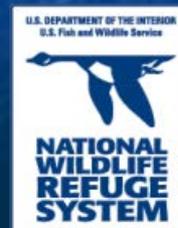
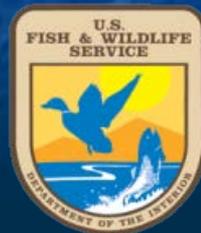


# Mattamuskeet National Wildlife Refuge Authorization and Purpose

Lake Mattamuskeet Information Meeting  
November 18, 2013

Pete Campbell, Refuge Manager  
Mattamuskeet NWR



# Refuge Purpose

- Mattamuskeet NWR was established on December 18, 1934 by Presidential Executive Order
- Primary purpose to “protect and conserve migratory birds and other wildlife resources through the protection of wetlands...”
  - Migratory Birds include waterfowl, wading birds, shorebirds, ospreys, eagles
  - Other priority wildlife resources include anadromous (blueback herring) and catadromous species (American eel)

# Executive Order Language

*“With regard to the waters ... The Secretary of Agriculture [Interior] ... may enter into a cooperative agreement or lease ... Said waters may be used for fishing purposes ... Executive Order 6924, dated Dec. 18, 1934, ... for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.”*

# Refuge Compatible Public Uses

- Hunting
- Fishing
- Wildlife photography
- Wildlife observation
- Environmental education
- Wildlife interpretation

# North Carolina Superior Court Decision and Management of LMT

- Established the right of all lands originally situated within the Mattamuskeet Drainage District to drain into Lake Mattamuskeet in perpetuity as they were allowed prior to the creation of the District.
- The Refuge must allow drainage into Lake Mattamuskeet through existing drainage networks, and therefore all lake management strategies must maintain the drainage rights of these landowners

# Lake Hydrology

- Rainfall and runoff from adjacent lands are the only source of lake water replenishment
- Lake connected to Pamlico Sound by four man-made channels or canals.
- Each canal has a structure containing a series of gates designed to:
  - allow water to flow from the lake to the sound when lake levels are higher than sound levels.
  - close when sound levels are higher to prevent saltwater intrusion into the lake

# Lake Management

- Since its establishment, the Refuge has allowed lake levels to fluctuate and mimic a natural system where levels are higher during the rainy season (winter) and lower during the dry season (summer).
- The refuge's gate system is used to prevent saltwater intrusion into the lake from canals linked to Pamlico Sound and to efficiently allow water to be released during heavy storm events to prevent flooding of adjacent private lands.

# Refuge Management Objectives

- The Refuge's goal is to provide optimal foraging habitat (Submerged Aquatic Vegetation and Native Emergent Vegetation) conditions in the lake and in impoundments for wintering waterfowl and other migratory birds to meet the refuge's primary authorized purpose while remaining in compliance with the NC Supreme Court Ruling.
- Provide recreational opportunities for the "big six" compatible refuge uses.
- Defined in 2008 Mattamuskeet NWR Comprehensive Conservation Plan



# Next Steps

- Complete repairs to gate system to minimize leakage
- Maintenance dredge canal sections within the Refuge boundary, per management strategy in CCP
  - ✓ improve freshwater fishery refugia
  - ✓ increase capacity to flush the lake of silt and nutrient rich water during high water events
  - ✓ prevent flooding of adjacent private lands

# Next Steps cont'd

- Convene Lake MTK Technical Working Group
  - Waterfowl Biologists
  - Fisheries Biologists
  - Anadromous/Catadromous Fish Experts
  - Hydrologist
  - Water Quality Specialists
  - Refuge Management Staff

# Next Steps cont'd

- Prioritize and secure funding for research and monitoring projects
  - Determine primary factors impacting SAV growth on West Side (e.g. input from surrounding lands, lake circulation etc.)
  - SAV Restoration
  - Determine limiting factors affecting fishery population recruitment and recreational fishery (e.g. water quality, predation rates, fishing pressure)
  - Determine primary factors impacting anadromous fish runs from Pamlico Sound into Lake Mattamuskeet

# Next Steps cont'd

- Using results, identify short and long term lake management strategies, compatible with the Refuge's primary purpose and CCP, designed to
  - improve lake water quality
  - restore, if feasible, SAV to the west side
  - increase anadromous and resident fish populations
- Design Monitoring Program to track success of management strategies and adapt as necessary

# Next Steps cont'd

- Should we convene a group representing various user communities to facilitate information exchange on lake related issues?
  - Meet Quarterly to receive updates from Refuge Staff
  - Forum to communicate on lake related issues
  - Conduit to deliver information to members of each user community
  - Provide means to coordinate and to provide assistance for off-refuge projects designed to improve lake condition

# Next Steps cont'd

- Other means to communicate information?
  - Establish web page to post current information on lake condition, status and results of lake research, monitoring and management programs
  - Use other electronic media, list serve etc. to keep the public informed
  - Periodic open house meetings in larger venues to ensure broader information exchange
  
- Additional Suggestions?