



# Clean Annapolis River Project 2014-2015 Year in Review

Clean Annapolis River Project is a community-based environmental non-profit organization with a mission to enhance the ecological health of the Annapolis watershed through science, leadership and community engagement.

2014-2015 was a very busy year for everyone involved with CARP, including staff, the Board of Directors, volunteers, partner organizations, and project funders. This document outlines some of the highlights from our major projects undertaken within the 2014-2015 fiscal year.

More information, including annual project reports, is available on the CARP website: [www.annapolisriver.ca](http://www.annapolisriver.ca).

## Wood Turtle Monitoring and Stewardship

**Objectives:** to contribute to ecological knowledge of the local wood turtle subpopulation through field surveys, and to facilitate stewardship actions among stakeholders in the Annapolis watershed. Wood turtles are listed as a threatened species by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and under the NS Endangered Species Act.

### Highlights:

- 4 turtles were tracked using radio-telemetry and a 5<sup>th</sup> transmitter attached to a newly identified turtle who suffered mortality in October
- 7 previously notched turtles were located during the 2014 visual surveys
- 3 nest sites were protected, one of which produced live hatchlings
- 658 volunteer hours dedicated to visual surveys, radio-tracking, nesting surveys and emergence surveys
- 5 stewardship plans were developed, outlining specific actions for landowners to take in order to protect wood turtles and their habitat

**Next steps:** this project will continue in 2015-2016, building on stewardship actions and the development of stewardship agreements with residents and other stakeholders.



## Striped Bass Monitoring in the Annapolis River, Bear River, & Allains Creek, Nova Scotia

**Objectives:** to increase knowledge about striped bass populations within the Annapolis River watershed through field surveys and local historical knowledge, as part of a larger project based out of Acadia University, led by the Striped Bass Research Team. Striped bass are listed as a threatened species by COSEWIC.

### Highlights:

- 8 egg tow surveys; no eggs were identified
- 17 beach seine surveys
- 4 fyke net surveys
- No juvenile or adult striped bass found during surveys

**Next steps:** CARP has committed to the Striped Bass Research Team at Acadia University to conducting field surveys and outreach during 2015-2016. Actions will be targeted to filling research gaps based on lessons learned in past field seasons. Angler engagement in striped bass research will be priority.



## Broken Brooks

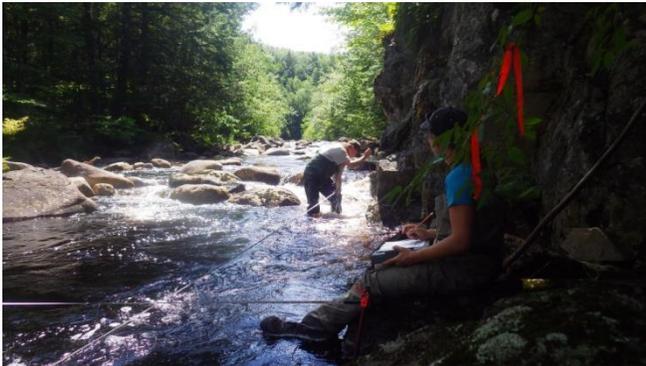
**Objectives:** to address the issue of habitat fragmentation for native fish species caused by watercourse-crossing structures, such as culverts.

### Highlights:

- 54 sites visits, primarily on the Moose River and South Annapolis River sub-watersheds
- 22 detailed watercourse crossing assessments
- 14 assessments identified as partial or full barriers
- Restoration activities at 9 sites: 6 debris removals, 3 tailwater control structures

- Instream habitat restoration on the Nictaux River: 2 rock weirs reconstructed, 2 rock weirs partially reconstructed, boulder cluster placement to improve habitat structure

**Next steps:** this project will be continued in 2015-2016. Restoration of rock weirs, and other instream habitat improvements, will resume on the Nictaux River. Watercourse crossings assessed as barriers in past projects will be prioritized for remediation, and approximately 10 will undergo fish passage improvements in 2015.



## Sub-watershed Management Planning

**Objectives:** to develop tailored strategies to improve fish habitat conditions and fish populations for priority sub-watersheds within the larger Annapolis River Watershed

### Highlights:

- Historical knowledge gathering for the Moose, South Annapolis and Nictaux River sub-watersheds
- Field data collection for development of Moose and South Annapolis sub-watershed restoration plans
- Restoration actions implemented based on the Nictaux River sub-watershed management plan developed in 2013-2014.

**Next steps:** Finalize South Annapolis and Moose River subwatershed management plans, and continue implementation of the Nictaux River sub-watershed plan.

## Community-level stewardship of salmonids in the Annapolis River watershed

**Objectives:** This project engaged key stakeholder groups to promote the uptake of stewardship practices in a collaborative effort to conserve native brook trout and Atlantic salmon, as well as their habitat across the Annapolis watershed. Salmonids require high quality freshwater habitat to support their various life stages and are threatened by land uses such as agriculture, forestry, and habitat alteration by private landowners.

### Highlights:

- Collection of local ecological knowledge of fish habitat and populations
- Production and distribution of best management practice resources for woodlot owners and agricultural land owners
- Hosting of a series of educational sessions for various stakeholder groups
- Production of educational signs about invasive species and best practices for catch-and-release fishing

**Next steps:** Signs to be installed in public spaces accessed by recreational anglers during 2015 field season. Educational materials are available for ongoing distribution. Local ecological knowledge to be incorporated into ongoing fish habitat conservation projects.



## Environmental Home Assessment Program

**Objectives:** a free and confidential program designed to help rural homeowners protect their health and the environment by providing them with the information and tools they need to properly maintain their septic systems, water wells, and home heating oil tanks. EHAP was a provincial program, which CARP administered in Kings, Annapolis, Digby and Yarmouth counties.

### Highlights:

- 54 Home Assessments conducted
- 59 \$100 vouchers distributed to be used to help pay for water quality testing or septic pump-outs

**Next steps:** The EHAP program was discontinued by the provincial government as of April 2015.

## Annapolis River Watershed Agri-stewardship

**Objectives:** To improve the health of watercourses and riparian habitats on agricultural land in the Annapolis watershed.

**Highlights:**

- 1.02 ha of habitat & shoreline protected by livestock fencing
- 1760 indigenous trees planted
- More than 500 acres of habitat involved in stewardship activities
- Installation of 1148 m of livestock exclusion fencing
- Creation of 4 willow sills to mitigate river bank erosion
- Installation of 2 alternative watering systems
- 6 stewardship agreements signed with agricultural landowners

**Next-steps:** CARP has applied for additional funding continue the Agri-stewardship Project.

A number of potential farms and stewardship activities were identified through the winter of



2014-2015 to facilitate

future project implementation.

## Annapolis River Guardians Water Quality Monitoring

**Objectives:** River Guardians is a citizen science water quality monitoring program that has been running continuously since 1992. The River Guardians program provides information about a variety of water quality parameters, provides training to community members in water stewardship, and has established a long-term record of the river's health.

**Highlights:**

- Biweekly monitoring events at 8 sites from April through October, 2014
- Parameters monitored: E. coli bacteria, dissolved oxygen, water temperature, air temperature, pH, conductivity, turbidity
- Biweekly reporting of bacteria levels through public signs at 6 River Guardians sites

For more information about CARP: [www.annapolisriver.ca](http://www.annapolisriver.ca); [carp@annapolisriver.ca](mailto:carp@annapolisriver.ca); (902)-532-7533

- Additional point and non-point source pollution monitoring conducted by CARP staff

**Next steps:** Monitoring will be continued at all 8 sites in 2015-2016.

## Community Outreach and Education

**Objectives:** to raise awareness and increase knowledge about environmental issues specific to the Annapolis River watershed and to encourage community members to become engaged in stewardship and conservation actions.

### Highlights:

- 90+ education/outreach events for various groups including classrooms, community organizations, clubs, etc.
- Led the Annapolis Young Outdoors Women weekly afterschool program for girls in grades 6-8 at AWEC
- Provided support for teachers on topics related to CARP projects
- Worked with the Middleton 02 class to involve students in various project activities
- Developed and circulated a wide variety of educational resources

**Next steps:** Continue to raise awareness about watershed issues and improve community capacity to engage in stewardship actions



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