



Wateree River Heritage Preserve Wildlife Management Area & Love Farm Wildlife Management Area Wetlands Management Review







Wetland Review Team

Kevin Nelms Certified Wildlife Biologist USDA NRCS

Kevin Nelms serves as the USDA NRCS biologist for 15 counties in the Mississippi Delta and is currently serving as state biologist. In addition to wetlands compliance duties, he works extensively with private landowners to improve waterfowl habitat and management. He is knowledgeable in federal wetlands restoration programs (CRP and WRP – the Conservation Reserve and Wetlands Reserve programs) and in the design and implementation of wetlands restoration. Prior to his role in Mississippi, Nelms worked in a similar role in the Missouri Bootheel and Fort Stewart, Georgia. Over his 26-year career, Nelms has tested and applied his waterfowl knowledge and recommendations on thousands of properties.



Acknowledgements

The insights and observations in this review were made possible by the spirit of collaboration between the South Carolina Department of Natural Resources (SCDNR) Wateree River Heritage Preserve Wildlife Management Area (WMA) and Love Farm Wildlife Management Area waterfowl and wetland management leadership, biologist Travis Bennett, State Waterfowl Biologist Molly Kneece, and Region 3 Wildlife Coordinator Barry Kesler; the wetland review team of Kevin Nelms and Scott Rhodes; and third-party facilitator, Jennifer Howard. The review team commends SCDNR leadership for embracing an external review process in the spirit of furthering the application of sound science in the responsible management of the state's resources. Photos are provided courtesy of SCDNR biologists, archaeologists and technicians. A special thank you to Meg Gaillard (pg. 11) and Travis Bennett for the collection of photos provided for this report.

Scott Rhodes Registered Forester Certified Wildlife Biologist Forest Management Services

While the majority of his business is forestry-related, Scott Rhodes enjoys the challenges of waterfowl management, including on his family property in the Lowcountry. Rhodes' clients value his practical, field-tested recommendations that he has honed over his 25+ years of work. He is the founder of the Lowcountry Gamebird Foundation, dedicated to raising money for gamebird research.





Jennifer Howard
Conservation Communications
Consultant
Steward Terra

Steward Terra’s name - to care for and earth - embodies the mission of helping natural resource and conservation professionals tell their stories in deliberate and impactful ways. Howard is committed to helping organizations succeed by leveraging meaningful words and supporting visuals through strategic communications planning and implementation, media relations and meeting/small group facilitation. Steward Terra’s current and previous client list includes local land trusts, such as the Open Land Trust in Beaufort, South Carolina, and Pee Dee Land

Trust, and large conservation leaders such as The Nature Conservancy, Audubon South Carolina, American Battlefield Trust, and The Longleaf Alliance. She also serves as the first paid executive director of the South Carolina Land Trust Network. Clients value her ability to distill technical information and her sensitivity to navigating competing or complex interests.

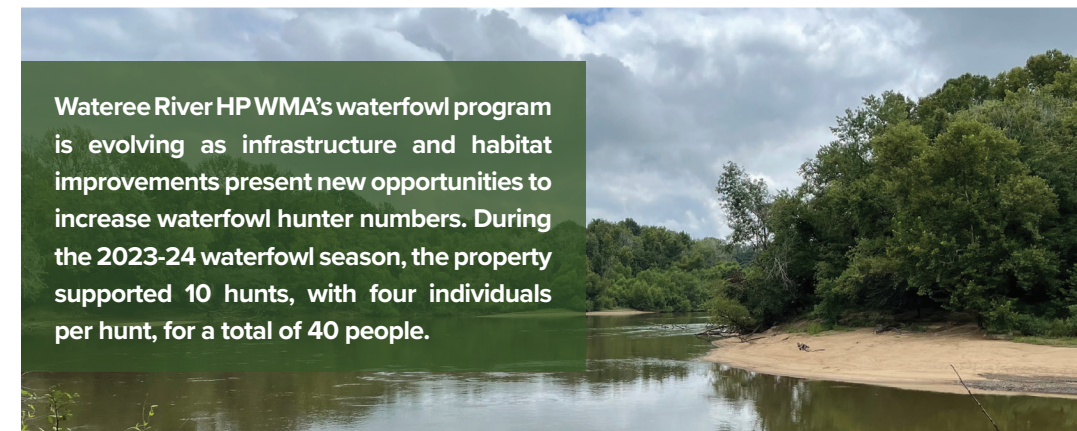
Prior to founding Steward Terra, Howard worked for more than 20 years in the forest products industry: International Paper, Westvaco, MWV, WestRock; as a wood procurement forester, public affairs forester and director of marketing and communications for the company’s land management division.

The Properties

Wateree River Heritage Preserve Wildlife Management Area Property Overview

Wateree River Heritage Preserve Wildlife Management Area is bordered by the Wateree River and includes the iconic Cooks Mountain, 17 miles east of Columbia, South Carolina. The property encompasses 3,674 acres, with portions of two historic plantations: Cooks Mountain and Goodwill Plantation. Because of its rich cultural and natural resources, Wateree River is designated as a Heritage Preserve (HP), the highest protection in the state; and the Wildlife Management Area (WMA) designation allows for a robust public hunt program. The property was purchased by the Haile Gold Mine as a partial mitigation for a Lancaster County mining operation and was transferred to SCDNR in 2015. A portion of the property is under a conservation easement with Ducks Unlimited to further encourage the management of wetland habitats. The agency’s stated objectives for the property are to “preserve and enhance natural and cultural resources while restoring and enhancing jurisdictional wetlands and streams.”

Given the property’s proximity to Columbia and Shaw Air Force Base, it is a popular destination not only for hunting (deer, turkey, waterfowl, hog, and small game), but also for non-consumptive uses such as hiking, birding, plant and wildlife observation, biking and photography. It is also open for equestrian use and select camping by permit. Visitor use averages around 2,500 people per year – approximately half of whom are hunting, fishing or scouting.



Wateree River HP WMA’s waterfowl program is evolving as infrastructure and habitat improvements present new opportunities to increase waterfowl hunter numbers. During the 2023-24 waterfowl season, the property supported 10 hunts, with four individuals per hunt, for a total of 40 people.



Wateree River HP WMA

By the numbers

- **Managed wetlands: seven waterfowl impoundments**
- **44 miles of roads and fire lines**
- **9.5 miles of open drivable roads**
- **2,500 annual visitors**

Love Farm Wildlife Management Area and Nat Love Youth Special Hunt Area Property Overview

The Love Farm WMA is an 802-acre property located along the Wateree River, just downstream and adjacent to the Wateree River HP WMA and has been under management by SCDNR since 2021. From the bottomland hardwoods along the river to the upland pines and agriculture fields, Love Farm gains nearly 90 feet in elevation, providing for a variety of habitat types in a relatively small footprint. The agency's Divisions of Wildlife and Freshwater Fisheries (WFF) and Law Enforcement share joint ownership, planning and management of the property.



Love Farm WMA is only open to the public during regulated dove hunts and lottery waterfowl hunts. Deer and turkey hunting is provided through the Take One Make One youth hunting program. A skeet/trap range is under construction and expected to open in 2024. Two impoundments are currently serving as water retention for the construction and can be managed after securing county and state approvals.



LOVE FARM WMA

By the numbers

- Five impoundments totaling 51.8 acres
- 1.2 miles of waterfowl impoundment fencing
- 12 water control structures



Project Overview

In August 2022, SCDNR engaged a third-party facilitator and two external wetland experts from public and private sectors across the south to conduct a thorough review of the impoundment management practices for Wateree River HP WMA and Love Farm WMA. The team was tasked with evaluating the following five areas:

1. Evaluate the **existing management plan** for gaps or misplaced goals
2. Evaluate **infrastructure** (dikes, water control structures)
3. Evaluate and make recommendations on **mitigating disturbance**
4. Evaluate current **water management** regimes and issues
5. Evaluate selection and success of **planted crops**



During two meetings, one web-based teleconference and a two-day onsite classroom session and field tour, the team reviewed and discussed all aspects of Wateree River HP WMA and Love Farm WMA's management programs and documentation including:

- Management plan
- Maps
- Detailed management accomplishments and challenges
- Equipment and staffing
- Budget
- Waterfowl harvest data

ONE: EXISTING MANAGEMENT PLANS

Successful land management is rooted in innovation and flexibility. The review team agrees that the existing comprehensive management plans are adequate and encourages on-site leadership to develop flexible, tactical multi-year work plans to direct activities and to identify and resolve potential conflicting interests while responding to changing factors such as weather events. The joint ownership and management of Love Farm WMA offers opportunities to support the goals of both organizations but documented, clear direction is needed.



The review team commends the partnership with the agency archaeologist on Wateree River HP WMA and encourages the team to explore how to broadly share the story of the impact past cultural practices have on today's habitats.

TWO: INFRASTRUCTURE

The review team studied infrastructure through the lens of accessibility (roads) and the functionality of the impoundments (dikes and water control structures).



Both Wateree River HP WMA and Love Farm WMA have remarkable road systems, demonstrating staff's commitment to prioritizing good access during the agency's short window of ownership. Significant hog populations posed challenges immediately upon acquisition. Staff proactively installed fencing to protect the investment in managed impoundments. With access and site destruction by hogs addressed on both properties, the team is positioned to continue infrastructure improvements.

The Love Farm WMA boasts a system of dikes and water conveyance that positions the property for successful waterfowl management. All management decisions, however, should be contingent upon the two internal divisions prioritizing land use options. The visiting team identified an opportunity to create a new impoundment by adding an additional dike and explored options for the impoundment that is currently serving as retention for the shooting complex that is under construction. Additionally, the expansive bottomland hardwood forest, particularly near the oxbow, could serve as a Green Tree Reservoir (GTR) complementing the open water impoundments.



On the Wateree River HP WMA, the initial work in the GTR is an innovative, positive step. The review team encourages staff to continue maintenance while archaeological work is ongoing, to explore solutions for water management, and to consider other similar areas for additional GTRs. Additionally, the review team strongly encourages continued investment in all impoundments (except Cypress Pond), to include opening areas by removing timber in narrow spaces, improving access for equipment, stabilizing dikes and using chemical and/or mechanical treatments to promote desirable vegetation.



THREE: MITIGATING DISTURBANCE

Wildlife biologists, duck hunters and researchers agree that disturbance can have an immediate impact on how or if waterfowl use a site. The staff of Wateree River HP WMA and Love Farm WMA are proactively addressing known and potential disturbances by increasing buffers, eliminating the potential impacts of foot traffic by re-routing hiking trails and discouraging traffic generated by agency vehicles.



The air traffic from nearby McEntire Joint National Guard Base has been particularly problematic. Both sites are in the training paths for Apache helicopters, which fly at very low levels. Staff reports that initial conversations demonstrated a willingness of the base leadership to work with SCDNR to pursue solutions that reduce their impact and shared specific actions that the base was already taking to decrease disturbance. The review team recommends connecting agency leadership to base leadership in effort to eliminate nighttime flights over the WMAs during duck season.

On Love Farm WMA, the review team anticipates impacts on waterfowl use due to shooting range effects and recommends a schedule change specific to duck season. The team recommends no range shooting on hunt days and limited shooting times of 11 a.m. – 2 or 3 p.m. on non-hunt days during waterfowl season. This compromise would provide both public range opportunities while providing some undisturbed time for waterfowl sanctuary.



FOUR: WATER MANAGEMENT

For Wateree River HP WMA and Love Farm WMA to realize the full value of infrastructure investments, the staff must have better access to water sources and systems that are efficient, independent and able to minimize impacts by external forces to the extent possible.



While formal and informal agreements are in place at Wateree River HP WMA, water access is potentially vulnerable to disruption or unavailability. The review team recommends investigating long-term solutions, such as dedicated wells (on the north end near the river and adjacent the southern impoundments near the entrance) that will allow for greater autonomy and eliminate the need for surface water pumps and water releases from adjacent properties.

Love Farm WMA currently has a reliable water conveyance and distribution system that could be further capitalized on to supply new impoundments.



FIVE: PLANTED CROPS

At both Wateree River HP WMA and Love Farm WMA, the review team acknowledged the value of planted crops while encouraging staff to continue to prioritize moist soil management to ensure a diversity of food sources and a balanced diet for waterfowl and other wetland-dependent species.

On sites suitable for corn, staff is encouraged to intensely manage the crop to maximize yield. This could include pre-emergent and post-emergent herbicide treatments to control competition and soil amendments per soil test recommendations. On sites with an elevation gradient, staff is encouraged to manage for moist soil plants in the low areas and planted crops (corn, chufa, rice, millet) in well-drained soils.



The review team recommends that two impoundments: Beaver (Wateree River HP WMA) and Lilly (Love Farm WMA) be managed for submerged and emergent aquatic plants and invertebrates, providing other valuable waterfowl food sources and wetland habitat diversity. Target species should include naiads (*Najas*), pondweeds (*Potamogeton*), duck potatoes (*Sagittaria*), beggarticks (*Bidens*), spikerushes (*Eleocharis*), and bullrushes (*Scirpus*).



Beaver (Wateree River HP WMA)



Lilly (Love Farm WMA)

Conclusion

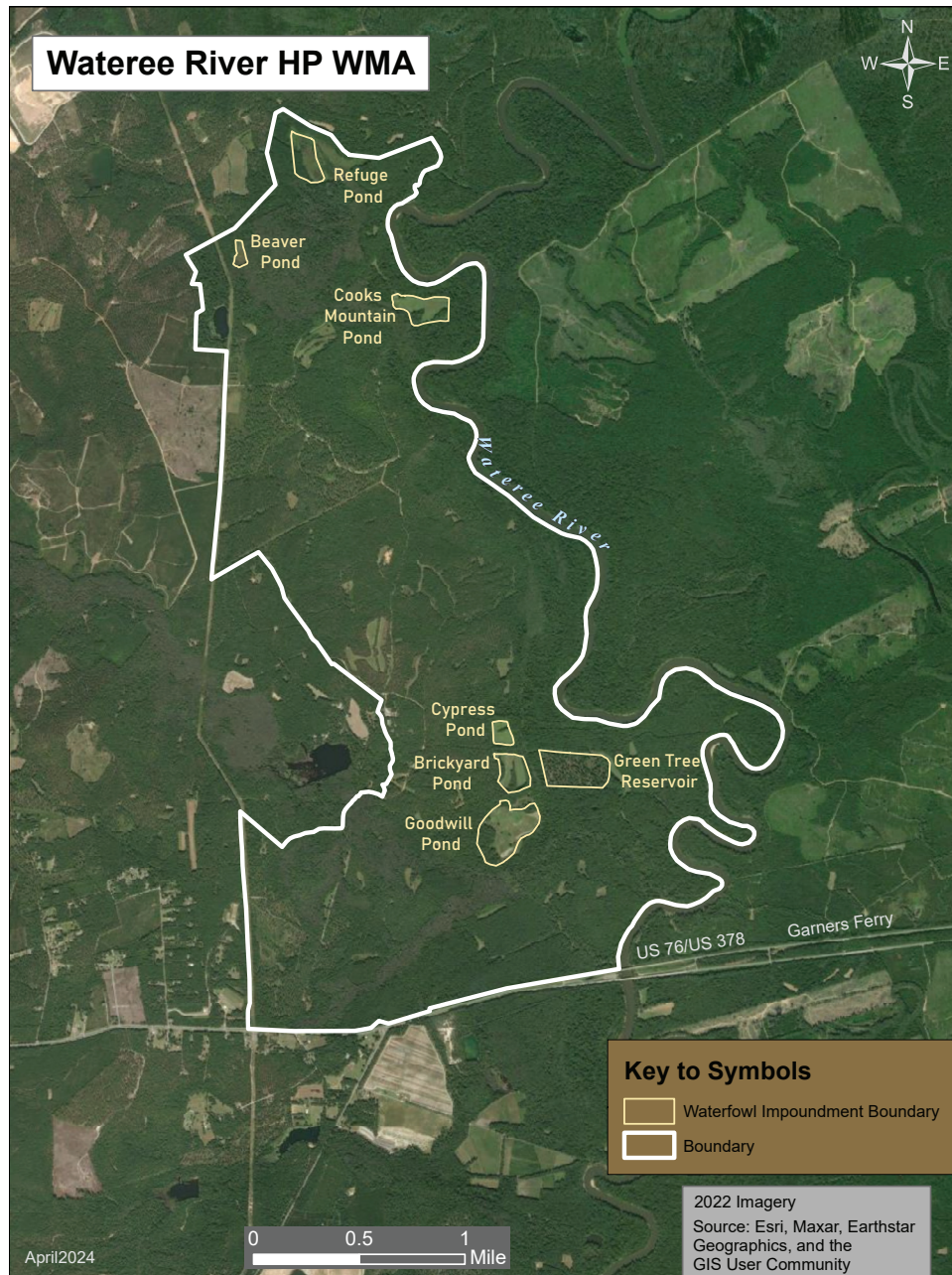
Wateree River HP WMA and Love Farm WMA are led by committed professionals and currently have the equipment and staffing necessary to maintain quality habitats. Both properties are relatively new to the agency and are requiring significant time and investment to increase the quality of the waterfowl habitat.

Staff is commended for focusing on critical infrastructure needs first- roads, hog fencing and failing impoundment levees and pipes- as they seek ways to scale up hunter numbers. They have completed an impressive volume of work with a relatively small budget and team. Further, the review team was impressed with the solutions they negotiated with McEntire Joint National Guard Base, as installations can be challenging to penetrate.



As remaining impoundment infrastructure needs and water issues are resolved, the review team encourages staff to explore options to increase their knowledge of moist soil management through mentorship with the state waterfowl biologist and experienced peers, pursuing continuing education courses and online resources.

Maps







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