



Virginia Coastal Zone MANAGEMENT PROGRAM

Semi-Annual Success Story ("Section C")
submitted to the

Office of Coastal Management/NOAA

Reporting Period: April 1, 2014 – September 30, 2014

Virginia CZM Migratory Bird Habitat Restoration on the Southern Tip of Virginia's Eastern Shore

CZMA Performance Measure Areas: Government Coordination & Decision-Making, Coastal Habitat & Public Access

Geographic Location: Northampton County, VA: Congressional District 1

Identification & Description of Issue:

Ever since the Virginia CZM Program's seminal studies in the early 1990's confirmed the importance of the southern tip of Virginia's Eastern Shore as a hemispherically important "stopover" habitat for neotropical migratory songbirds, we have been working with partners to protect and restore this critical coastal habitat.

Our partnership - the "Southern Tip Partnership" – includes staff from the US Fish & Wildlife Service, The Nature Conservancy, the Virginia Department of Conservation & Recreation, the Virginia Department of Game & Inland Fisheries and the Virginia CZM Program. Since the early 1990's our Southern Tip partnership has pooled over \$37 million to purchase, or conserve through easements, over 6,000 acres of migration stopover habitat. Map at right shows conserved lands in brown.

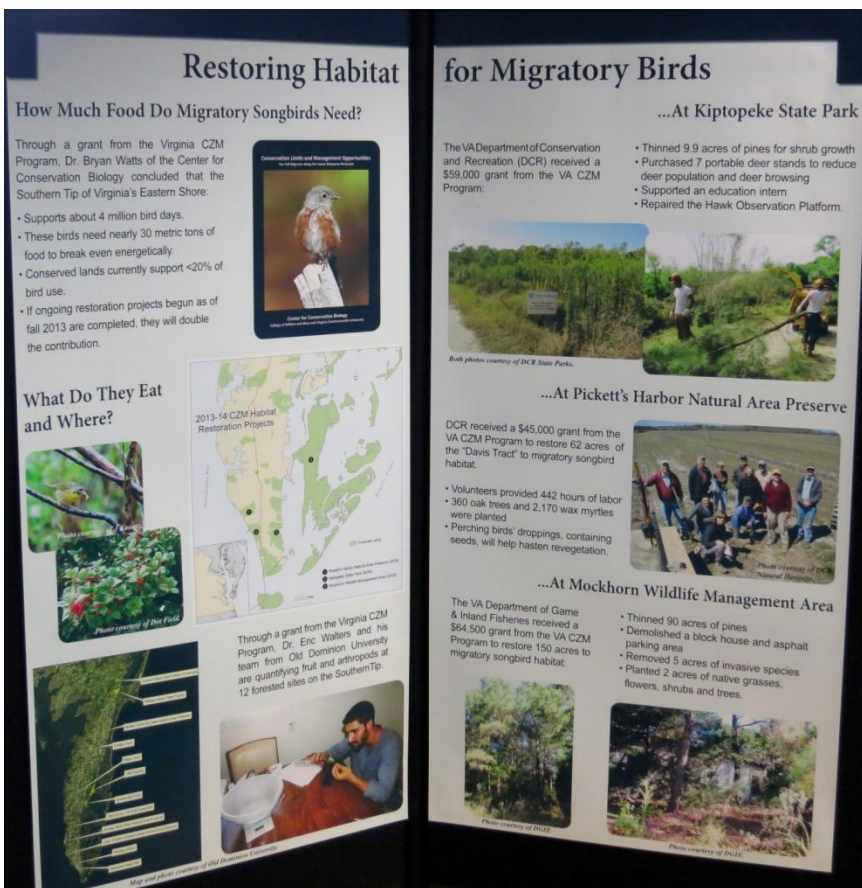
In early 2013 at one of our Southern Tip Partnership meetings we decided it would be a good time to pause in our efforts and look at whether we were maximizing what the birds really need and what is being provided on the lands we have protected.



We wanted to determine how much food they need, what type of berries and insects they are eating, and whether enough is available.

How the Virginia CZM Program Was Involved:

At a regular meeting of the Southern Tip Partnership, the Virginia CZM Manager suggested that because the gubernatorial administration at the time did not support fee simple land acquisition and because no conservation easement projects were available, that in lieu of spending the usual \$200,000 set-aside for land acquisition, the partners use the funds to try to set habitat restoration goals and determine how much more land would need to be protected and restored to support migratory birds on the southern tip of the Delmarva Peninsula and to use some of the funds to continue restoration on lands already in public conservation ownership. Ensuing discussions lead to the group decision to fund two research projects and three habitat restoration projects. The CZM Manager pulled together scopes of work, 306A documentation and managed the five grants as they progressed. These projects provided half the content for the Virginia CZM Program's exhibit at the 22nd Annual Eastern Shore Birding & Wildlife Festival.



Qualitative and Quantitative Summary of Accomplishments and Outcomes:

Research Projects

What are the Birds Resource Requirements? Dr. Bryan Watts at the Center for Conservation Biology began to answer some of those questions. His report entitled, *Establishing Resource Delivery Objectives for Migration Habitat Management on the Lower Delmarva Peninsula* is available at

<http://www.deq.virginia.gov/Portals/0/DEQ/CoastalZoneManagement/FundsInitiativesProjects/task11-01-11.pdf>. In a nutshell, he concluded that, "Despite its relatively small land mass, the study area [southern tip] is estimated to support 4 million bird days during the migratory period. In order to break even energetically, these birds would require nearly 30 metric tons of

food. Conservation lands are currently supporting less than 20% of the bird use ... however, if ongoing restoration projects are brought to their conservation endpoints they would more than double this contribution.” The report was completed in fall of 2013.

What Are the Birds Eating and Where? Another group of researchers has been using radar to track and attempt to predict which areas are currently being used by neotropical and temperate migratory songbirds. As a companion project, the Virginia CZM Program funded Dr. Eric Walters at Old Dominion University to quantify migratory landbird use at 12 forested sites on the lower Delmarva Peninsula. That report will be available after Nov 15 2014 at:



<http://www.deq.virginia.gov/Programs/CoastalZoneManagement/Funds,Initiatives,Projects/2011Projects/2011VirginiaCZMGrantProjectTask110211.aspx> . Fruit was assessed at the 12 study sites noting abundance, ripeness and height; arthropods were counted on the ground and in bagged branch clippings brought to the lab.

Habitat Restoration Projects

Pine Thinning at Kiptopeke In the meantime as the research efforts continued, the Virginia CZM Program funded several habitat restoration projects on conserved lands in the Southern Tip. A grant to the Department of Conservation & Recreation provided for work at Kiptopeke State Park which included thinning of almost **10 acres** of pines and provision of seven 16 foot high portable deer stands. In some areas of the park pines had become so dense that light could not penetrate and fruit-bearing trees and shrubs could not grow. Thinning and careful monitoring is now allowing native fruit-bearing trees and shrubs to become established providing a more useful food source for neotropical songbirds. In addition, due to cost savings on the project an additional deliverable of 6 Eastern Shore Natives plant demonstration gardens were installed at each of the six lodges within the park resulting in an additional almost **1 acre** of habitat restored plus the educational value to park visitors.

Excessive browsing of vegetation by deer is a problem in the park. Purchase of 13 portable deer stands through this project allowed for a successful hunting season to reduce the deer population.

The work was appreciated by the Director of the Coastal Virginia Wildlife Observatory, Brian Taber, *"This past weekend at Kiptopeke, it was great to see lots of birds foraging in the new-cut pine thinning area in the field west of Taylor Pond...congrats and thanks for the grant to make it happen! We put some info about the grants on the CVWO website's General Blog....great improvements for people and birds!"*

This project also included repairs to the Kiptopeke Hawk Watch platform and salary for a summer intern to relay migratory bird information to park visitors.



Shrub and Tree Planting at Pickett's Harbor At Pickett's Harbor Natural Area Preserve a CZM grant to the Department of Conservation and Recreation's Natural Heritage Program provided for the planting of 2,170 wax myrtle shrubs and 360, 7-10' tall oak saplings in a vacant **62 acre** agricultural field within the Preserve. DCR staff recruited volunteers who provided 442 hours of labor. As DCR's Dot Field describes, *"Wax myrtles grow quickly and are evergreen, providing instant islands of year-round cover for birds....rapidly providing berries within a short time. Wax myrtle also fixes nitrogen, increasing its survivability in the altered soil of agricultural fields. ..oak saplings provide an additional layer of instant cover providing bird perches promoting dispersal of favored seeds (e.g. black cherry, blackgum, sassafras, muscadine grape) through the birds' droppings."*

Habitat Enhancements at Mockhorn At Mockhorn Wildlife Management Area a Virginia CZM grant to the Department of Game & Inland Fisheries provided for pine thinning and planting of native grasses, forbs, flowers, shrubs and trees; removal of invasive plants (such as Japanese honeysuckle), and demolition of an unsightly cement block structure and unneeded asphalt parking lot. Timber stand improvement created openings in the canopy which will allow sunlight to penetrate to the forest floor and for understory fruit-bearing shrubs to grow which will provide food for birds. The current basal area has been reduced to a residual measurement of 125 sq. ft./acre. Firebreaks in the forest were also created so that, in the future, an herbaceous understory can be maintained with prescribed fire. The firebreaks will also serve as walking paths for area visitors. Shrubs for the newly created openings and in areas previously occupied with non-desirable vegetation have been procured and installed. In total, **141 acres** of habitat were restored.

CZM Funds Expended & Other Funds Leveraged:

FY 11 Task 11.01: Center for Conservation Biology, College of William & Mary: Delmarva Resource Delivery for Migration Habitat. \$10,741

FY 11 Task 11.02: Old Dominion University: Forested Stopover Migration Sites & Radar Models. \$33,922. This project helped leverage over \$100,000 in USFWS funds to use radar to model bird distribution for the Mid-Atlantic and Northeast.

FY 11 Task 11.03: Department of Conservation & Recreation: Kiptopeke Habitat Management. \$58,980

FY 11 Task 11.04: Department of Game & Inland Fisheries: Mockhorn Wildlife Management Area (GATR Tract) Migratory Bird Habitat Enhancement. \$64,549

FY 11 Task 11.05: : Department of Conservation & Recreation: Pickett's Harbor Habitat Restoration. \$45,000

Total CZM Southern Tip Habitat funding during the reporting period: \$213,192