

2012 Snapshot of NOAA Sea Grant Restoration Activities

Sea Grant programs throughout the nation are engaged in a wide variety of restoration efforts. Below, are highlights of several ongoing projects.

For general information about Sea Grant's Healthy Coastal Ecosystems work, please visit:
http://www.seagrant.noaa.gov/focus/documents/fact_sheets_and_synthesis_stories/2011%20Fact%20Sheets/2011HCEFinal.pdf

See also Sea Grant's Healthy Coastal Ecosystems web site for additional information at:
http://www.seagrant.noaa.gov/focus/hce_page.html

1. North Carolina Sea Grant Urban Restoration Stream Effort

Background: Sea Grant has helped restore a number of creeks and streams across North Carolina, including Yates Mill in Raleigh, Pine Valley Golf Course in Wilmington, and a shellfish habitat in Carteret County known as "Jumping Run." Sea Grant's biggest project is Rocky Branch, an urban creek that runs more than a mile through the heart of the North Carolina State University campus. Once one of the state's most polluted streams, Rocky Branch is now a national model for urban stream restoration.

A three-phased, multi million-dollar endeavor, the Rocky Branch project was designed to stabilize the creek, improve water quality as well as aquatic and wildlife habitat, and integrate the creek into the campus environment through greenway trails. Now that the final phase has been completed, the stream and greenways will function as a safe, accessible outdoor teaching laboratory and recreation area.

To learn more about how urban stream restoration improves water quality and enhances landscapes, view a special segment on Rocky Branch that aired on UNC-TV's Coastwatch on the NC NOW series. For more details about the Rocky Branch project, the summary report of the stream restoration assessment and the summary report of the Phase I construction, please visits the links below.

Main restoration page: <http://www.ncseagrant.org/home/coastal-connections/ecosystems-and-habitats/habitants-restoration>

UNC TV program: <http://www.unctv.org/ncnow/coastwatch/urbanstream.html>

2. Great Lakes Restoration Initiative

Background: The Great Lakes received \$475 million for restoration efforts in 2010, as part of the Great Lakes Restoration Initiative, or GLRI. Michigan Sea Grant was awarded more than \$1.5 million, and is leading two projects, and assisting on five others. The projects focus on endangered fish, invasive species, beach contamination, sound boating and marina operations, and water pollution.

In addition to a marsh restoration project, aquatic invasive species efforts and several other projects under the GLRI initiative, Michigan Sea Grant has received much attention for its recent efforts to restore native fish to the St. Clair River. The program constructed new underwater reefs to encourage native fish reproduction, such as lake whitefish, walleye and lake sturgeon. Researchers have surveyed

the new reefs and collected eggs. They have confirmed that Lake sturgeon successfully deposited and fertilized their eggs on the reefs, and that the eggs produced viable sturgeon larvae.

Post-construction assessments are planned to ensure the Middle Channel Reefs are being used by a variety of fish species. The goal, aside from reestablishing the habitat, is to help remove the St. Clair River from the bi-national list of Areas of Concern. Two more spawning reefs for native fish are being planned for the St. Clair River in 2013 and 2014, as part of the Great Lakes Restoration Initiative. Studies before and after construction will allow biologists to evaluate the impact of the work and improve future habitat restoration efforts.

Check out this new video on their progress:

<http://www.miseagrant.umich.edu/restoration/reef/index.html>

And a story about this effort:

http://www.oar.noaa.gov/spotlite/archive/2012/articles/bringing_back_fish/bringing_back_fish.html

Michigan Sea Grant: <http://www.miseagrant.umich.edu/restoration/index.html>

3. Maine Sea Grant Sea Lamprey Removal and Dam Restoration Video

Background: Two dams were removed on Maine's Sedgeunkedunk Stream in 2008 and 2009, and a rock and pool fishway built to allow alewife, sea lamprey, and Atlantic salmon access to spawning habitat for the first time in two centuries. Watch this video on sea lamprey recovery produced by Maine Sea Grant to learn more about the science of fisheries restoration and why sea lamprey are important to recovery of other sea-run fish in the Penobscot watershed:

Video: <http://www.youtube.com/watch?v=9VZX8HU-BRA>

4. Maryland Sea Grant Blue Crab Restoration in Chesapeake Bay

Background: An annual winter dredge survey has been estimating blue crab populations since 1990. This year's 2012 survey counted 764 million crabs, the highest number on record since 1993 when the survey estimate reached 852 million. New restrictions on the harvesting of female crabs were enforced in 2009, and crab populations began to recover in the Chesapeake Bay after a cutback on the harvest of female crabs. In 2008, Maryland, Virginia, and the Potomac River Fisheries Commission agreed to reduce the harvest of female crabs by 34 percent. Their options included limiting the number of fishermen, the number of pots and traps, the number of hours in a fishing day, and/or the number of months in a fishing season. In Maryland, the major change was shortening the fall crabbing season. And in Virginia, the big change was outlawing the winter crab dredge season. Maryland Sea Grant has covered several facets of this recovery effort in the articles below.

This overview explains the current population growth; the policies enacted by Maryland and Virginia to encourage that growth; and the role of Maryland Sea Grant in supporting research, deliberations, and scientific synthesis that helped to support those new policies.

(<http://www.chesapeakequarterly.net/CQ/V11N2/main1/>)

Take a tour of more than three decades of research, some of it funded by Maryland Sea Grant, that led scientists to a much-improved understanding of the factors that drive the blue crab population.

(<http://www.chesapeakequarterly.net/CQ/V11N2/main2/>)

Maryland Sea Grant economists played a key role in designing an unusual program in Maryland to buy back unused crabbing licenses in order to manage fishing pressure on the population.

(<http://www.chesapeakequarterly.net/CQ/V11N2/main3/>)