



## United States Department of the Interior

FISH AND WILDLIFE SERVICE

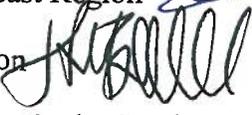
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In Reply Refer To:  
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**JUN 28 2016**

### Memorandum

To: Project Leaders of Migratory Bird Program Field Stations and National Wildlife Refuges Managing for Waterfowl

From: Chief, National Wildlife Refuge System, Southeast Region   
Chief, Migratory Bird Program, Southeast Region 

Subject: Strategic Action Plan for Waterfowl Management in the Southeast Region

To address the challenges facing national wildlife refuges (Refuges) conducting waterfowl management, over 60 managers/biologists from the U.S. Fish and Wildlife Service (Service) and multiple partners representing Joint Ventures, Arkansas Game and Fish Commission, Ducks Unlimited, and the Mississippi State University Agricultural Extension Office attended the May 2015 Waterfowl Workshop at Wheeler National Wildlife Refuge. The initial outcome of this workshop was the establishment of the Regional Waterfowl Working Group to champion a path forward for waterfowl management in the Southeast Region. This group was comprised of National Wildlife Refuge System (NWRS) and Migratory Bird program staff and was tasked with developing a strategic action plan for NWRS waterfowl management in the Southeast Region.

By this memorandum, we are pleased to provide the “Strategic Action Plan for Waterfowl Management in the Southeast Region” which will serve as a 5-year strategy to increase the efficiency of waterfowl management on Refuges across the Southeast Region, prioritize conservation delivery to support the North American Waterfowl Management Plan (NAWMP), and more broadly support the mission of the National Wildlife Refuge System. Using the workshop discussion themes as a foundation and comments received through an extensive internal peer-review of the draft action plan, four fundamental operating recommendations were developed to facilitate the regional approach: Communication, Science, Waterfowl and Habitat Support, and Human Dimensions. The plan includes specific, interrelated actions for implementation during the near- (1-3 years) and long-term (3-5 years).

Implementation of these actions will require substantial effort across the Southeast Region which will be achieved through the formation of multiple teams and the creation of a field-based Regional Waterfowl Ecologist position to support the 73 of 130 (56%) Refuges identified as top/important regional priorities that contribute to NAWMP goals and objectives under the

Southeast Refuge Workforce Alignment Plan. The Regional Waterfowl Ecologist and proposed teams are charged to work in close partnership with Joint Venture staff. A first step was our reaching out to Joint Venture partnerships for assistance to update NAWMP "stepped down" objectives at the State level, and, where possible and appropriate, at more local levels. The Lower Mississippi Valley, Gulf Coast, and Atlantic Coast Joint Ventures have all agreed and developed timelines to conduct this work in their partnership forums.

The following teams are charged with implementing the actions and recommendations described in the strategic plan during the next five years:

- **Waterfowl Steering Committee** – Chris Swanson (lead), Janet Ertel, Randy Wilson, and Troy Littrell from the original Regional Waterfowl Working Group along with the Regional Waterfowl Ecologist to provide strategic oversight in the implementation of this plan. All five teams will maintain close communication with the Waterfowl Steering Committee to report progress and ensure completion of the action items identified in the plan.
- **Waterfowl Communications Team** – Stacy Hayden (lead), Jennifer Strickland, Nick Wirwa, Scott Lanier, Bo Sloan, and Wendy Stanton to develop strategies to convey the role of Refuges in supporting continental waterfowl populations.
- **Waterfowl Science Team** – Steve Reagan (lead), Gypsy Hanks, James Harris, Rick Eastridge, Bill Gates, Pete Campbell and the Regional Waterfowl Ecologist working in concert with Joint Venture partnerships to develop science-based strategies to support waterfowl management on Refuges .
- **Waterfowl and Habitat Support Team** – John Stanton (lead), Brett Wehrle, Gary Pogue, Richard Crossett, Whit Lewis, Regional Waterfowl Ecologist and an external expert in waterfowl conservation to link emerging waterfowl science with NWRS operations.
- **Waterfowl Management NEPA Team** – Tina Chouinard (lead), Cheri Ehrhardt, Kelly Van Druten, Randy Cook, Robert Wheat, Whit Lewis, and a representative from the U.S. Solicitor's Office to develop a course of action to evaluate pesticide use associated with waterfowl management under NEPA.
- **Waterfowl Human Dimensions Team** – Stacy Armitage (lead), Cindy Heffley, Dave Young, Diane Borden-Billiot, Michael Johnson, Tamar Kavaldjian-Liskey, Teresa Adams, and the Regional Waterfowl Ecologist in coordination with Natural Resource Program Center Human Dimensions Branch staff to establish station-level human dimension objectives in partnership with Joint Ventures.

Waterfowl management on Refuges in the Southeast Region is at a critical point with greater competition for limited financial resources, with policy changes affecting management techniques, and with an internal lessening appreciation for their role and value in supporting NAWMP. Thus, the steps outlined in the strategic action plan are necessary for optimizing operational efficacy, increasing science-based management and inventory and monitoring strategies, addressing key research gaps, meeting National Environmental Policy Act requirements, and communicating internally and externally the importance of Refuges in maintaining continental waterfowl populations and connecting people with nature. Together we will continue to make waterfowl management within the Southeast Region a priority and increase its efficiency to meet Refuge purposes in support of continental waterfowl populations.

**Strategic Action Plan  
for  
Waterfowl Management in the Southeast Region**

*A report resulting from the Southeast Region  
National Wildlife Refuge System Waterfowl Workshop  
at  
Wheeler National Wildlife Refuge  
May 2015*

## INTRODUCTION

National Wildlife Refuges (refuges) across the Southeast Region play a critical role in providing food resources, nesting habitat, and sanctuary for a variety of migratory and wintering ducks, swans, and geese. However, the ability to consistently and efficiently provide resources needed for waterfowl conservation on these refuges has been challenged by several years of declining budgets, reduced staff, workforce alignment planning, and a national-level policy decision to phase out genetically modified crops and neonicotinoids. These changes and other challenges have elevated the need for a comprehensive assessment of how and where refuges across the Southeast Region can meet legal mandates and obligations to trust resources (e.g., migratory birds), as well as the goals and objectives of the North American Waterfowl Management Plan (NAWMP).

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*”. With respect to waterfowl management, the Refuge System and its partners strive to meet and contribute to the goals and objectives outlined in NAWMP: (1) sustain abundant and resilient waterfowl populations to support hunting and other uses without imperiling habitat; (2) protect wetlands and related habitats sufficient to sustain waterfowl populations at desired levels, while providing places to recreate and ecological services that benefit society; and (3) promote growing numbers of waterfowl hunters, other conservationists, and citizens who enjoy and actively support waterfowl and waterfowl conservation.

In the Southeast Region, 73 of the 130 (56%) refuges are identified as top or important regional priorities in support of NAWMP goals and objectives (NAWMP priority refuges) under the Southeast Refuge Workforce Alignment Plan. Each of these identified NAWMP priority refuges contributes to the management and protection of wetlands, provision of high-quality food resources and sanctuary for waterfowl, as well as recreational opportunities through hunting and wildlife viewing to the general public. These resources contribute to the life-cycle needs of waterfowl and other wetland dependent species, as well as providing benefits to society and supporting the overall mission of the Refuge System.

In the Southeast Region, refuges support millions of waterfowl each year and are responsible for providing resources year-round. During the non-breeding period (up to 8 months of the annual life-cycle), management objectives are to ensure high survival rates and return birds to the breeding grounds in optimum body condition. The importance of providing sufficient sanctuary and food resources on the wintering grounds cannot be overstated. These resources influence annual survival rates, body condition, nest initiation date, clutch size, nest survival and breeding propensity of waterfowl; all of which can have individual and/or cumulative positive impacts on

population growth. Thus, management actions on refuges across the Southeast Region have an essential role in supporting abundant and sustainable populations of waterfowl consistent with the goals of the NAWMP.

Waterfowl management on refuges in the Southeast Region is at a critical point with greater competition for limited financial resources, growing limitations on management techniques, and a lessening appreciation for this role and value of these refuges. To address these challenges, a three day workshop was held at Wheeler National Wildlife Refuge from May 12-14, 2015 to discuss topics affecting waterfowl management on refuges across the Southeast Region.

Key themes that emerged from the Wheeler workshop were the need to: (1) better communicate the role and value of refuges towards meeting obligations to trust resources and NAWMP goals; (2) increase and improve capability and efficacy of on-the-ground habitat delivery on refuges; (3) increase the scientific base of knowledge underpinning waterfowl conservation actions on refuges; and (4) enhance our collective understanding of human dimensions and societal values surrounding waterfowl conservation on refuges. Using these themes as a foundation, this report includes the review and synthesis of notes from the Wheeler workshop that: (1) puts forth a set of recommendations to address fundamental needs for waterfowl management on refuges across the Southeast Region; (2) identifies a series of interrelated actions to advance and facilitate implementation of the recommendations on refuges across the Southeast Region; (3) assigns responsible parties to coordinate and collaborate with partners both inside and outside the Service to oversee and deliver the outcomes identified, and (4) prioritizes these actions into immediate, near-term (e.g., 1-3 year) and long-term (3-5 year) priorities recognizing the necessary order of interrelated actions to facilitate current and future operational planning. It was beyond the scope of the writing team to address the details of specifically who and how each of the individual actions would be accomplished; however, the desired deliverable and responsible party deemed necessary to accomplish each action is identified.

The following recommendations and associated actions are organized into four fundamental operating recommendations to facilitate our collective and operational thinking: Communication, Science, Waterfowl and Habitat Support, and Human Dimensions. The recommendations and actions address existing needs and opportunities to increase the efficiency of waterfowl conservation on refuges across the Southeast Region to fulfill our responsibility under NAWMP and to more broadly support the mission of the Refuge System “*to administer a network of lands.....for the benefit of present and future generations*”.

## COMMUNICATION

**RECOMMENDATION 1.0: Develop and implement a strategic approach to increase focused internal and external communication on demonstrating the importance of refuges in the Southeast Region in supporting waterfowl populations by connecting people with nature (CPwN) through science.**

**ACTION 1.1:** Develop a communication strategy for internal and external audiences.

**DELIVERABLE:** Develop a communications strategy that identifies target audiences and appropriate messaging to convey the role and support that refuges provide to waterfowl conservation. Develop in-reach and outreach communication products and utilize traditional and innovative mechanisms (e.g. social media, Refuge Update, FWS website and Facebook pages, radio, TV, CPwN refuge education programs, partner agencies, etc.) to actively promote the need, benefit, and accomplishments of refuges in supporting waterfowl populations.

**RESPONSIBLE PARTY:** A Standing six person Waterfowl Communications Team appointed by the Regional Chief to include external affairs, refuge visitor service staff, two refuge biologists, and two refuge managers. Refuge employees selected to serve on the team should have experience with waterfowl management techniques including the use of cooperative farming.

**TIMELINE:** Immediate to 1 year.

**ACTION 1.2:** Communicate to Regional Office and Headquarters leadership the importance and contributions of refuges to supporting NAWMP goals.

**DELIVERABLE:** Develop talking points that clearly demonstrate the waterfowl population and societal benefits of waterfowl management on NAWMP priority refuges as identified in the Southeast Refuge Workforce Alignment Plan. Develop further talking points for Service leadership to communicate similar benefits with formal audiences such as Department of Interior and congressional leaders.

**RESPONSIBLE PARTY:** The Waterfowl Communications Team with input from key Migratory Bird Program staff utilizing information provided by the Waterfowl Science Team.

**TIMELINE:** Immediate to 1 year.

**ACTION 1.3:** Provide current technical guidance to refuge staff on waterfowl management techniques.

**DELIVERABLE:** Develop a regional waterfowl management technique guide or handbook based on the best available science that is readily revised and current (e.g. e-format). In addition to the guide, investigate offering on-line training and a course at the National Conservation Training Center (NCTC) for new Service employees on waterfowl management that goes in depth into the resources (i.e., high energy foods, sanctuary) provided by refuges in the Southeast Region that support the full life cycle of waterfowl.

**RESPONSIBLE PARTY:** The proposed Regional Waterfowl Ecologist.

**TIMELINE:** One to 3 years.

## SCIENCE

**RECOMMENDATION 2.0: Utilize the strategic habitat conservation framework to advance the body of science used to inform, assess, adapt, and prioritize waterfowl management contributions to NAWMP goals and objectives on refuges in the Southeast Region.**

**ACTION 2.1:** Establish and endorse a formal process for identifying priority waterfowl species, habitat-based resources, and sanctuary objectives to improve the biological basis guiding waterfowl management actions in support of NAWMP.

**DELIVERABLE:** Provide a report outlining a transparent and defensible process for establishing priority waterfowl species, habitat-based resource objectives (e.g., food, water, nesting cover, brood rearing cover, etc.), and sanctuary objectives for all NAWMP priority refuges across the Southeast Region that is consistent with Joint Venture planning processes.

**RESPONSIBLE PARTY:** A standing 6-person refuge Waterfowl Science Team comprised of one refuge biologist or manager representing the geographic footprint of each Joint Venture across the southeast (Lower Mississippi Valley, Gulf Coast, Central Hardwoods, East Gulf Coastal Plain, and Atlantic Coast) and the proposed Regional Waterfowl Ecologist working in concert with Joint Venture partnerships.

**TIMELINE:** One to 3 years (Establish priority waterfowl species and resource objectives within 1 year; all processes complete within 3 years).

**ACTION 2.2:** Determine the most efficient and biologically based allocation of population, habitat, and sanctuary objectives across NAWMP priority refuges in the Southeast Region to meet JV/NAWMP waterfowl objectives.

**DELIVERABLE:** Establish apportionment of population, habitat, and sanctuary objectives for all priority waterfowl species to individual refuges across the Southeast Region via a transparent and defensible process informed by Joint Venture planning efforts and regional budget allocation strategies (see Actions 3.1 & 3.3).

**RESPONSIBLE PARTY:** The Waterfowl Science Team.

**TIMELINE:** One to 3 years.

**ACTION 2.3:** Develop and institutionalize a formal process to document and track current (land base) capability to provide habitat-based resources and sanctuary on all NAWMP priority refuges in the Southeast.

**DELIVERABLE:** Establish and maintain a geo-database (e.g., Refuge Lands GIS) to identify current habitat and water management capabilities (e.g., impoundments, cover types, sanctuary) and archive management treatments on all NAWMP priority refuges.

**RESPONSIBLE PARTY:** The Waterfowl Science Team with assistance from the Refuge Inventory & Monitoring Branch staff, in concert with Joint Venture partnerships.

**TIMELINE:** One to 3 years.

**ACTION 2.4:** Identify monitoring objectives, appropriate response variables and protocols for refuge-, regional-, and flyway-scale assessments using a collaborative decision-making process to ensure objectives, values, and protocols reflecting the contribution of refuges to Joint Venture and NAWMP goals and objectives.

**DELIVERABLE:** Develop a Southeast Region Refuge System waterfowl and habitat inventory and monitoring plan that identify objectives, metrics, and protocols for addressing monitoring needs at multiple spatial-scales.

**RESPONSIBLE PARTY:** The Waterfowl Science Team and Inventory & Monitoring Branch staff in consultation with Refuge staff, Joint Ventures and the Migratory Bird Field Offices.

**TIMELINE:** One to 3 years.

**ACTION 2.5:** Identify key research assumptions, knowledge gaps, and questions underpinning waterfowl management practices on refuges.

**DELIVERABLE:** Develop a “living report” that identifies the science needed to test assumptions and/or reduce data gaps. The report should include: (1) clearly stated need; (2) a brief problem statement; (3) key objectives to be addressed; (4) geographic scope of the work; and (5) expected deliverables. The report should be updated on a 5-year basis or as information becomes available.

**RESPONSIBLE PARTY:** The Waterfowl Science Team.

**TIMELINE:** Immediate to 1 year.

## **WATERFOWL and HABITAT SUPPORT**

**RECOMMENDATION 3.0: Assess and improve operational capacity for on-the-ground delivery of high quality habitat resources for wintering and migrating waterfowl on refuges in the Southeast Region and prioritize station and regional level needs toward meeting NAWMP goals and objectives.**

**ACTION 3.1:** Assess the current operational capabilities of refuges to meet NAWMP goals and objectives.

**DELIVERABLE:** Develop a regional refuge budget strategy with written recommendations to balance waterfowl management (i.e., planning, delivery, monitoring) priorities and needs of the Southeast Region and individual stations. Identify strategies to meet shortfalls in staffing and other resources (e.g., funding, equipment, infrastructure and land base) needed by priority individual refuges identified as having NAWMP and CPwN “top priorities” within the most recent version of the Southeast Refuge Workforce Alignment Plan.

**RESPONSIBLE PARTY:** Area Supervisors in coordination with Refuge Leadership Team.

**TIMELINE:** One to 3 years.

**ACTION 3.2:** Establish an FTE to serve as a regional waterfowl ecologist to support waterfowl management activities across refuges.

**DELIVERABLE:** Establish a field-based waterfowl ecologist position with regional duties within the Inventory & Monitoring Branch. Potential funding mechanisms include using some of the 126x money currently provided to the Migratory Bird Program, redirecting duties of a vacant or existing Refuges or Migratory Bird Program position, or redirecting funding to create a new FTE. Placing it organizationally within the Inventory & Monitoring Branch will amplify benefits through collaboration in science.

**RESPONSIBLE PARTY:** Refuge Leadership Team in coordination with Division of Strategic Resource Management and Migratory Bird Division

**TIMELINE:** Immediate to 1 year.

**ACTION 3.3:** Periodically evaluate alternative management actions to determine the most efficient and effective practices that provide high quality habitat for waterfowl.

**DELIVERABLE:** Assess scenarios of alternative management strategies (e.g., force account farming, cooperative farming), seeking to provide waterfowl habitat (e.g., moist-soil habitat, row crops, bottomland hardwoods), including costs, benefits (DEDs and DUDs), tradeoffs and uncertainties. For example, evaluate seed sources, food resources (e.g., DEDs provided by row crops, moist-soil habitat, bottomland hardwood wetlands, etc.), manpower, financial inputs, and waterfowl use (DUDs) at 3 year intervals to inform waterfowl management actions on refuges in the Southeast Region.

**RESPONSIBLE PARTY:** A standing refuge Waterfowl and Habitat Support Team to include the proposed Regional Waterfowl Ecologist, Regional Farm Coordinator, two Refuge Managers,

two Wildlife Biologists, one Migratory Bird Biologist, and one external expert within the waterfowl field.

**TIMELINE:** One to 3 years.

**ACTION 3.4:** Develop course of action for evaluating pesticide use associated with waterfowl management on refuges under National Environmental Policy Act (NEPA).

**DELIVERABLE:** Provide the Refuge Leadership Team with outline addressing: (1) a summary of NEPA that has been previously conducted to implement waterfowl management; (2) identify lessons learned; (3) identify steps to maintain compliance with NEPA on future use of pesticides.

**RESPONSIBLE PARTY:** An ad hoc group, to include Regional Farming Coordinator, solicitor, NEPA trained planner, two members of cooperative farming NEPA team, and two representatives from impacted Areas.

**TIMELINE:** Immediate to 1 year.

**ACTION 3.5:** Ensure refuge staff receives continuing education in waterfowl management.

**DELIVERABLE:** Provide readily available web- and classroom-based learning opportunities for resource managers related to habitat management for waterfowl and human dimensions. Provide regular workshops to promote hands on learning and sharing of ideas among practicing professionals.

**RESPONSIBLE PARTY:** An ad hoc group, led by the proposed Regional Waterfowl Ecologist working with a Refuge Manager, Wildlife Biologist, Forester, Migratory Bird Biologist, Inventory and Monitoring Ecologist, and representatives from NCTC.

**TIMELINE:** One to 3 years.

## HUMAN DIMENSIONS

**RECOMMENDATION 4.0: Clarify and assess the role and value of refuges in the Southeast Region in connecting people with waterfowl conservation as realized through hunting and wildlife observation consistent with NAWMP.**

**ACTION 4.1:** Assess current Big 6 accomplishments relative to waterfowl management actions occurring on all refuges.

**DELIVERABLE:** Quantify current participation and provide recommendations to increase the number of public contacted through waterfowl-related outreach tools (e.g., waterfowl hunts, wildlife viewing, festivals, EE program, Jr. Duck Stamp Program).

**RESPONSIBLE PARTY:** The regional Visitor Services Branch staff.

**TIMELINE:** Immediate to 1 year.

**ACTION 4.2:** Identify and establish NAWMP-derived human dimensions objectives for individual NAWMP priority refuges and CPwN priority refuges as identified in the Southeast Refuge Workforce Alignment Plan.

**DELIVERABLE:** Establish station-level human dimension objectives developed in partnership with Joint Ventures.

**RESPONSIBLE PARTY:** A standing 7-person Waterfowl Human Dimensions Team comprised of one refuge Park Ranger representing the geographic footprint of each Joint Venture across the Southeast (Lower Mississippi Valley, Gulf Coast, Central Hardwoods, East Gulf Coastal Plain, and Atlantic Coast), the proposed Regional Waterfowl Ecologist and a Refuge Manager in coordination with NWRS, Natural Resource Program Center Human Dimensions Branch staff.

**TIMELINE:** Three to 5 years.

## SUMMARY OF RECOMMENDED ACTIONS

The following Action Items are proposed in this report to address each of the four fundamental Recommendations: **Communication, Science, Waterfowl and Habitat Support, and Human Dimensions**. Together and through time, these Actions will demonstrate contributions of and improve waterfowl management by the Southeast Region Refuge System in support of continental waterfowl populations.

### Immediate to 1 year

- Develop a communication strategy for internal and external audiences. (Action 1.1).
- Communicate to Regional Office and Headquarters leadership the importance and contributions of refuges to supporting NAWMP goals (Action 1.2).
- Identify key research assumptions, knowledge gaps, and questions underpinning waterfowl management practices on refuges (Action 2.5).
- Establish an FTE to serve as a regional waterfowl ecologist to support waterfowl management activities across refuges (Action 3.2).
- Develop course of action for evaluating pesticide use associated with refuge management under National Environmental Policy Act (NEPA) (Action 3.4).
- Assess current Big 6 accomplishments relative to waterfowl management actions occurring on all refuges (Action 4.1).

### One to 3 years

- Provide current technical guidance to refuge staff on waterfowl management techniques (Action 1.3).
- Establish and endorse a formal process for identifying priority waterfowl species, habitat-based resources, and sanctuary objectives to improve the biological basis guiding waterfowl management actions in support of NAWMP (Action 2.1).
- Determine the most efficient biologically based allocation of population, habitat, and sanctuary objectives across NAWMP priority refuges in the Southeast Region to meet JV/NAWMP objectives (Action 2.2).
- Develop and institutionalize a formal process to document and track current (land base) capability to provide habitat-based resources and sanctuary on all NAWMP priority refuges in the Southeast (Action 2.3).
- Identify monitoring objectives, appropriate response variables and protocols for refuge-, regional-, and flyway-scale assessments using a collaborative decision-making process to ensure objectives, values, and protocols reflecting the contribution of refuges to Joint Venture and NAWMP goals and objectives (Action 2.4).
- Assess the current operational capabilities of refuges to meet NAWMP goals and objectives (Action 3.1).
- Periodically evaluate alternative management actions to determine the most efficient and effective practices that provide high quality habitat for waterfowl (Action 3.3).

### Three to 5 years

- Ensure refuge staff receives continuing education in waterfowl management (Action 3.5).
- Identify and establish NAWMP-derived human dimensions objectives to individual NAWMP priority refuges and CPwN priority refuges as identified in the Southeast Refuge Workforce Alignment Plan (Action 4.2).

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Strategic Plan for Waterfowl Management in the Southeast Region.

January 20, 2016.