[Draft] Compatibility Determination

Title

[Draft] Compatibility Determination for Recreational Alligator Hunting on Big Branch Marsh National Wildlife Refuge

Refuge Use Category

Hunting

Refuge Use Type(s)

Big Game Hunting

Refuges

Big Branch Marsh National Wildlife Refuge

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

Emergency Wetlands Resources Act of 1986, 16 U.S.C. § 3901(b), "It is the purpose of this chapter to promote, in concert with other Federal and State statutes and programs, the conservation of the wetlands of the Nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions with Canada, Mexico, Japan, the Union of Soviet Socialist Republics, and with various countries in the Western Hemisphere by—

(1) intensifying cooperative efforts among private interests and local, State, and Federal governments for the management and conservation of wetlands; and

(2) intensifying efforts to protect the wetlands of the Nation through acquisition in fee, easements or other interests and methods by local, State, and Federal governments and the private sector."

North American Wetlands Conservation Act, 16 U.S.C. 4401(b), " The purposes of this chapter are to encourage partnership among public agencies and other interests—

(1) to protect, enhance, restore, and manage an appropriate distribution and diversity of wetland ecosystems and habitats associated with wetland ecosystems and other fish and wildlife in North America;

(2) to maintain current or improved distributions of wetland associated migratory bird populations; and

(3) to sustain an abundance of waterfowl and other wetland associated migratory birds consistent with the goals of the North American Waterfowl Management Plan, the United States Shorebird Conservation Plan, the North

American Waterbird Conservation Plan, the Partners In Flight Conservation Plans, and the international obligations contained in the migratory bird treaties and conventions and other agreements with Canada, Mexico, and other countries."

National Wildlife Refuge System Mission

The mission of the National Wildlife Refuge System (NWRS) 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?

Big Game Hunting, Recreational Alligator Hunting. We propose to introduce recreational hunting of alligators. Hunting is identified as one of six priority public uses of the NWRS by the National Wildlife Refuge System Administration Act of 1966 (NWRSAA), as amended by the National Wildlife Refuge System Improvement Act of 1997 (NWRSIA; Public Law 105-57). FWS has developed an amendment for recreational alligator hunting for seven NWRs in Louisiana and all details of the proposed hunt are provided in that plan (USFWS 2026a).

Is the use a priority public use?

Yes

This is a legislated, priority wildlife-dependent public use of the NWRS.

Where would the use be conducted?

The refuge would be open to hunting within the area designated in the annual Public Use Regulations brochure (Figure 1). This area open to recreational alligator hunting consists of open water and intermediate/ brackish marsh habitat. Only existing roads, trails, boat launches or paths will be used for access for this activity. Hunting may possibly be allowed on any future land purchased or leased for the refuge that falls within the Approved Acquisition Boundary and would be stipulated by refuge management discretion whether to open those additional acquired acres or close portions of the area based on site-specific biological or safety factors.

When would the use be conducted?

Recreational alligator hunting would be allowed based upon Louisiana Department of

Wildlife and Fisheries (LDWF or State) determined season dates. Hunting would be in accordance with all applicable Federal and State regulations and will occur within the hunting season framework established by LDWF and Federal regulations in 50 Code of Federal Regulations (CFR), including existing refuge-specific regulations. However, the Refuge Manager may, upon annual review of the hunting program and in coordination with the LDWF, impose further restrictions on hunting, recommend that the refuge be closed to hunting, or further restrict hunting regulations within the limits of State seasons and regulations. The Refuge Manager may restrict hunting if it conflicts with other refuge programs or endangers refuge resources or public safety.

How would the use be conducted?

Method of take would be restricted to hook and line or snatch hook only (i.e., anchored, tethered, or originating from immovable eligible property) while pole hunting and free shooting would be prohibited per State regulations. Alligators may be dispatched or removed from hook and line or snatch hook during daylight hours between official sunrise and official sunset. The recreational alligator hunt would be conducted as a lottery hunt and administered by LDWF. Only Louisiana residents aged 16 years and older could apply with applications required to be submitted online through LDWF website.

Recreational alligator hunting opportunities have been categorized into eight geographic zones throughout the state of Louisiana (Figure 2). Each zone has a designated quota that is based upon aerial nest surveys, which have been conducted by LDWF since 1972, and marsh habitat type alligator density estimation (i.e., fresh, intermediate, brackish marsh). The State has established a statewide annual maximum of 5,000 successful applications and 10,000 alligator tags. Big Branch Marsh National Wildlife Refuge (Big Branch Marsh NWR) is located within Zone H. Refuge quotas are based upon acres of habitat type (e.g., swamp, fresh marsh, intermediate marsh, brackish marsh) open to recreational alligator hunting and associated tag allocation rate. Proposed tag allotment would be annually determined during hunt coordination meetings between LDWF and U.S. Fish and Wildlife Service (FWS). LDWF will conduct a lottery to select hunters each year and will communicate to the refuge manager the name and contact information of successful applicants following selection.

Selected applicants must possess a valid general Louisiana hunting license, a resident recreational alligator hunting license, recreational hide tags, and email notification from LDWF of being successfully drawn for alligator hunting on Big Branch Marsh NWR. The refuge will require selected applicants carry a signed Public Use Regulations brochure and proof of notification email while hunting. Nonresidents may participate only in the physical presence of the lottery-winning hunter and must possess a nonresident recreational alligator hunting license. The refuge will issue the Public Use Regulations brochure to selected applicants to provide information on all refuge-specific regulations applicable to recreational alligator hunting and other

refuge regulations.

Why is this use being proposed or reevaluated?

On August 20, 2026, the Louisiana Department of Wildlife and Fisheries and the Louisiana Wildlife and Fisheries Commission adopted LAC 76:V.703 to establish a recreational alligator hunting season. The rule creates a controlled recreational harvest opportunity for resident hunters, separate from the existing commercial alligator program, based upon availability of alligator resource and increasing public recreational opportunity. The program is designed to increase public engagement in wildlife management, address landowner concerns regarding nuisance or overabundant alligators, and maintain population sustainability through limited lottery tag issuance, zone-based distribution, mandatory reporting, and a strict prohibition on the commercial sale or movement of recreationally harvested alligators, hides, meat, and parts (LR 52:1392). This was designated to increase public engagement in wildlife management, address landowner concerns regarding nuisance or overabundant alligators, and maintain population sustainability.

Expanding hunting opportunities and aligning regulations with state agencies implements Secretarial Order (S.O.) 3347 Conservation Stewardship and Outdoor Recreation, S.O. 3356 Hunting, Fishing, Recreational Shooting, and Wildlife Conservation Opportunities and Coordination with States, Tribes, and Territories, and S.O. 3447 Expanding Hunting and Fishing Access, Removing Unnecessary Barriers, and Ensuring Consistency Across the Department of the Interior Lands and Waters. Hunting would also promote the stewardship of our natural resources and increase the public's appreciation and support for the refuge. The need is to meet the FWS's priorities and mandates, as outlined by the NWRSIA, to "recognize compatible wildlife-dependent recreational uses as the priority general uses of the NWRS" and "ensure that opportunities are provided within the NWRS for compatible wildlife-dependent recreational uses" (16 United States Code 668dd(a)(4)).

Availability of Resources

To comply with the Refuge Recreation Act (Public Law 87-714), the Project Leader 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 NWRS. This determination should be informed by a review of current capacity and, where applicable, the refuge's Comprehensive Conservation Plan (CCP).

Assessment of current resources and capacity

The analysis of cost for administering and managing this use will include the incremen tal increase above general operational costs that we can show as being directly caused by the proposed use. Hunt administration costs for Big Branch Marsh NWR, including refuge staff salary, equipment, law enforcement, maintenance, and

communication with the public will be approximately $3,500 annually (Table 1). Refuge trails and roads are maintained for a variety of activities. Costs shown are a percentage of total costs for brochures and law enforcement on the refuge. In addition, USFWS law enforcement salaries are not funded out of the refuge budget. LDWF provides law enforcement officers to help with patrolling the refuge.

Hunting occurs using existing staff, funding, equipment, and facilities. Existing resources such as law enforcement, maintenance, and monitoring are made possible through extensive help of staff, volunteers, and partners. Big Branch Marsh NWR is part of the Southeast Louisiana NWR Complex which provides the opportunity for Complex staff to assist across multiple refuges.

Table 1. Costs to Administer and Manage Recreational Alligator Hunting.

Category and Itemization	One-time Cost	Recurring Annual Expenses
Develop Plan/ NEPA document/ opening package	$1,500	--
Construct facilities	--	--
Supplies and equipment	--	--
Develop and print signage and brochures	$750	$500
Survey and post use area boundary	--	--
Staff time (law enforcement, administration and management)	$4,000	$3,000
Maintenance	--	--
Monitoring	--	--
Total one-time expenses	**$6,250**	
Total recurring annual expenses		**$3,500**
Offsetting revenue	**--**	**--**
Total expenses		**$9,750**

Off-setting Revenues: No revenue is collected by the refuge for this use.

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, supplies, and staffing. A substantial increase to the number of requests may also create the need for additional resources to administer the use. The Project Leader will use sound professional judgment in evaluating whether the refuge or its partners can develop, operate, and maintain the use in a compatible manner.

For priority public uses, including hunting, fishing, wildlife observation and photography, or environmental education and interpretation, if resource conditions shift such that the refuge can no longer sustain the use in a compatible manner, the Project Leader may temporarily modify or suspend the use pursuant to 50 CFR 25.21(E). If it becomes apparent that insufficient resources will be sustained into the long-term, the Project Leader may re-evaluate the compatibility of the use and discontinue the use if necessary. The public will be notified of any changes to refuge uses, including temporary modification or suspension, re-evaluation 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 NWRS 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”. Floodplains, uplands, geology and soils, air and water quality, water resources, and cultural resources would not be more than negligibly impacted by the action and have been dismissed from further analyses. FWS has done an analysis of recreational alligator hunting impacts on seven NWRs in Louisiana via an environmental assessment (USFWS 2026b). A summary is provided below.

Refuges are managed, first and foremost, for wildlife. The focus of refuge management is to benefit wildlife populations and not necessarily individual animals. The State regulates alligator hunting on statewide, regional, and local scales to ensure it remains sustainable and does not cause a negative impact to the population.

This determination applies to portions of the refuge and the impacts analysis reflects anticipated impacts to the refuge. Hunting on Big Branch Marsh NWR is regulated to ensure compatibility with refuge purposes and mission of the NWRS, to contribute to goals and objectives for species populations developed by the LDWF and the refuge CCP, and provide low-impact, high-quality, wildlife-dependent recreational opportunities for visitors to the Refuge. This action addresses CCP Goal

3: Provide opportunities for environmental education, interpretation, and wildlife-dependent recreation in accordance with the National Wildlife Refuge System Improvement Act of 1997 (USFWS 2007a).

Hunting is currently authorized and ongoing on Big Branch Marsh NWR. This activity has been permitted on refuge land since 1996 (USFWS 1996). An expansion of opportunities was approved in 2007 (USFWS 2007b) and additional opportunities were approved in 2020 (USFWS 2020).

Hunting enables the beneficial use of renewable and sustainable natural resources. Participants shall gain an increased understanding of wildlife conservation practices, habitat and wildlife relationships, and the value of habitat management and public use programs practiced on the refuge while hunting. These opportunities inspire greater appreciation for wildlife conservation on national wildlife refuges and stimulate hunters to highly value and support national wildlife refuges, the NWRS, and the FWS. Hunting also combines the features of other priority public uses such as wildlife observation and photography. There are valuable wildlife and environmental educational components involved, particularly when experienced hunters impart their knowledge and skills to less-experienced hunting partners, and especially considering this will be the first year for recreational alligator hunting to occur on refuge. Therefore, the FWS has determined that the proposed action does not negatively impact the purpose and goals of the refuge or the NWRS.

Short-term impacts

The refuge consists of 19,463 acres in St. Tammany Parish, Louisiana (Figure 1). This refuge is primarily brackish marsh and open water habitat located on the north shore of Lake Pontchartrain. The proposed action will primarily occur within those habitats, barring a few public areas, across 18,777 acres.

Big Branch Marsh NWR currently allows big game hunting of white-tailed deer (*Odocoileus virginianus*), migratory gamebird hunting of duck, merganser (*Mergus merganser*), teal (*Anas crecca*), coot (*Fulica americana*), light and dark goose, snipe (*Gallinago delicata*), rail (*Ralidae spp.*), gallinule (*Gallinula galeata*), dove (*Gallinula galeata*), and woodcock (*Scolopax rusticola*), and upland game hunting of squirrel (*Sciurus carolinensis*), rabbit (*Oryctolagus cuniculus*), and quail (*Coturnix coturnix*), and the incidental take of nutria (*Myocastor coypus*), coyote (*Canis latrans*), raccoon (*Myocastor coypus*), armadillo (*Dasypus novemcinctus*), and opossum (*Didelphis virginiana*). The analysis provided here covers any impacts due to the addition of recreational alligator hunting. The estimated number of additional hunters due to this action would be no more than 150 with the maximum number of alligators to be taken being 300. The refuge is one of seven NWRs in Louisiana that will participate in a state-wide recreational alligator hunt program.

Recreational alligator hunting on the refuge would cause direct impacts to alligators due to mortality. However, take limits are established so that these direct impacts do

not have a detrimental effect on the overall alligator population. Joanen et. al (2021) studied alligator harvest impacts in Louisiana over a 31-year period and found that a 3% harvest is conservative enough to allow for sustained population stability even given potential unexpected condition changes. Harvest limits are to be adjusted each year based on nest surveys conducted by LDWF and in consultation with FWS staff. Proposed maximum harvest on Big Branch Marsh NWR would account for approximately 3.0% of all recreational alligator harvest statewide.

Temporary wildlife disturbance may be experienced by other non-target species. Various wildlife species (e.g., marsh birds, waterfowl) are likely to become more skittish and prone to disturbance, reduce the amount of time they spend foraging and resting, and alter their habitat usage patterns during hunting season (Owen 1973, Raveling 1979, Pease et al. 2005, St. James et al. 2013, Shirkey et al. 2020). Additionally, McNeil et al. (1992) suggested that some waterfowl and shorebird species may forage at night instead of during the day to avoid humans. This is likely to cause birds to expend energy that would otherwise be used for survival, migration, and reproduction (Bélanger and Bédard 1990, Weimerskirch et al. 2002). The active breeding season for most birds is May-July. Bald Eagles (*Haliaeetus leucocephalus*) and Great Horned Owls (*Bubo virginianus*), on the other hand, nest during winter in Louisiana (Baumgartner 1938, Smith et al. 2017).

Noise (i.e., boat motor) and added presence of hunters may cause a disturbance to non-hunted wildlife. Motorized boats can alter wildlife distribution, reduce use of habitats by waterfowl and other birds, alter feeding behavior and nutritional status, and cause premature departure from areas (Knight and Cole 1995). Impacts between hunters and non-hunters are anticipated to be like the impacts between other user groups (e.g., hikers and photographers) and would be negligible. As public use levels on the refuge expand across time, unanticipated conflicts between user groups may occur. The refuge may adjust times and locations of public use activities to minimize impacts if needed.

Overall, disturbance to non-target birds and resident wildlife would likely occur from hunting and associated hunter activity but would be short-term and temporary. The effects are expected to be minimal given recreational alligator hunting is to occur during the non-breeding season and number of hunters is limited.

FWS conducted a Section 7 Intra-Service Biological Evaluation on this action. In summary, threatened and endangered species or species of special concern that may occur on Big Branch Marsh NWR include northern long-eared bat (*Myotis septentrionalis)*, tri-colored bat (*Perimyotis subflavus*), alligator snapping turtle (*Macrochelys temminckii*), West Indian manatee (*Trichechus manatus*), eastern black rail (*Laterallus jamaicensis jamaicensis*), northern long-eared bat (*Myotis septentrionalis)*, piping plover (*Charadrius melodus*), red-cockaded woodpecker (*Picoides borealis*), Rufa red knot (Calidris canutus rufa), Hawksbill sea turtle (*Eretmochelys imbricata*), Kemp's ridley sea turtle (*Lepidochelys kempii*), loggerhead sea turtle (*Caretta caretta*), pallid sturgeon (*Scaphirhynchus albus*), and Gulf sturgeon

(*Acipenser oxyrinchus*). Potential disturbances to these species are similar to other non-target wildlife species including flushing due to noise or hunter boat traffic, trampling of habitat, and inadvertent capture. FWS uses temporal and spatial zoning to reduce disturbance to non-target species. The short season length of this hunt, and the method of take allowed by LDWF will minimize disturbances to sensitive species.

Recreational alligator hunting at Big Branch Marsh NWR will take place primarily in open water and marsh habitats composed of wiregrass (*Spartina patens*), smooth cordgrass (*Spartina alterniflora*), and rushes (*Juncaceae* sp.). Forested wetlands are predominately made up of pine species including slash (*Pinus elliottii*) and loblolly (*Pinus taeda*), with few pockets of longleaf pine (*Pinus palustris*). A complete discussion of the habitat makeup of the refuge can be found in the Biological Environment section of the Big Branch Marsh NWR CCP (USFWS 2007).

Boating and hiking can alter habitats by trampling vegetation, compacting soils, and increasing the potential of erosion. Success of ground-nesting birds is also influenced by vegetation cover and disturbance (Blakesly and Reese 1988). Recreational alligator hunting is typically conducted from boat platforms, therefore disturbance to terrestrial plant communities is expected to be limited to those areas where hook and line or snatch hook placement occurs, pole set placement occurs, vehicle parking areas, and boat launches. Hunters are dispersed over 18,777 acres and the number of hunters is limited to a maximum of 150, therefore, coupled with parking and boat launching guidance, impacts to vegetation are likely to occur, but are expected to be minor.

Recreational boating can also negatively impact aquatic vegetation either directly, via contact with propeller and boat hull, or indirectly via turbidity and wave damage (Asplund 2000, Hansen et al. 2018, Sagerman and Wikstrom 2020). Small boats or boats with shallow draft can access very shallow areas that contain submerged aquatic vegetation. The process of recreational alligator hunting can lead to increased disturbance of submerged aquatic vegetation. Limiting the number of additional boaters by implementing a lottery system for the recreational alligator hunt will help combat increased damage to submerged aquatic vegetation. Additionally, using established boat launches and parking areas will channel use to those areas already designed to minimize impacts. Big Branch Marsh NWR is heavily utilized by hunters and anglers. An additional maximum of 150 boats operating across over 18,000 acres for recreational alligator hunting would likely result in a minor increase in aquatic vegetation damage.

Recreationists can also be vectors for invasive plants. Seeds or other propagules can be transferred from one area to another via clothing, gear, boats, or personal belongings and spread to nearby areas through self-propagation (Pickering and Hill 2007). Once established, invasive plants can out-compete native plants, altering habitats and indirectly impacting wildlife. Each refuge has a program to detect and combat invasive species. Those programs will continue and should new invasive plant

species be detected, focus will be on minimizing and eliminating those plants.

Overall, impacts to vegetation and habitat from hunting and boats are expected to be minor as these areas are already frequented by boats. Boats will be launched from established boat ramps and hunting will occur in those areas frequented by boats already. The use of ATVs/ UTVs or bicycles will not be allowed on the refuge for recreational alligator hunting.

Under the proposed alternative, number of hunters is expected to increase by a maximum of 150. Conflicts between alligator hunters and hunters of other species will be likely with some overlapping seasons. Deer season is open only to archery in October, and an experimental black-bellied whistling duck (*Dendrocygna autumnalis*) hunting season occur in October as well. Potential conflicts may also arise between anglers and recreational alligator hunters attempting to use the same areas. Refuges are open to fishing however State fishing regulations apply as well as refuge-specific regulations designed to protect species and provide for public safety and positive angling experiences. Refuge staff will monitor implementation of the new hunt to determine if overlapping uses result in conflicts not anticipated. Managers may adjust uses to reduce or eliminate conflicts, should conflicts arise.

Visitation based on the remaining six priority public uses are expected to remain the same. Big Branch Marsh NWR hosted 258,160 visitors in 2025 with 20,630 of those being hunters (USFWS 2025). Refuges manage multiple public opportunities through space and time by closing and opening areas to specific uses to reduce conflicts. Hunting generates approximately $1.77 billion for the Louisiana economy (LDWF 2021). Commercial alligator harvest generates $238 million annually with over 5,000 jobs and over $17 million in tax revenue (LDWF 2021). Louisiana issued 23,828 alligator sport hunting licenses in 2019 accounting for over $13 million of the total revenue. We anticipate the number of hunters on refuges to increase and subsequently increase economic input generated following the initiation of recreational alligator hunting on seven Louisiana national wildlife refuges.

Long-term impacts

The refuge hunt program is designed to be sustainable through time, given alligator population monitoring efforts, as well as close coordination with LDWF. The proposed alligator hunt program is designed to be sustainable with less than 3% of the estimated statewide population targeted to be harvested via recreational hunting. This conservative annual harvest provides a buffer against unknown and unpredictable factors while ensuring that populations will not be overharvested (Joanen et al. 2021).

Annual Louisiana alligator population estimates are based upon aerial nest surveys as well as acreages of available habitat (e.g., fresh, intermediate, brackish marsh) on the refuge and subsequent tag allocation rate. As such, long-term impacts to alligator populations from the proposed hunting use would not be anticipated; however, the use and its effects on refuge resources would be monitored by refuge staff to ensure

that no significant impacts were associated with the use and that the use continued to meet compatibility requirements. American alligators are at the top of the food chain within their ecological niche (Lu et al. 2026). As such, recreational harvest will positively benefit prey species (e.g., resident ducks) by reducing predation probability.

A thorough discussion of lead is provided in the Louisiana Recreational Alligator Hunt Environmental Assessment which is incorporated by reference herein (USFWS 2026b). The following is a summary of that analysis.

Recreational alligator hunting under LDWF rules primarily uses non-firearm capture methods, with firearms employed only to dispatch animals; consequently, shotgun-based lead shot concerns typical of waterfowl hunting are less applicable. The principal refuge-relevant lead pathways are bullet fragmentation during dispatch and the loss of lead fishing tackle (e.g., sinkers, jigs) in wetlands and waterways, where gear can persist in sediments.

Environmental availability and fate. Lead fragments from ammunition and tackle can contaminate carcasses, viscera, and substrates (Hunt et al. 2006, Dobrowolska and Melosik 2008, Grund et al. 2010). In wetland soils, mobility and bio-accessibility depend on pH, organic carbon, and particle size (Mousavi et al. 2022). Although total soil lead can remain for centuries, bioavailable fractions often persist at concerning levels for decades; binding to soils is typically strong, and plant uptake effects are limited at common hunting densities (USEPA 2020). Historic studies show plant lead near heavily hunted areas did not differ from protected sites, and lead concentrations decline with increasing trophic level in aquatic food chains, indicating negligible biomagnification outside direct ingestion (Wong et al. 1978, Behan et al. 1979).

Wildlife risks by guild.

- **Scavengers and predators (raptors, mammals):** Eagles and other scavenging raptors can ingest fragments in carcasses or gut piles, with documented sublethal and occasional clinical effects on coordination, behavior, and survival; seasonal blood lead peaks often align with big-game seasons (Haig et al. 2014, Church et al. 2006, Hunt et al. 2006, Pauli and Buskirk 2007, Herring et al. 2016). Large mammal scavengers (e.g., coyotes, bears) show elevated exposure during hunting seasons, but population-level effects have not been demonstrated (Bedrosian and Craighead 2006, Burco et al. 2012, Rogers et al. 2012, Fuchs et al. 2021, Kelly et al. 2021).
- **Waterfowl and diving birds:** Since the 1991 nationwide ban on lead shot for waterfowl/ coots and the FWS's shot approval process, exposure from spent shot in wetlands has substantially diminished. Remaining risks are concentrated in species susceptible to ingesting lost fishing tackle, notably loons and swans, which can forage deeper in sediments (Scheuhammer and Norris 1995, Franson et al. 2003, Pokras et al. 2009, Grade et al. 2019).
- **Upland game birds:** Ground-foraging species that ingest grit (e.g., quail, grouse, pheasant, turkey, mourning dove) remain at risk where lead shot and

ammunition are still used (Larsen et al. 2007, Franson et al. 2009).

Human health considerations. Hunters and families may be exposed via consumption of game containing micro-fragments and via inhalation of lead dust at shooting ranges; public-health guidance recommends precautionary measures for sensitive groups and consideration of non-toxic projectiles (Iqbal et al. 2009, Avery and Watson 2009).

Regulatory context for protected birds. Potential lead exposure remains a consideration under Migratory Bird Treaty Act and the Eagle Act; while bald and golden eagles are currently secure at broad scales, local exposure episodes can occur where scavenging intersects with hunting activity.

Population-level effects and refuge scale. Best-available science indicates that, where lead use is authorized, direct-ingestion impacts are less than significant at the population level, including for susceptible species, and bioaccumulation in typical hunting/ fishing environments is a minor concern (Wong et al. 1978, Behan et al. 1979, Eisler 1988, AFWA 2018, Slabe et al. 2022). In the action area, expected use is small—methods emphasize non-firearm capture, firearms are used only for dispatch, participation is capped (maximum 817 hunters), and activity is dispersed across large acreages—so additional environmental lead is expected to be negligible relative to regional background.

Mitigation and management. FWS and partners are advancing voluntary lead-free adoption through incentives and outreach, coupled with BMPs for retrieving spent materials and removing harvested animals. In the proposed program, no animal remains may be left on refuge lands, further reducing scavenger exposure. Collaboration with states/ Tribes and targeted refuge-specific measures remain the preferred strategy over blanket requirements, given availability, cost, platform constraints, and equity considerations for participants.

Because of the regulatory process for harvest management in place within FWS, the setting of hunting seasons largely outside of the breeding seasons of resident and migratory wildlife, and the ability of individual refuge hunt programs to adapt refuge-specific hunting regulations to changing local conditions, we anticipate no direct or indirect negative long-term impacts on resident wildlife, migratory birds, and non-hunted wildlife from the addition of recreational alligator hunting on the refuge.

Public Review and Comment

FWS coordinated closely with the LDWF in the design of the recreational alligator hunt program. LDWF is the lead agency in Louisiana for managing hunting and fishing. In addition, LDWF reviewed the draft compatibility determination, draft Louisiana National Wildlife Refuges Draft Recreational Alligator Hunt Plan, and Environmental Assessment.

FWS offered consultation to the following tribes who have interests in lands or species involved in this action. Each were provided with the draft compliance

documents for review and comment.

- Alabama-Coushatta Tribe of Texas
- Caddo Nation of Oklahoma
- Chitimacha Tribe of Louisiana
- Choctaw Nation of Oklahoma
- Coushatta Tribe of Louisiana
- Jena Band of Choctaw Indians
- Mississippi Band of Choctaw Indians
- Quapaw Nation
- Tunica-Biloxi Indian Tribe of Louisiana

The draft Compatibility Determination and all other compliance documents were made available to the public from November 13 to 27, 2026. Comments received will be addressed in the final determination.

Draft documents were also made available to the public for review and comment at the refuge office and on the refuge website.

Determination

Is the use compatible?

Yes

Stipulations Necessary to Ensure Compatibility

1. Hunting would occur in accordance with State and Federal regulations and refuge-specific regulations (50 CFR 32). Enforcement of regulations would be conducted by USFWS and LDWF law enforcement officers.
2. Refuge-specific regulations are stipulated in the permit found on the annual Public Use Regulations brochure.
3. The Refuge Manager can modify/ suspend hunting at any time for administrative, biological or safety reasons on all or parts of the refuge, if deemed necessary.

Justification

The stipulations outlined above would help ensure that the use is compatible at Big Branch Marsh NWR. Big game hunting of American alligators, 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, FWS has determined that big game hunting of alligators at Big Branch Marsh NWR, in accordance with the stipulations

provided here, would not materially interfere with or detract from the fulfillment of the NWRS mission or the purposes of the refuge. Rather, appropriate and compatible big game hunting would be the use of the Big Branch Marsh NWR through which the public can develop an appreciation for wildlife and wild lands.

Signature of Determination

Refuge Manager Signature and Date

Signature of Concurrence

Assistant Regional Director Signature and Date

Mandatory Reevaluation Date

2037

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Figure 1. Big Branch Marsh NWR Proposed Recreational Alligator Hunt Area.

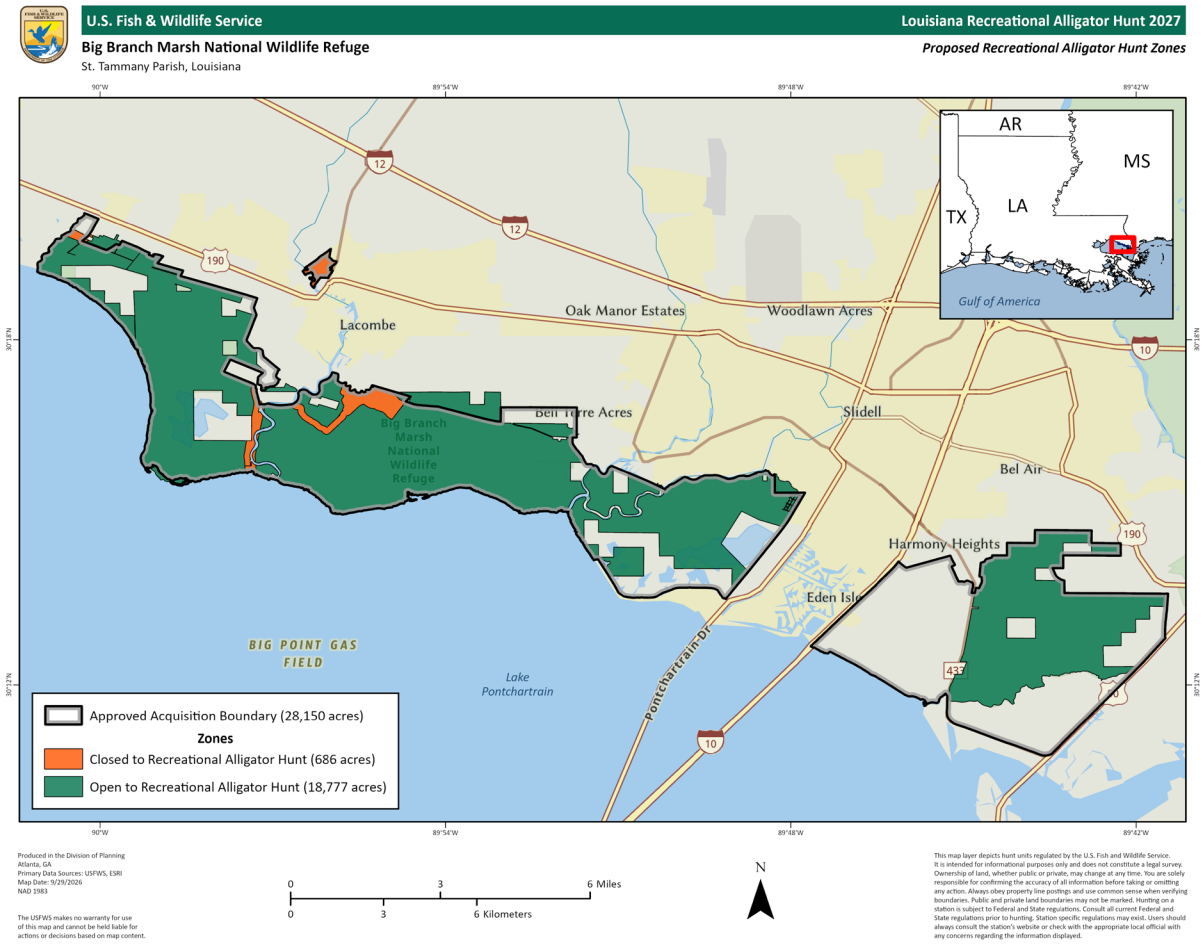


Figure 2. Louisiana Recreational Alligator Hunt Zones and Associated Tag Allotment.

