are minimal to monitor consequences of the public having boating access to the refuge. Monitoring of littering and vandalism are two

refuge duties associated with this use. Two FTE law enforcement officers spend approximately 520 hours/year (\$27,000) to monitor boating use.

- **Special Equipment** – A hydraulic bucket boat has been used in the past to clear aquatic vegetation from the unimproved boat ramp at Rainey Lake. This costs \$20,000 to initially clear the lake of vegetation.
- **Improvements to Support the Use** – The implementation of boat ramps at Rainey Lake and Indian Lake would increase boating use on the refuge. Current staffing levels preclude refuge staff from implementing ramps at this time, but outside funding sources through grants, state agencies or the Tensas River Refuge Association could support this use. Projected ramp construction costs in these two areas would total \$10,000.

Offsetting Revenue:

- The Annual Public Use Permit (USFWS 2021a) costs 20 dollars and provides recreation fee funding which may be used to maintain trails, boat ramps and parking lots to facilitate boat use. This permit generates \$80,000-100,000 dollars annually.

Anticipated Impacts of the Use

Potential impacts of a proposed use on the refuge's purposes and the Refuge System mission

This use was previously approved in the refuge CCP and associated Environmental Assessment (EA, USFWS 2009a,b). Furthermore, the Intra-Service Section 7 for the CCP supports the CCP's Finding of No Significant Impact (USFWS 2009a). As stated above, the use supports the goals of the refuge's visitor use program and further supports the mission of the National Wildlife Refuge System by providing access to the natural resources conserved for the American people.

Short-term impacts

Boating is restricted to the river and its tributaries and backwaters. Access is typically by a couple of individuals per boat. Short-term impacts may include wildlife disturbance, disturbance of vegetation (especially submerged vegetation), reduced water quality and pollution.

Motor boat disturbance to waterfowl varies among species and with the speed and actions of the boat. Motor boating has been documented to cause negative disturbance impacts to a variety of waterfowl species, as described in the following examples (Korschgen and Dahlgren, 1992). Disturbances during critical

times of the nesting cycle eventually cause ducks to nest elsewhere or not to nest at all. In Maine, American black ducks and ring-necked ducks did not nest under conditions of excessive human disturbance. Mallards at the Seney NWR in Michigan failed to nest in areas open to fishing. Disturbance from observers caused a 10% nest abandonment rate by mallards using artificial nest baskets in an Iowa study. In northern Maine, American black duck and ring-necked duck broods averaged two fewer ducklings because of mortality from disturbance by motorboats. On Navigation Pool 7 of the Upper Mississippi River, an average of 17.2 boats passed through the study area each day, resulting in 5.2 disturbances per day and a minimum of over 4 minutes of additional flight time per disturbance of waterfowl. The highest waterfowl use occurs in moist soil impoundments not accessible by boat; therefore, disturbance to waterfowl through this use is negligible.

Boating disturbance may cause nest abandonment, increase predation on young and subject young birds to environmental stress. The disturbance can result in increased energy expenditures from avoidance flights and decreased energy intake due to interference with feeding activity. This is important to species survival, especially with wintering waterfowl. Five boating disturbances a day increased energy expenditure of canvasbacks, suggesting that canvasbacks would need to consume an additional 75 kcal/day to compensate for energy lost due to disturbance (Korschgen, et. al 1985). Wintering waterfowl require energy stores for spring migration to their breeding grounds and reproduction (Ankney and MacInnes 1978). The Greenlea Unit is closed to waterfowl hunting to provide sanctuary and usually holds the largest number of wintering waterfowl on the refuge. This unit is not accessible by boat; therefore, disturbance to large populations of wintering waterfowl from this use is not possible.

Boats may impact macrophytes either directly, through contact with the propeller and boat hull, or indirectly through turbidity and wave damage. Propellers can chop off plant shoots and uproot whole plants if operated in shallow water. Increased turbidity from boat activity may limit the light available for plants and limit where plants can grow. Increased waves may limit growth of emergent species. Finally, boats may transport non-native species, such as water hyacinth, from one body of water to another (Asplund 2000).

Pollution is a potential negative impact associated with boating use. Federal air quality standards have prompted all 2-stroke engine manufacturers, including traditional outboard motors, to reduce air emissions by 75% by the year 2025. Most manufacturers have transitioned to cleaner burning 2-stroke engines. Four-stroke engines, which use fuel more efficiently, produce cleaner exhaust, and run more quietly than traditional 2-stroke engines, are replacing them (Asplund 2000).

Continued monitoring for significant disturbance during critical times or with large groups of birds will allow the refuge to determine if additional regulations are needed if use increases. Boating is currently not allowed in areas established for waterfowl sanctuary; therefore, disturbance is negligible. Any unreasonable harassment would be grounds for the manager to close the area to these uses or restrict the uses to minimize harm (USFWS 2009). Other short-term impacts include littering and fuel spills degrading water quality. Due to the disconnected nature of water bodies small size and lack of boat ramps, most boating use is human-powered. Fishing pressure is minimal (only approximately 250 visits annually); therefore, effects on air and water quality are minimal from outboard motor use.

Long-term impacts

Long-term impacts to natural resources may occur from boating. Permanent changes in habitat use by wildlife may occur with regular daily disturbances. Negative responses from wildlife due to human disturbance can include, but are not limited, to:

- permanent disappearance of migratory bird species or individuals that are unable to adapt to the presence of people by habituation,
- increased nest predation due to the continued flushing of birds from their nests,
- change of patterns of behavior due to repetitive flushing,
- increase of energy demands for wildlife fleeing from human disturbance, and
- variation in feeding behavior (Burger and Gochfeld 1998).

Shoreline erosion may affect water clarity in near shore areas, shading submerged aquatic plants as well as providing nutrients for algal growth. It can interfere with fish use of shallow water habitat, as well as wildlife use of the land-water edge. Waves or wake produced by boats is the primary factor by which boats can influence shoreline erosion (Asplund 2000).

Asplund and Cook (1997) documented a negative relationship between boat traffic and submerged aquatic plant biomass in a variety of situations. The primary mechanism appears to be direct cutting of plants, as many have noted floating plants in the water following heavy boat use. Scouring of the sediment, uprooting of plants, and increased wave activity may also be factors. Where frequent boat use has created channels or tracks, it was noted that these scoured areas persist for several years.

The biggest problem with boating use is littering and leaving boats on the refuge. This will continue to be handled with law enforcement and refuge staff for cleanup. While wildlife disturbance by recreational boating activity is expected, many adverse impacts are minimized by prohibiting boat motor horsepower to 10 or less and

strategically implementing boat ramps distant from established waterfowl sanctuaries. Horsepower restrictions exist for motorboats to minimize erosion and wildlife disturbance. Zoning of visitor activities by time and space, proper monitoring, and educating visitors and enforcement will ensure compatibility with the purposes of the refuge and mission of the Refuge System. Uses including research activities, wildlife observation and photography are usually conducted on terrestrial sites; therefore, conflicts are inherently minimized due to location. Most research activities are conducted in the summer when boat use is minimal. Boating could interfere with hunters utilizing areas near water bodies, but the isolated nature and size of water bodies on the refuge limits boating access and the potential for negative interactions.

This use will be monitored and if impacts are determined to be detrimental to important natural resources, actions will be taken to reduce or eliminate those impacts. Adverse long-term impacts are not expected, especially since the use has been ongoing and negative impacts have not previously been documented. Beneficially, allowing boating on the refuge allows people to connect with nature, thus fostering an appreciation of and public support for the refuge, the Refuge System, and natural resources as a whole.

Public Review and Comment

The draft CD will be available for public review and comment for 14 calendar days from May 3, 2022 to May 17, 2022. The public will be made aware of this comment opportunity through the refuge website (https://www.fws.gov/refuge/tensas_river/) and Tensas River Refuge Association Facebook page (<https://www.facebook.com/trrapage/>). A hard copy of this document will be posted at the Refuge Headquarters and Visitor Center (2312 Quebec Rd., Tallulah, LA 71282). It will be made available electronically on the refuge website. Please let us know if you need the documents in an alternative format. Concerns expressed during the public comment period will be addressed in the final CD.

Determination

Is the use compatible?

Yes

Stipulations Necessary to Ensure Compatibility

- Motorized land vehicles are to remain on designated roads only.
- Camping and fires are prohibited.
- No equipment (blinds, stands, boats, vehicles, etc.) may be left overnight.
- Harassment of wildlife and excessive damage to vegetation is prohibited.

- Outboard motors not greater than 10 horsepower are allowed to be operated in all refuge lakes, streams and bayous.
- Personal flotation devices must be worn by all occupants of motor boats that are under power on the refuge.
- If any adverse impacts occur from any aspect of the limited public access, then further restrictions may be imposed to protect the plant and animal resources of the refuge.
- The Self-Clearing Daily Visitor Registration Permit is required to operate a boat on the refuge. If engaged in hunting or fishing activities while operating a boat, the Annual Public Use Permit (USFWS 2021) is required as well.
- Boaters on the refuge must follow all state boating regulations.

Justification

Outdoor recreational activities provide individuals with quality wildlife-dependent experiences and educational opportunities and allow them to use a natural environment. Motorized and human-powered boating for fishing, hunting, wildlife observation and photography are a low impact and low cost activity on Tensas River NWR. The majority of boat use on the refuge is human-powered, and fishing pressure is minimal. The low number of access points, including boat ramps, and outboard restrictions of no more than 10 hp limit the widespread use of outboard motors so impacts to air and water quality should be minimal.

Boating supports wildlife-dependent public use activities on the refuge and does not materially detract or interfere with the purposes of the refuge or mission of the Refuge System. Additionally, this use helps meet the Refuge's CCP objective (USFWS 2009) to provide wildlife-dependent recreation opportunities where compatible and promote an appreciation of fish and wildlife resources. The associated disturbance to wildlife and habitat is temporary and minor.

The proposed use can be categorically excluded from further National Environmental Policy Act (NEPA) analysis under 40 CFR 1508.4 (definition of categorical exclusion) and

516 DM 8.5 B (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, this action does not trigger an extraordinary circumstance as outlined under 43CFR§46.215. Boating has been found to be appropriate and compatible on Tensas

River NWR, and this use is consistent with the 2009 EA and final CCP for Tensas River NWR (USFWS 2009a, 2009b). The environmental conditions and use have not changed substantially since the previous NEPA analysis and decision in 2009 (USFWS 2009). This CD updates and replaces the previous 2009 CD.

Literature Cited/References

- Ankney, C. D., and C. D. MacInnes. 1978. Nutrient Reserves and Reproductive Performance of Female Lesser Snow Geese. *The Auk*, 95(3) 459-471. <https://doi.org/10.1093/auk/95.3.459>.
- Asplund, T. R., and C. M. Cook. 1997. Effects of motor boats on submerged aquatic macrophytes. *Lake and Reserv. Manage.* 13(1): 1-12.
- Asplund, T.R., 2000. The effects of motorized watercraft on aquatic ecosystems. Wisconsin: Wisconsin Department of Natural Resources.
- Braun, C. E., K. W. Harmon, J. A. Jackson, and C. D. Littlefield. 1978. Management of national wildlife refuges in the United States: its impacts on birds. *The Wilson Bulletin*, 90(2), 309-321.
- Burger, J., and M. Gochfeld. 1998. Effects of ecotourists on bird behaviour at Loxahatchee National Wildlife Refuge, Florida. *Environmental Conservation*, 25:13-21.
- Korschgen, C. E., L. S. George, and W. L. Green. 1985. Disturbance of diving ducks by boaters on a migrational staging area. *Wildlife Society Bulletin*, 13, 290-296.
- Korschgen, C. E., and R. B. Dahlgren. 1992. 13.2.15. Human disturbances of waterfowl: causes, effects, and management. *Waterfowl Management Handbook*. 12. <https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1011&context=icwdmwfm>
- U.S. Fish and Wildlife Service. 2000. Part 603 FW 2: National Wildlife Refuge System Uses--Compatibility. *Fish and Wildlife Service Manual*. Division of Conservation Planning and Policy. <https://www.fws.gov/policy/603fw2.html>
- U.S. Fish and Wildlife Service. 2009a. Tensas River National Wildlife Refuge Comprehensive Conservation Plan. October 2009. U.S. Fish and Wildlife Service, Southeast Region. Atlanta, GA. <https://www.fws.gov/uploadedFiles/Tensas%20River%20NWR%20Final%20CCP.pdf>
- U.S. Fish and Wildlife Service. 2009b. Tensas River National Wildlife Refuge Draft

Comprehensive Conservation Plan and Environmental Assessment. U.S. Fish and Wildlife Service, Southeast Region. Atlanta, GA.

U.S. Fish and Wildlife Service. 2021a. Tensas River NWR Annual Public Use Permit 2021/2022. U.S. Fish and Wildlife Service, Southeast Region. Atlanta, GA. https://tensas.isportsman.net/annual_permit.aspx

U.S. Fish and Wildlife Service. 2021b. Tensas River NWR Public Use Regulations Brochure 2021/2022. U.S. Fish and Wildlife Service, Southeast Region. Atlanta, GA. <https://www.fws.gov/southeast/pdf/regulations/tensas-river-national-wildlife-refuge-hunt.pdf>

Signature of Determination

Refuge Manager Signature and Date

Signature of Concurrence

Assistant Regional Director Signature and Date

Mandatory Reevaluation Date