REGION 4
INTRA-SERVICE SECTION 7 BIOLOGICAL EVALUATION FORM

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Date: September 24, 2024

PROJECT NAME (Grant Title/Number): 2024-25 Hunt Package for Bayou Teche National Wildlife Refuge

I. **Service Program:**
- ○ **Ecological Services**
- ○ **Federal Aid**
- ○ **Clean Vessel Act**
- ○ **Coastal Wetlands**
- ○ **Endangered Species**
- ○ **Section 6 Partners for**
- ○ **Fish and Wildlife**
- ○ **Sport Fish Restoration**
- ○ **Wildlife Restoration**
- ○ **Fisheries**
- • **Refuges/Wildlife**

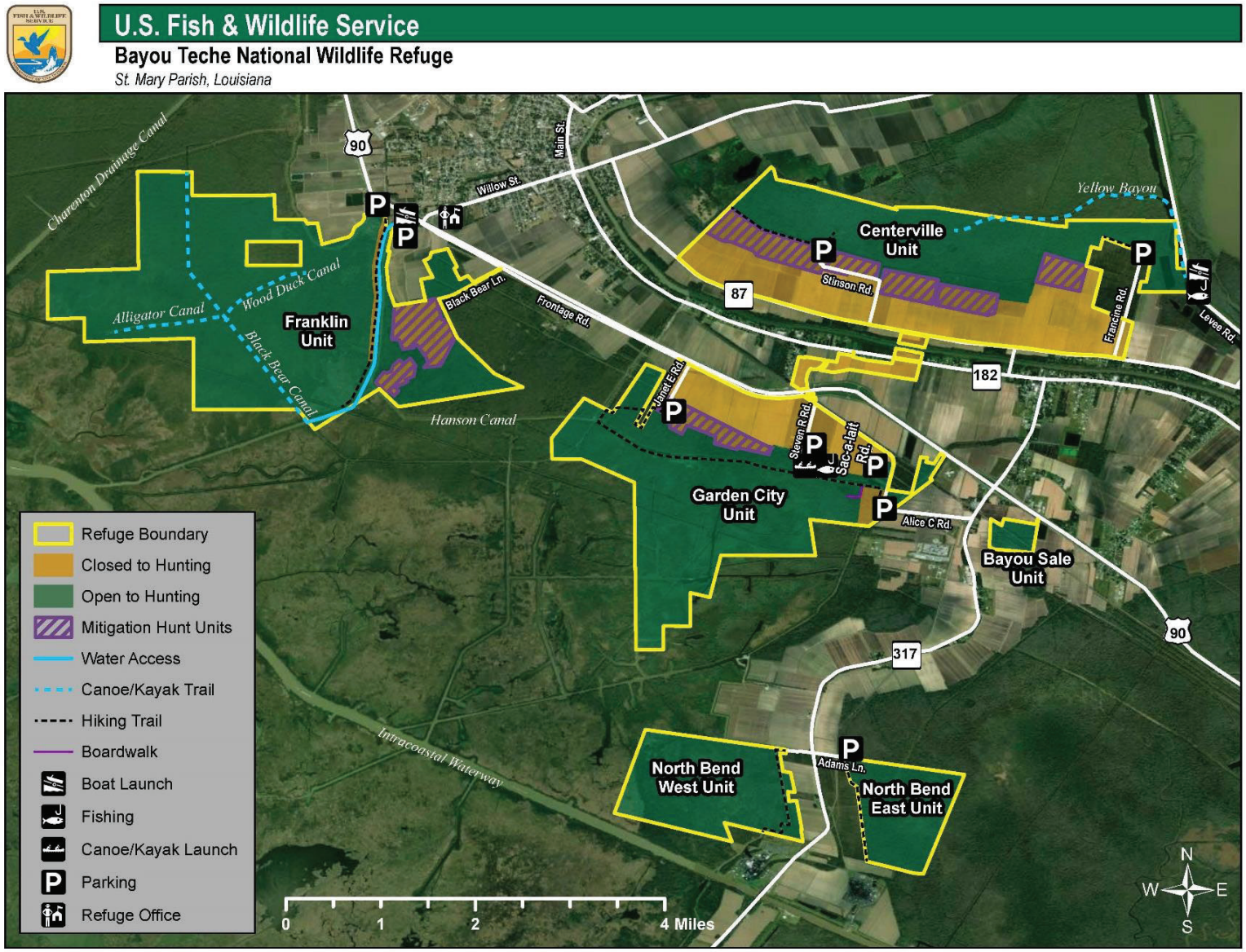
II. **State/Agency:** Louisiana/U.S. Fish & Wildlife Service

III. **Station Name:** Bayou Teche National Wildlife Refuge

IV. **Description of Proposed Action:**

The U.S. Fish and Wildlife Service (Service, USFWS) is proposing to expand existing hunting opportunities at Bayou Teche National Wildlife Refuge (NWR, refuge) for: (1) migratory birds (firearms) and (2) white-tailed deer (*Odocoileus virginianus*) with incidental take of feral hog (*Sus scrofa*) (archery). The Service recently acquired 835.19 acres known as the Mitigation Tracts for the refuge; see the hatched areas on Figure 1. Under the proposal and as outlined in Figure 1, the Service will add 835.19 acres to the refuge's existing public hunting program as a new hunt unit to be named Mitigation Units in accordance with the 2021-22 Southeast Louisiana Refuges Complex Hunt Package (including the Bayou Teche NWR Hunting Plan and Environmental Assessment [EA] for Migratory Game Birds, Upland Game, and Big Game; USFWS 2021); the Bayou Teche NWR Comprehensive Conservation Plan

Figure 1. Existing and 2023-24 Proposed Hunt Units for Bayou Teche National Wildlife Refuge



(CCP) / EA / Finding of No Significant Impact (FONSI) (USFWS 2009a, 2009b); and federal, state, local, and refuge-specific regulations. The 2021-22 Hunt Package built on and updated the refuge's hunt program and 2007 Hunt Package (USFWS 2007). The 2021-22 Hunt Package specifically included and analyzed the 835.19-acre Mitigation Tracts in anticipation of their future acquisition and inclusion in the refuge's hunt program. Endangered Species Act Section 7 Intra-Service Biological Evaluations were completed with the 2021-22 Southeast Louisiana Refuges Complex Hunt Package (USFWS 2021) and the CCP (USFWS 2009a). The 2021-22 Hunt Package and its Section 7 previously included and analyzed this action; the 2021 Section 7's findings were No Effect and Not Likely to Adversely Affect (USFWS 2021).

Under the Proposed Action, the Service will open an additional 835.19 acres on Bayou Teche NWR in a new hunt unit to be named Mitigation Units (Figure 1) in accordance with existing federal, state, local, and refuge-specific regulations; the 2021-22 Southeast Louisiana Refuges Complex Hunt Package (including the Bayou Teche NWR Hunting Plan and EA for Migratory Game Birds, Upland Game, and Big Game; USFWS 2021); and the Bayou Teche NWR CCP/EA/FONSI (USFWS 2009a, 2009b). Under the proposal and as previously analyzed, the Service will expand the current migratory bird hunting (firearms) and big game hunting (archery white-tailed deer with incidental take of feral hog) from the existing 8,937 acres to a new total of 9,772.82 acres (i.e., the existing 8,937 acres in six existing hunt units in the Bayou Sale, Centerville, Franklin, Garden City, North Bend East, and North Bend West units; the existing 2,021-acre Closed Area; and the proposed 835.19-acre Mitigation Units). As depicted in Figure 1, the proposal adds the new 835.19-acre hunt area as a separate hunt unit to be named Mitigation Units. Generally, hunting on the refuge annually occurs from mid-September to mid-February. For clarity, since the Proposed Action only includes waterfowl hunting and archery hunting, lead ammunition is not included.

Previously, the 835.19 acres of the proposed refuge hunt unit were part of a private mitigation bank that had approximately 20 hunters. Potentially, the Proposed Action could be expected to increase the annual hunting visits on the refuge from the current 236 to a new total of up to between 250 and 270 from the additional 835.19 acres. The associated increase in anticipated annual take of white-tailed deer would be up to 5 with incidental annual take of feral hog of up to 3, while anticipated annual take of migratory birds would be up to 45. However, the first year or so may see higher-than-expected average take due to the newly opened nature of the hunt unit.

The existing 8,937-acre hunt program has not resulted in adverse impacts, including to listed species. The increase in acres, hunting visits, and take of white-tailed deer, feral hog, and migratory birds under the Proposed Action would not be expected to change this. Many hunt days during the work week do not have any hunt visitors to the refuge.

The Proposed Action is part of the larger refuge management and hunt program to maintain plant and animal populations at healthy levels while supporting opportunities for appropriate and compatible priority public use.

Specific changes proposed for the existing Sport Hunting Plan are listed.

- Following the second Federal Register notice and approval of the Proposed Action, Figure 1 here would replace Figure 1 (Bayou Teche NWR Hunt Units) in the 2021 Bayou Teche NWR Hunting Plan (USFWS 2021).
- Following the second Federal Register notice and approval of the Proposed Action, 50 Code of Federal Regulations (CFR) §32.27 would be updated to reflect the new Mitigation Units.

For the Proposed Action, the Service is tiering a Categorical Exclusion/Environmental Action Statement from the existing 2021-22 Southeast Louisiana Refuges Complex Hunt Package/EA/FONSI (USFWS 2021) and the Bayou Teche NWR CCP/EA/FONSI (USFWS 2009a, 2009b). The Proposed Action and hunt area were previously included and analyzed in the 2021-22 Southeast Louisiana Refuges Complex Hunt Package/EA/FONSI (USFWS 2021) with the clearly stated intent to add newly acquired properties to the hunt program following acquisition.

V. Pertinent Species and Habitat:

A. Include species/habitat occurrence maps:

Table V.B lists the known and expected federally listed and candidate species and designated critical habitat. Listed species and habitat occurrence on the refuge are based on the expert opinion of Service biologists, supplemented with site-specific information and information from the Environmental Conservation Online System (ECOS, https://ecos.fws.gov/ecp/) and Information for Planning and Consultation (IPaC, https://ecos.fws.gov/ipac/) databases. Since research activities are ongoing in this area and since the ECOS and IPaC databases are regularly updated approximately every 90 days, it is possible that the specific threatened and endangered species identified as present on or near the refuge may change between the finalization of this Biological Evaluation and its publication. While IPaC identified the West Indian manatee for the refuge, it does not occur in the action area, nor does it occur in areas used to access the action area.

B. Listed Species and Any Designated Critical Habitat:

SPECIES/CRITICAL HABITAT Species Common Name (Scientific Name)	STATUS[1]
West Indian Manatee *(Trichechus manatus*)	T
Alligator Snapping Turtle (*Macrochelys temminckii*)	PT
Monarch Butterfly (*Danaus plexippus*)	C

[1]STATUS: T=threatened, PT=proposed threatened, C=candidate species

West Indian Manatee *(Trichechus manatus*) - Threatened

The Florida manatee lives in freshwater, brackish and marine habitats. Submerged, emergent, and floating vegetation are the preferred food. During the winter, cold temperatures keep the population concentrated in peninsular Florida and many manatees rely on the warm water from natural springs and power plant outfalls. During the summer, they expand their range and on rare occasions are seen as far north as Rhode Island on the Atlantic Coast and as far west as Texas on the Gulf Coast. Manatees can be found in very shallow water. Hartman (1979) observed manatees using waters as shallow as 0.4 m with their backs out of the water. Shallow grass beds with ready access to deep channels are preferred feeding areas in coastal and riverine habitats. Manatees often use secluded canals, creeks, embayments, and lagoons, particularly near the mouths of coastal rivers and sloughs, for feeding, resting, cavorting, mating, and calving (Marine Mammal Commission 1986, 1988). In estuarine and brackish areas, natural and artificial fresh water sources are sought by manatees. As in winter, manatees often use the same summer habitats year after year (Reid et al. 1991; Koelsch 1997). While IPaC identified the West Indian manatee for the refuge, it does not occur in the action area, nor does it occur in areas used to access the action area. The action area and access to the action area do not include habitat for the manatee.

Alligator Snapping Turtle (*Macrochelys temminckii*) – Proposed Threatened

The alligator snapping turtle is the largest species of freshwater turtle in North America and is among the most aquatic. Sexual maturity is achieved in 11-21 years for males and 13-21 years for females. No more than one clutch per year per female (average 27.8 eggs per clutch) has been observed in the wild, and they exhibit lower reproductive output than the smaller common snapping turtle (*Chelydra serpentina*). They do not appear to be particularly selective about nest sites, but nests have been observed across a range of distances – approximately 8 to 656 ft (2.5 to 200 m) landward from the nearest water. Temperature of the nest site is important because this species also exhibits temperature-dependent sex-determination, Type 2 – where more males are produced at intermediate incubation temperatures and more females are produced at the two extremes (Ernst and

Lovich 2009, p. 16, 144-146). Most nesting occurs from May to July (Reed et al. 2002, p. 4) with areas in the southern part of the range (e.g., Georgia, Florida, and Louisiana) beginning in April and extending through May and areas in the northern/western portions of the range occurring from late May through June to early July (Ernst and Lovich 2009, p. 145, Carr et al. 2010, p. 87). Nest predation is a major source of mortality in many turtle populations. Growth is rapid until maturity (11-21 years of age), slowing after 15 years of age (Dobie 1971, p. 654). Alligator snapping turtles display sexual dimorphism, with males being distinctly larger than females and having a greater anterior-to-vent tail length. Alligator snapping turtles are associated with deeper water (usually large rivers, major tributaries, bayous, canals, swamps, lakes, ponds, and oxbows), with shallower water occupied in early summer and deeper depths in late summer and mid-winter, representing a thermoregulatory shift (Ernst and Lovich 2009, p. 141). Hatchlings and juveniles tend to occupy shallower water, in comparison. Alligator snapping turtles are also associated with structure (e.g., tree root masses, stumps, and submerged trees), and may occupy areas with a high percentage of canopy cover or undercut stream banks. Alligator snapping turtles are opportunistic predators and foragers and consume a variety of foods. Fish comprise a significant portion of the alligator snapping turtle's diet; however, crayfish, mollusks, smaller turtles, insects, nutria, snakes, birds, and vegetation (including acorns) have also been reported (Ernst and Lovich 2009, p. 147). Movements can be highly variable. In Black Bayou Lake and Bayou DeSiard, daily distance traveled ranged from 91 to 377 ft per day (Sloan and Taylor 1987, p. 345). On Bayou Teche NWR, alligator snapping turtles are present in larger, deeper canals and back water areas. These areas provide thermo-regulating water depths, ample food sources, canopy cover, and the structure necessary to support alligator snapping turtles.

Monarch Butterfly (*Danaus plexippus*) - Candidate

Adult monarch butterflies are large and conspicuous, with bright orange wings surrounded by a black border and covered with black veins. The black border has a double row of white spots on the upper side of the wings. Adult monarchs are sexually dimorphic, with males having narrower wing venation and scent patches. The bright coloring of a monarch serves as a warning to predators that eating them can be toxic. During the breeding season, monarchs lay their eggs on their obligate milkweed host plant (primarily *Asclepias* spp.), and larvae emerge after two to five days. Larvae develop through 5 larval instars (intervals between molts) over a period of 9 to 18 days, feeding on milkweed and sequestering toxic chemicals (cardenolides) as a defense against predators. The larva then pupates into a chrysalis before emerging 6 to 14 days later as an adult butterfly. There are multiple generations of monarchs produced during the breeding season, with most adult butterflies living approximately two to five weeks; overwintering adults enter reproductive diapause (suspended reproduction) and live six to nine months. In

many regions where monarchs are present, monarchs breed year-round. Individual monarchs in temperate climates, such as eastern and western North America, undergo long-distance migration and live for an extended period of time. In the fall, in both eastern and western North America, monarchs begin migrating to their respective overwintering sites. This migration can take monarchs distances of over 3,000 km and can last for over two months. In early spring (February-March), surviving monarchs break diapause and mate at the overwintering sites before dispersing. The same individuals that undertook the initial southward migration begin flying back through the breeding grounds, and their offspring start the cycle of generational migration over again. Monarch butterflies in eastern and western North America represent the ancestral origin for the species worldwide. Butterflies, including monarch butterflies, and butterfly habitats have not been surveyed on the refuge, but are likely to occur in small remote locations within the refuge.

VI. Location:

The Mitigation Units are hatched in Figure 1

A. Ecoregion Number and Name: 73, Mississippi Alluvial Plain

B. County and State: St. Mary Parish, Louisiana

C. Section, township, and range (or latitude and longitude): 29° 46' 55.6" N 91° 28' 30.3" W

D. Distance (miles) and direction to nearest town: 1 mile

E. Species/habitat occurrence: Rare

VII. Determination of Effects:

A. Explanation of effects of the action on species and critical habitats in item:

SPECIES / CRITICAL HABITAT	IMPACTS TO SPECIES/CRITICAL HABITAT
West Indian Manatee *(Trichechus manatus*)	No Effect The known locations of the manatee are outside of the boundaries of the Proposed Action and outside of the area of potential effect of the Proposed Action. The

SPECIES / CRITICAL HABITAT	IMPACTS TO SPECIES/CRITICAL HABITAT
	proposed Mitigation Units do not provide the habitat to support manatees. Access to the Mitigation Units for hunting also does not include habitat for manatees; access to the Mitigation Units is from adjacent uplands. Habitat in the Mitigation Units includes bottomland hardwood forests with very shallow, seasonally wet drainage ditches, low areas, and marsh. Manatees live in freshwater, brackish and marine habitats, which are not present in the Mitigation Units. The Mitigation Units do not provide the necessary food source or migration routes necessary to support West Indian manatees. Therefore, the Proposed Action will have no effect on this species.
Alligator Snapping Turtle (*Macrochelys temminckii*)	Not Likely to Jeopardize The known locations of the alligator snapping turtle are outside of the boundaries of the Proposed Action and outside of the area of potential effect of the Proposed Action. The proposed Mitigation Units do not provide the habitat to support alligator snapping turtles. Access to the Mitigation Units for hunting also does not include habitat for alligator snapping turtles; access to the Mitigation Units is from adjacent uplands. Habitat in the Mitigation Units includes bottomland hardwood forests with very shallow, seasonally wet drainage ditches, low areas, and marsh. These seasonally wet shallow areas do not meet the requirements necessary to support alligator snapping turtles. While the forest does provide canopy cover, seasonal wetlands do not provide the water depth, food, and access to larger and deeper water bodies that are required to support alligator snapping turtles. The current hunt program has not resulted in documented adverse impacts to this species. Therefore, the Proposed Action will not be likely to jeopardize this species.

SPECIES / CRITICAL HABITAT	IMPACTS TO SPECIES/CRITICAL HABITAT
Monarch Butterfly (*Danaus plexippus*)	Not Likely to Jeopardize The monarch butterfly is a migratory insect species that spends part of its life cycle in North America. The monarch butterfly is currently considered a candidate species under the Endangered Species Act. Monarch butterflies spend spring and summer in areas of North America and prefer open field and grassland habitats. The primary host plant for the monarch in North America is milkweed. Surveys have not formally been completed to indicate monarch presence on the proposed hunt area, but monarchs are present throughout Louisiana from late August through October for fall migration and mid-March to May for spring migration, so it can be assumed that monarchs could be found in the proposed hunt area. Hunting occurs from September through February. If monarch butterflies are present when hunters are using the refuge, it would most likely be adult butterflies seeking nectar sources for the migration south. To access the hunt area, hunters are most likely to use tracts through forested parts of the refuge, where monarchs and their nectar plants generally do not occur. Furthermore, given that only light foot travel from hunters accessing the area would be expected to occur on these acres, we anticipate that any potential damage to nectar plants from foot traffic disturbance would be extremely unlikely, and therefore considered discountable. Hunting does not result in the removal of vegetation, including nectar sources or milkweed, and so it would have no to negligible impacts to habitat resources important for monarchs. Given the limited temporal overlap in September and October when hunters could be in the proposed hunt area while monarch butterflies and caterpillars could potentially be there and given the unlikely spatial overlap between the low number of hunters and monarchs, encounters with monarch butterflies or caterpillars would be infrequent; even so, the presence of humans would likely not disturb

SPECIES / CRITICAL HABITAT	IMPACTS TO SPECIES/CRITICAL HABITAT
	the monarchs, given that they are fairly tolerant of human presence. Further, the Service prohibits the take of plants on the refuge. The current hunt program has not resulted in documented adverse impacts to these species or their host plant. Therefore, the Proposed Action will not be likely to jeopardize this species.

B. Explanation of actions to be implemented to reduce adverse effects:

1. The refuge will modify hunting activities if unusual concentrations of threatened and endangered species are known to be present and would be threatened by hunting activities.
2. The presence of federal and state wildlife law enforcement officers will provide a deterrent to illegal activities, including the take of non-target species, trespass activities, and the use of unauthorized weaponry.
3. Hunter numbers are intrinsically reduced by the design of the hunt program, including take methods and other restrictions, which help minimize any potential disturbance to listed species.
4. Hunting under the Proposed Action will be limited to archery and waterfowl, which inherently do not include lead ammunition.

SPECIES/ CRITICAL HABITAT	ACTIONS TO MINIMIZE IMPACTS
West Indian Manatee *(Trichechus manatus*)	No actions necessary.
Alligator Snapping Turtle (*Macrochelys temminckii)*	No actions necessary.
Monarch Butterfly (*Danaus plexippus*)	No actions necessary.

VIII. Effect Determination and Response Requested:

SPECIES / CRITICAL HABITAT	NE[1]	NJ[1]	NA[1]	AA[1]	RESPONSE[1] REQUESTED
West Indian Manatee *(Trichechus manatus*)	X				Concurrence
Alligator Snapping Turtle (*Macrochelys temminckii)*		X			Concurrence
Monarch Butterfly (*Danaus plexippus*)		X			Concurrence

[1]DETERMINATION/RESPONSE REQUESTED:

NE = no effect. This determination is appropriate when the proposed action will not directly, indirectly, or cumulatively impact, either positively or negatively, any listed, proposed, candidate species or designated/proposed critical habitat. Response Requested is optional but a "Concurrence" is recommended for a complete Administrative Record.

NJ = not likely to jeopardize. This determination is appropriate when the proposed action is not likely to jeopardize the continued existence of the proposed listed species. Response Requested is a "Concurrence".

NA = not likely to adversely affect. This determination is appropriate when the proposed action is not likely to adversely impact any listed, proposed, candidate species or designated/proposed critical habitat or there may be beneficial effects to these resources. Response Requested is a "Concurrence".

AA = likely to adversely affect. This determination is appropriate when the proposed action is likely to adversely impact any listed, proposed, candidate species or designated/proposed critical habitat. Response Requested for listed species is "Formal Consultation". Response Requested for proposed or candidate species is "Conference".

Signature/Date BRIAN PEMBER Digitally signed by BRIAN PEMBER Date: 2024.10.07 10:42:58 -05'00'

Title

IX. Reviewing Ecological Services Office Evaluation:

A. Concurrence __X____ Non-concurrence _____

B. Formal consultation required _____

C. Conference required _____

D. Informal conference required _____

E. Remarks (attach additional pages as needed):

Signature/Date Deputy Field Supervisor DUSTIN GARIG Digitally signed by DUSTIN GARIG Date: 2024.10.10 16:05:31 -05'00'

Title/Office

FOR Brigette Firmin, FIeld Supervisor, Louisiana Ecological Services Office

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