

Draft Compatibility Determination

Title

Draft Compatibility Determination for Wildlife Observation and Photography
(commercial) on
Big Lake National Wildlife Refuge

Refuge Use Category

Wildlife Observation and Photography

Refuge Use Type(s)

Wildlife observation (commercial)

Refuge

Big Lake National Wildlife Refuge

Refuge Purpose(s) and Establishing and Acquisition Authority(ies)

Big Lake NWR, located near the town of Manila in Mississippi County, Arkansas, was established in August 1915, by Executive Order of President Woodrow Wilson, to serve as a reserve and breeding ground for native birds. It is one of the Nation's oldest inland refuges and encompasses 11,038 acres. The New Madrid earthquakes of 1811 -- 1812 changed the Big Lake area from a free-flowing river system to its present lake/swamp environment. An extensive network of ditches in the Missouri bootheel drains approximately 2,500 square miles of farmland directly through the refuge. Big Lake NWR also administers two Farm Service Agency tracts and one conservation easement. The French Tract is located in Greene and Lawrence Counties and contains 108 acres. The French easement is also located in Greene County and encompasses 18 acres. The Craighead tract is located in Craighead County and contains 42 acres. Management activities target water, waterfowl, wetland, forestry, wilderness stewardship, and compatible wildlife-dependent recreation.

Big Lake NWR's official purposes are:

"...as a refuge, reserve, and breeding ground for native birds" (Executive Order 2230, dated August 2, 1915).

"...for use as an inviolate sanctuary, or for any other management purposes, for migratory birds." 16 U.S.C. 715d (Migratory Bird Conservation Act).

To manage the Big Lake Wilderness as part of the National Wilderness Preservation System according to the Wilderness Act of 1964, as compatible with the purposes for which Big Lake NWR was established.

National Wildlife Refuge System Mission

The mission of the National Wildlife Refuge System (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?

No.

What is the use?

Commercial outfitting of refuge visitors to view fish, wildlife, plants, or their habitats (including provision of access to viewing areas). This use includes fee-based self-service stations providing rentals that are expected to add to the recreational, educational, or interpretive enjoyment of Refuge lands and waters to the visiting public. The services would aim to enhance the visitor's knowledge and enjoyment of the key natural resources and mission of the Refuge and the USFWS, or other uses otherwise determined appropriate and compatible with the purposes for Refuge establishment, including recreational hunting or fishing, wildlife observation or photography, nature study or interpretation, and other wildlife-oriented activities. The use includes issuance of Commercial Special Use Permit (SUP) with conditions by the Refuge Manager for operations with less than \$100,000 in annual gross income. This CD does not include major or minor concessions (exceeding that amount) as described in policy.

Is the use a priority public use?

No

Wildlife observation and photography are priority public uses of the National Wildlife Refuge System under the National Wildlife Refuge System Administration Act of 1966 (16U.S.C. § 668dd-668ee), as amended by the National Wildlife Refuge System Improvement Act of 1997 (Public Law 105-57). While wildlife observation and photography, commercial use, is not a priority use, this use does support several wildlife-dependent priorities uses beyond wildlife observation and photography, including fishing, environmental education and interpretation.

Where would the use be conducted?

The use would be conducted within the Refuges boundary except for areas closed to the public and as identified in permit. Motorized watercraft and mechanical transport are prohibited inside the Big Lake Wilderness Area.

When would the use be conducted?

The use would take place year-round, subject to the Refuge-specific regulations or laws governing the individual public use. Access is suspended in the designated waterfowl sanctuary from November 1st - February 29th but would be allowed in Ditch 28, Ditch 81 and south of Sand Slough Dam during this time. Rental operations would only occur during open refuge hours (4 a.m. to one hour after sunset), except for those engaged in fishing, frogging, or raccoon/opossum hunting at night and possessing the appropriate equipment and required licenses. The Refuge must approve any requests outside of these hours. If approved, the hours permitted would be included in a Commercial Special Use Permit (SUP). The Refuge Manager may restrict rentals if it conflicts with other higher-priority Refuge programs, endangers Refuge resources or public safety, or is not in support of the Big 6 activities. Certain areas of the Refuge are inaccessible permanently or seasonally; however, roads and trails provide access to parking lots and boat ramps.

How would the use be conducted?

Each request for this use would be considered and if found appropriate, would be issued a Special Use Permit (SUP). Each request must be presented in writing with details of who, what, where, when, why, and how the commercial operation would be conducted. Each request will be evaluated on its own merit. The refuge manager would use professional judgment and ensure that the request will have no considerable negative impacts to natural, cultural, or visitor services, does not violate refuge regulations, and contributes to the achievement of the refuge purpose or the Refuge System mission. Special needs would be considered on a case-by-case basis and are subject to the refuge manager's approval. Any approved SUP will outline the framework in which the use can be conducted and refuge staff would ensure compliance with the permit.

The proposed operation supports a framework for self-service vendors where, equipment such as kayaks and associated equipment rental would be offered. To facilitate this operation, the permittees could utilize a small structure that can support space for the rental equipment. By limiting the number of rentals, potential impacts to wildlife in this area should be minimal. Any additional infrastructure would be a small footprint with no ground disturbance.

Refuge Responsibilities would include providing location approval, would enforce stipulations, and conduct regular monitoring. Refuge staff would maintain posting of closures and conditions via Refuge website, on site kiosks, and other communication channels. There would be periodic law enforcement patrols of launch sites and water routes. Refuge personnel may conduct monitoring of use patterns, wildlife responses, shoreline conditions, and concessionaire compliance. Designated staff would apply adaptive management if monitoring indicates unacceptable impacts.

Launch facilities may require hardened surfaces or erosion control features. Where feasible, provide accessible paths or launch aids consistent with Section 504/ADA. Refuge staff would assess and direct improvements as warranted. Continued enforcement of seasonal waterfowl sanctuary closures, sensitive area closures, and any flood related access restrictions would occur. The Refuge may install or maintain interpretive signage on wildlife friendly paddling (quiet approach, viewing distance guidance, disturbance avoidance). Route signage would direct users away from sensitive coves, ditches, or rest areas. Administration of commercially outfitting wildlife activities will be conducted in accordance with stipulations developed to ensure consistency throughout the refuge; provide a safe, quality experience; protect resources; and to ensure compliance with pertinent Refuge System regulations and policies.

Why is this use being proposed or reevaluated?

We propose that wildlife observation and photography, commercial outfitting would facilitate and enhance the experience of visitors while participating in wildlife-dependent priority public uses because many visitors may not have the equipment to explore the Refuge and engage in these activities on their own. Commercial equipment would help provide a safe and high-quality priority public use experience, and facilitate observation and appreciation by participants and observers of the Refuge's wildlife and habitats. Because it would generate a minimal amount of economic activity, this use is also likely to be supported by the local communities, and as such generate support for the Refuge. Because commercial outfitting is considered an economic use, per Federal law (see 16 USC 715s) and Service regulations (50 CFR 29.1), we may only allow economic uses of a Refuge natural resource where the use contributes to achieving Refuge purposes or the Refuge System mission.

Availability of Resources

To comply with the Refuge Recreation Act (Public Law 87-714), the Refuge Manager must determine whether sufficient resources—financial, staffing, facilities, or other infrastructure—are available to support the proposed use without materially interfering with the Refuge purpose(s) or the mission of the National Wildlife Refuge System. This determination should be informed by a review of current capacity and, where applicable, the Refuge's CCP.

Assessment of current resources and capacity

The Refuge has minimally sufficient resources for managing the expected volume for these uses at current staffing levels. Administration would primarily involve issuing permits, enforcement of regulations, and monitoring of impacts. Resources involved in the administration and management of the use includes personnel time associated with administration and law enforcement. Existing staffing and funding are adequate

to support these activities. Additional staff costs are incurred to review each request, analyze affected habitats and wildlife, coordinate with the outside entity, and process a permit if necessary. Compliance with the terms of the permit is within the regular duties of the Refuge's law enforcement officers.

A special use permit is required, which obligates administrative time to complete. Additionally, costs may be assumed by the requestor as appropriate given the level of oversight needed. The Service requires the permittee to offset any cost incurred by the Refuge. This will be determined on a case-by-case basis. The offsetting cost should always be equal to the Refuge-incurred cost and would come to the Refuge in the form of fees paid by the commercial permittee. These fees should at least equal our cost to administer the use, including any costs associated with facilities, equipment, supplies, and services. The following initial/annual costs would be required to administer and manage the activities as:

One-time costs: Staffing to complete compliance documentation. \$3500

Annual/recurring expenses (that is, for annual operations and maintenance):

(a). Resources involved in the administration and management of the use: Refuge staff would need to evaluate potential qualified vendors, administer permits, and oversee the day-to-day operations of the selected vendor. Federal Wildlife Officers would spend time enforcing Refuge regulations. No additional public use staff would be needed to oversee the contact station's day-to-day operations. Administration of SUPs associated with this activity consists of approximately 10 staff days or less than 3% of staff time. \$4500

(b). Special equipment, facilities, or improvements necessary to support the use: Existing Refuge facilities that support this use include boat ramps, parking lots, trails, and restrooms. The operator would be provided enough space to construct the necessary infrastructure to support its own operation independent of the Refuge and partners' footprint on a case by case basis. Vendor/community partners would cover kiosk procurement, installation, operations, and routine maintenance (per emails with local economic development partners). No refuge capital expenditure anticipated.

(c). Maintenance costs: Routine maintenance associated with this use is already being performed by staff and volunteers throughout the year, during the normal course of their duties. Examples include mowing, trail, levee maintenance, signage, parking areas, structure maintenance (boat ramps), law enforcement, and trash removal.

(d). Staffing/ Monitoring costs: staff time for permitting, inspections, monitoring, enforcement of closures, and adaptive management (estimated 5-8 hours/month

during operational season). Refuge staff would need to monitor the impacts of this use to ensure it is not causing negative impacts to wildlife, habitat, and other public uses. Through the SUP process, the Refuge would request that the vendor submit an annual report. \$4500

(e) Law Enforcement: Existing refuge LE capacity with support from the Service and coordination with local authorities; kiosk operators must include anti-vandalism design and rapid repair protocols. No additional LE support is anticipated.

(f). Offsetting revenue: Operators are required to pay a SUP fee and/or a percentage of gross receipts.

Impacts of changes to resources and capacity

The availability of resources is subject to change and the level of use provided may vary based on current staffing, partner support, funding, or infrastructure conditions. Costs may increase over time, in relation to changes in the costs for equipment, maintaining facilities, etc. A substantial increase to the number of requests may also create the need for additional resources to administer the use. The Project Leader would use sound professional judgment in evaluating whether the Refuge or its partners can develop, operate, and maintain the use in a compatible manner.

For other Refuge uses, if resource conditions shift such that the Refuge can no longer sustain the use in a compatible manner, the Project Leader may modify or suspend the use pursuant to 50 CFR 25.21. The public would be notified of any changes to Refuge uses, including temporary modification or suspension, reevaluation of compatibility and/or discontinuing of Refuge uses.

Anticipated Impacts of the Use

Potential impacts of a proposed use on the Refuge's purpose(s) and the Refuge System mission

The effects and impacts of the proposed use to Refuge resources, whether adverse or beneficial, are those that are reasonably foreseeable and have a reasonably close causal relationship to the proposed use. This CD includes the written analyses of the environmental consequences on a resource only when the impacts on that resource could be more than negligible and therefore considered an "affected resource."

Natural resources would not be more than negligibly impacted by the action when managed under detailed regulation. Natural resources include habitat and vegetation, air and water quality, and wildlife and fish. Cultural Resources would not be impacted if there is no ground disturbance beyond anchoring at previously disturbed sites; any ground disturbing work would be reviewed for compliance with Section 106 of the NHPA before installation. Invasive species risk is low but present with risk of aquatic

nuisance species spread via shared equipment; operators providing water-based equipment would be required to include mandatory clean drain, dry messaging and decontamination guidance consistent with refuge invasive species protocols.

The continuation of the existing programs for fishing, environmental education and interpretation, wildlife observation and photography would have negligible impacts on wildlife and habitats.

Short-term impacts

Impacts from individual concession users are expected to be similar to other public use activities already approved/being considered for use on the Refuge (see boating draft compatibility determinations for details). Accommodating larger groups may increase the likelihood of disturbances related to noise, trampling, compaction, or longer duration of continuous activity. Regular scheduled use to specific areas may displace wildlife use at certain locations to a greater extent than random visitor use. Wildlife may be temporarily disturbed by larger groups or could possibly avoid some of the areas used repeatedly by the groups. Several studies have examined the effects of recreation on birds using shallow water habitats adjacent to trails and roads through wildlife Refuges in the eastern United States (Burger 1981, 1986, Klein 1993, Burger et al. 1995, Klein et al. 1995, Rodgers and Smith 1995, 1997, Burger and Gochfeld 1998). Overall, the existing research clearly demonstrates that disturbance from recreational activities always has at least temporary effects on the behavior and movement of birds within a habitat or localized area (Burger 1981, 1986, Klein 1993, Burger et al. 1995, Klein et al. 1995, Rodgers and Smith 1997, Burger and Gochfeld 1998). The findings that were reported in these studies are summarized as follows in terms of visitor activity and avian response to disturbance.

Presence: Birds avoided places where people were present and when visitor activity was high (Burger 1981, Klein et al. 1995, Burger and Gochfeld 1998).

Distance: Disturbance increased with decreased distance between visitors and birds (Burger 1986), though exact measurements were not reported.

Approach Angle: Visitors directly approaching birds on foot caused more disturbance than visitors driving by in vehicles, stopping vehicles near birds, and stopping vehicles and getting out without approaching birds (Klein 1993). Direct approaches may also cause greater disturbance than tangential approaches to birds (Burger and Gochfeld 1981, Burger et al. 1995, Knight and Cole 1995, Rodgers and Smith 1995, 1997).

Type and Speed of Activity: Landscapers caused birds to flush more than anglers, sunbathers, and some pedestrians, possibly because the former groups move quickly (joggers) or create more noise (landscapers). The latter groups tend to move more slowly or stay in one place for longer periods, and birds likely perceive these activities as less threatening (Burger 1981, 1986, 1991, Burger et al. 1995, Knight and Cole 1995). Alternatively, birds may tolerate passing by with unabated speed, but may flush if the

activity stops or slows (Burger et al. 1995).

Noise: Noise caused by visitors resulted in increased levels of disturbance (Burger 1986, 1991, Klein 1993, Burger and Gochfeld 1998), though noise was not correlated with visitor group size (Burger and Gochfeld 1998).

Trash left on the Refuge facilities and natural areas, particularly food or wrappers, can attract predators that prey on nesting, loafing, roosting birds and other wildlife. Impacts of commercial tours, guides, and outfitters are likely to be minimal if conducted in accordance with Refuge regulations. The Refuge would manage Refuge closures that restrict public access to minimize disturbance to priority avian species during critical times of the year. Closures can be expanded or decreased as needed, depending on bird activity and results of further disturbance studies.

Littering, dumping, and abandoning property are prohibited by Federal regulation at 50 CFR 27.93 and 50 CFR 27.94. Visitors must either pack out trash or deposit it in trash cans at parking lots. The potential short-term impacts to natural resources can be beneficial or adverse. Proper stipulations, management actions, and enforcement would ensure adverse impacts are negligible.

Long-term impacts

Promotion of these services may bring greater numbers of visitor groups and individuals to the Refuge and thus, greater disturbance to the resources may occur. Long-term use of an area would be monitored as visitation increases and adaptive management strategies developed to address significant impacts. Monitoring would include an evaluation of changes in wildlife use patterns, trampling of vegetation, and compaction of the soil around the activity area. The Refuge and concession operator would work collaboratively to manage group size and distribute groups to various sites to minimize the impacts resulting from this use. When managed appropriately through regulation and enforcement, the use is not expected to impact refuge purposes, the NWRS mission, or refuge management goals and objectives.

The use is also not expected to significantly impact wildlife, or vegetation, to be consistent with Goals 1 and 2 on the Central Arkansas Complex Comprehensive Plan nor impact the Refuge's inviolate sanctuary, reserve, and breeding ground for native and migratory birds. The use is also not expected to significantly impact cultural resources, biological integrity and diversity, priority public uses, other public uses, and public safety. Uses would be done in a manner consistent with Central Arkansas CCP (USFWS 2009), specifically Visitor Services Goal 4: Develop compatible, wildlife-dependent recreation programs that lead to enjoyable experiences, a greater understanding of fish, wildlife, and habitat conservation, and a greater appreciation for the value of Big Lake NWR. This use supports other compatible uses, such as human-powered boating (kayaks) which remains an important means for the public to fully participate in Big 6 activities.

Visitor Experience and Safety is expected to be enhanced through expanded access for families and users; and improved environmental education via interpretive

messaging. Safety for visitors would be enhanced by required, as necessary and appropriate, PFDs, weather/closure notifications, and clear emergency contact information. The refuge already supports priority wildlife dependent recreation. The use is not expected to cause significant reasonably foreseeable impacts to trust resources when managed under closures and buffers. Coordination with adjacent WMA managers would align seasonal timing and route guidance to avoid additive disturbance.

Commercially outfitted wildlife observation and photography can result in positive or negative impacts to the wildlife resource. A positive effect of enhancing visitor's access to the refuge will be the provision of additional wildlife-dependent recreational opportunities and a better appreciation and more complete understanding of the wildlife and habitats associated with the ecosystem. Each application will be evaluated on its own merit and stipulations will be adapted to individual requests to minimize impacts to vegetation and wildlife and ensure that the use is consistent with goals of the refuge and the Refuge System.

Public Review and Comment

The draft compatibility determination would be available for public review and comment for 14 calendar days from June 15, 2026 to June 29, 2026. The State of Arkansas has been asked directly to review and comment on the draft compatibility determination. Coordination to date includes discussions with Mississippi County Economic Development, Arkansas Game & Fish Commission (AGFC), and Arkansas Water Trails partners regarding family friendly recreation and water trail opportunities.

A hard copy of this document would be posted and made available at the Big Lake NWR office located at 2274 Highway 18, Manila, AR 72442. Copies would be made available electronically on the Refuge website: <https://www.fws.gov/refuge/big-lake>. Please let us know if you need the documents in an alternative format. Concerns expressed during the public comment period would be addressed in the final determination.

All comments received from individuals become part of the official public record. The Service would handle all requests for such comments in accordance with the Freedom of Information Act and the Council on Environmental Quality's National Environmental Policy Act regulations in 40 CFR 1506.6(f). The Service's practice is to make comments, including names and home addresses of respondents, available for public review during regular business hours. Individual respondents may request that the Service withhold their home address from the record, which the Service would honor to the extent allowable by law. If you wish for the Service to withhold your name, address, or both, you must state this prominently at the beginning of your

comments.

Determination

Is the use compatible?

Yes

Stipulations Necessary to Ensure Compatibility

The stipulations necessary to ensure compatibility are presented in the stipulations below.

Operational Limits

1. Rentals may not operate at night unless specifically authorized under an SUP for night operations.
2. Temporary suspensions may be enacted during low-water periods, hazardous weather, management activities, or emergency closures.
3. Seasonal restrictions apply, including suspension within designated waterfowl sanctuaries and other biologically sensitive windows.
4. Refuge may adjust stipulations, limit use, or modify routes if monitoring indicates disturbance thresholds are being approached.

Authorization, Permitting, and Agreements

5. A Commercial Special Use Permit (SUP) is required.
Agreements must include:
6. Liability insurance and indemnification requirements.
7. Compliance with all federal, state, and Refuge regulations.
8. Prohibition of use in closed areas or during declared closures.
9. Equipment standards, maintenance schedules, and safety protocols.

Permittee Responsibilities

10. Provide all maintenance on rental equipment to ensure cleanliness and equipment staging does not degrade refuge habitat.
11. Maintain all equipment and associated infrastructure in safe, clean, and fully operational condition, following Clean-Drain-Dry protocols for human powered paddling equipment to prevent invasive species spread.
12. Provide paddles and personal flotation devices (PFDs) for human powered paddling equipment.
13. Provide clear safety messaging and emergency contact information.
14. Supply refuge-approved visitor information emphasizing stay-on-route

rules, closed areas, wildlife protection, and Leave No Trace principles.

15. Submit quarterly use, maintenance, and incident reports, and notify the Refuge immediately of safety issues, wildlife disturbance, vandalism, or kiosk tampering and annual revenue reports.

Visitor Conduct Requirements

16. Users must follow all general Refuge regulations.
17. Compliance with federal and state PFD requirement.
18. Quiet and wildlife-sensitive behavior required; no intentional disturbance or close approach to wildlife.
19. Launching of human powered paddling equipment limited to designated access points; concentrated launching may be used to minimize shoreline trampling and improve enforceability.

Accessibility & Equity

20. Ensure equal access to safety and orientation information in app-based and on-site formats.

Law Enforcement & Compliance

21. Vendor must cooperate with federal, state and local Law Enforcement and Refuge staff during compliance checks or investigations.
22. Kiosks must incorporate anti-tampering design and reliable communication features.

The refuge may modify, suspend, or terminate the authorization if compatibility conditions are not met or if monitoring indicates adverse impacts to wildlife, habitats, or visitor safety. If operator non-compliance occurs, or monitoring indicates adverse impacts, stipulations may be adaptively adjusted to ensure continued protection of Refuge purposes and resources.

Justification

Regulating and limiting the number of commercial operators as stated in the stipulations would provide a safe, quality experience to individuals who want to enjoy the resources of the refuge. It would also increase opportunities for those who wish to observe wildlife and experience the scenic and wild nature of the refuge, but may lack the required equipment, knowledge, or expertise.

The stipulations outlined above would help ensure that the use is compatible at Big Lake NWR. Wildlife Observation and Photography, commercial outfitting, as outlined in this compatibility determination, would not conflict with the national policy to maintain the biological diversity, integrity, and environmental health of the Refuge. Based on available science and best professional judgement, the Service has determined that wildlife observation and photography, commercial outfitting, at Big Lake NWR, in accordance with the stipulations provided here, would not materially

interfere with or detract from the fulfillment of the NWRS mission or the purpose of Big Lake NWR. Rather, appropriate and compatible boating would be the use of Big Lake NWR through which the public can develop an appreciation for wildlife and wild lands.

Signature of Determination

Project Leader Signature and Date

Signature of Concurrence

Assistant Regional Director Signature and Date

Mandatory Reevaluation Date

2036

Literature Cited/References

- Burger, J. 1981. The effect of human activity on birds at a coastal bay. *Biological Conservation* 21: 231-241.
- Burger, J. 1986. The effect of human activity on shorebirds in two coastal bays in northeastern United States. *Biological Conservation* 13: 123-130.
- Burger, J. 1991. Foraging behavior and the effect of human disturbance on the piping plover (*Charadrius melodus*). *Journal of Coastal Research* 7(1): 39-52.
- Burger, J. and M. Gochfeld. 1981. Discrimination of the threat of direct versus tangential approach to the nest by incubating herring and great black-backed gulls. *Journal of Comparative Physiological Psychology* 95: 676-684.
- Burger, J. and M. Gochfeld. 1998. Effects of ecotourists on bird behaviour at Loxahatchee National Wildlife Refuge, Florida. *Environmental Conservation* 25: 13-21.
- Burger, J., M. Gochfeld, and L.J. Niles. 1995. Ecotourism and birds in coastal New Jersey: Contrasting responses of birds, tourists, and managers. *Environmental Conservation* 22: 56-65

- Klein, M.L. 1993. Waterbird behavioral responses to human disturbance. *Wildlife Society Bulletin* 21: 31-39.
- Klein, M.L., S.R. Humphrey, and H.F. Percival. 1995. Effects of ecotourism on distribution of waterbirds in a wildlife refuge. *Conservation Biology* 9: 1454-1465.
- Knight, R.L. and D.N. Cole. 1995. Wildlife responses to recreationists. Pp. 51-69 In R.L. Knight and D.N. Cole, eds. *Wildlife and recreationists: coexistence through management and research*. Island Press, Washington, D.C
- Rodgers, J.A. and H.T. Smith. 1995. Set-back distances to protect nesting bird colonies from human disturbance in Florida. *Conservation Biology* 9: 89-99.
- Rodgers, J.A., and H.T. Smith. 1997. Buffer zone distances to protect foraging and loafing waterbirds from human disturbance in Florida. *Wildlife Society Bulletin* 25: 139-145.
- U. S. Fish and Wildlife Service. 2009. Comprehensive Conservation Plan. Central Arkansas National Wildlife Refuge Complex Bald Knob, Big Lake, Cache River, and Wapanocca National Wildlife Refuges. Atlanta, GA. 523 pp
- USFWS (US Fish and Wildlife Service). 2021. Big Lake NWR Complex Hunting and Fishing Draft Plan. US Fish and Wildlife Service Southeast Region, Atlanta, Georgia.