

Water for Life:

NOVA SCOTIA'S WATER STRATEGY
PROGRESS REPORT MARCH 2012

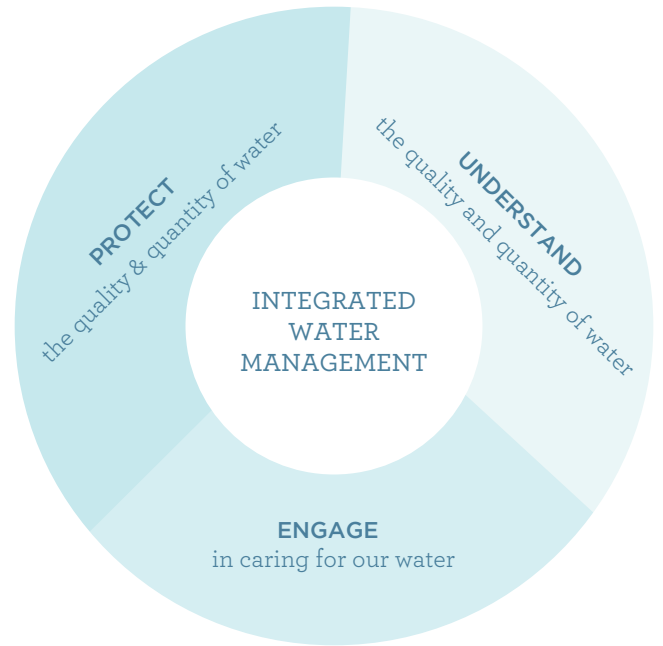
NOVA SCOTIA'S WATER STRATEGY PROGRESS REPORT: INTRODUCTION

Nova Scotia's Provincial Water Strategy, *Water for Life*, was released on December 16, 2010. *Water for Life* is based upon the principles of Integrated Water Management (IWM).

IWM is a comprehensive approach to managing water resources and the effects of human activities on watersheds and ecosystems. It means all provincial departments must work closely together and in partnership with their stakeholders. By working in partnership and pooling our knowledge, we can ensure that water resources are managed most effectively.

We will achieve our goal by completing the 29 actions outlined under the three action areas of *Water for Life*:

- **UNDERSTAND** the quality and quantity of our water
- **PROTECT** the quality and quantity of our water
- **ENGAGE** in caring for our water



Water for Life is a ten-year province-wide government strategy. Actions under the strategy are assigned to one of two groups: “Actions for today” and “Actions for tomorrow”. This progress report is a summary of some of the key projects and programs completed or being undertaken across the province in Year One of the strategy. Only projects related to “Actions for today” are listed at this time, as these are Nova Scotia Environment’s primary focus for the next three years. These foundational pieces will help us as we begin our work on the “Actions for tomorrow” in the near future. Progress reports will be released annually over the next two years.

INTEGRATED WATER MANAGEMENT

Establishment of interdepartmental Water Strategy Implementation Committee (WSIC)

The interdepartmental Water Strategy Implementation Committee was established in January 2011 to advise on the implementation of the Water Strategy. The committee is led and chaired by Nova Scotia Environment with representation from the following departments: Nova Scotia Environment, Agriculture, Fisheries and Aquaculture, Health and Wellness, Natural Resources, Service Nova Scotia and Municipal Relations, and Transportation and Infrastructure Renewal. Committee members are working together to coordinate the implementation of *Water for Life* across all provincial departments. They receive advice from the Nova Scotia Water Advisory Group and provide direction to the Water Strategy collaboration teams.

Formation of Nova Scotia Water Advisory Group (NSWAG)

The Nova Scotia Water Advisory Group was formed to provide “external-to-government” advice on the implementation of the Water Strategy. The group consists of seven members (see below) with knowledge in Integrated Water Management, understanding the quality and quantity of our water, protecting the quality and quantity of our water and engaging in caring for our water.

NSWAG was established in August 2011 and met in September 2011, November 2011 and February 2012, and will continue to meet at least three times per year.

- [Chair] Dr. Graham Daborn, Research Associate, Acadia Centre for Estuarine Research, Acadia University
- Fred Baechler, Chief Hydrogeologist and Senior Hydrologist, exp Services Inc.
- Dr. Cathy Conrad, Associate Professor, Department of Geography, Saint Mary’s University
- Dr. Graham Gagnon, Professor, Department of Civil and Resource Engineering, Dalhousie University
- Anna McCarron, Chair, Shubenacadie Watershed Environmental Protection Society
- Debbie Nielsen, Municipality Sustainability Coordinator, Union of Nova Scotia Municipalities
- Henry Vissers, Executive Director, Nova Scotia Federation of Agriculture

Establishment of interdepartmental Water Strategy collaboration teams

Three interdepartmental collaboration teams were established in January 2012 to work on the implementation of the Water Strategy in three categories: Understand the quality and quantity of our water, Protect the quality and quantity of our water, and Engage in caring for our water. The first meetings for the teams were held in March 2012. These groups were initiated to enhance the sharing of information and joint interdepartmental planning of projects that support Water Strategy Actions. The purpose of these groups is to increase collaboration between the many subject matter experts across government departments who work on projects related to water.

UNDERSTAND THE QUALITY AND QUANTITY OF OUR WATER

Enhance the system for receiving and sharing water quality and quantity information with government and the public

In February 2011, Nova Scotia Environment launched the “Water Portal Website” (www.waterforlife.gov.ns.ca). The Water Portal links to reputable sources of online information on water and water issues relevant to Nova Scotians, from septic systems to drinking water, and watersheds to water withdrawal approvals.

Continue to build, support and integrate existing water-monitoring networks to bolster baseline data and assessment tools, and to identify stresses on quality and quantity

The Nova Scotia Groundwater Observation Well Network (<http://gov.ns.ca/nse/groundwater/groundwaternetwork.asp>) was established in 1965 and is used to monitor groundwater levels, monitor groundwater quality, evaluate the impact of human activities on groundwater, and identify long-term trends associated with issues such as climate change. The Groundwater Observation Well Network has added ten new wells during the last three years, bringing the network up to 38 active wells. Four annual reports are published each year in addition to quarterly on-line reporting.

The Nova Scotia Automated Surface Water Quality Monitoring Network (<http://gov.ns.ca/nse/surfacewater/automatedqualitymonitoring.asp>) was established in 1999 and includes five active stations. The network is used to assess ambient water quality in lakes and rivers throughout the province. A summary report of the data collected between 2002 and 2005 was published in 2007. A second report was published in 2010. Quarterly on-line reporting can be found on the network’s website.

Nova Scotia Environment also monitors approximately 150 water wells in Kings County for nitrate. Nitrate is a substance that can occur from natural sources, but elevated levels may be due to septic or manure contamination or fertilizers. Because Kings County is one of the most intensively farmed areas of the province, and nitrate contamination in drinking water poses health risks to humans, these wells are monitored annually. See www.gov.ns.ca/nse/groundwater/nitrate.asp for more information on the program and a map of the monitoring area.

Engage with post-secondary institutions, industry and communities in order to improve knowledge about water-related issues across the province

Nova Scotia Environment partnered with the Hydrologic Systems Research Group at Dalhousie University to develop the Nova Scotia Watershed Assessment Program. NSE provided funds and in-kind support to initiate the first survey of the 46 primary watersheds in Nova Scotia. The survey will result in a geodatabase for sharing vital watershed information. The grant was used to conduct research on models and tools for assessing surface and groundwater resources. Visit www.sterlinglab.ca/research to learn more.

Nova Scotia Environment partnered with the Acadia Centre for Estuarine Research at Acadia University to investigate water quality in ten lakes in the Carleton River watershed area of Yarmouth and Digby counties to address concerns about water quality and mink farming activities. Lake water quality and nutrient source assessments were completed in September 2011 and reports for the last three years can be found at <http://www.gov.ns.ca/nse/surface.water/surfacewater.research.asp>.

Nova Scotia Environment commissioned the Centre for Water Resources Studies at Dalhousie University to assess risks to drinking water sources in Nova Scotia. The study was completed as part of the process to update the province's drinking water treatment standards. See <http://centreforwaterresourcesstudies.dal.ca> for more information on the work of the Centre for Water Resources Studies.

PROTECT THE QUALITY AND QUANTITY OF OUR WATER

Require water conservation plans from large users

Nova Scotia Environment provided support to the Nova Scotia Federation of Agriculture's Environmental Farm Plan Program to study water use on farms. Water meters were provided to various sizes and types of farming operations. Farmers were then able to track the water used on their farms, and evaluate the success of water conservation practices. Farms that were found to exceed the 23,000 L/day limit for water withdrawals were assisted through the permitting process required by Nova Scotia Environment. Environmental Farm Plan staff met with farmers to answer their questions and seek feedback on the current permitting process. Visit <http://nsfa-fane.ca/member-services/environmental-farm-plan/> for more information about the Environmental Farm Plan.

Assist municipalities, First Nations, and communities with source water protection planning

Nova Scotia Environment continues to provide support to municipalities as they develop and implement source water protection plans for drinking water supplies. As of December 2011, 76% of municipalities required to have a source water protection plan have a complete or draft source water protection plan in place. Visit www.gov.ns.ca/nse/water/sourcewater.asp to learn more about source water protection in Nova Scotia.

Assess the current and future use of setbacks from fresh and coastal water resources

The NS departments of Environment and Fisheries and Aquaculture provided funding and in-kind support for a Dalhousie University study on watercourse buffers and setbacks in Nova Scotia. The "Buffers and Setbacks in Nova Scotia Report" summarizes the scientific literature, the approaches to managing land on our coastline, rivers, and lakes, and the challenges of putting undeveloped buffers or set back policies in place for Nova Scotia. This report, which will help us when considering future policies around buffers and setbacks, will be available online when completed.

ENGAGE IN CARING FOR OUR WATER

Build capacity for community water monitoring in watersheds across the province

The province provided funding and in-kind support to two valuable community-based monitoring programs in Nova Scotia.

The Ecology Action Centre's Groundswell Project promotes community-based groundwater monitoring and raises awareness about groundwater issues. The Nova Scotia departments of Environment and Natural Resources also participated in a groundwater monitoring workshop organized by Groundswell in 2011. Groundswell (www.ecologyaction.ca/content/groundswell) currently operates six monitoring wells across the province.

The Community-Based Environmental Monitoring Network's WET-PRO certification program at Saint Mary's University (<http://wetpro.smu.ca/getcertified/>) is an online water quality monitoring certification course with an accompanying field kit. This provides volunteers with the necessary training, skills and knowledge to conduct meaningful water quality monitoring.

To learn more about community-based water quality monitoring in Nova Scotia, visit the Community-Based Environmental Monitoring Network's website (www.envnetwork.smu.ca/welcome.html).

Work to engage youth in water stewardship and management activities

Many efforts to engage youth in water stewardship have been supported across Nova Scotia. Below are just a few examples:

- **Project WET (Water Education for Teachers):** Nova Scotia Environment staff held five Project WET workshops for elementary and secondary school teachers in 2011. This program provides suggestions for fun, interactive and curriculum-appropriate activities for teaching students about all aspects of water. www.cwra.org/branches/ProjectWet/goals.aspx
- **The 4-H Water Challenge:** 4-H clubs around the province were encouraged to do a day of community service around water stewardship in their community. Nova Scotia Environment provided prizes for top projects in each 4-H region. www.gov.ns.ca/agri/4h/
- **Envirothon:** Provincial staff provided annual in-kind and financial support to the “Aquatics” component of Envirothon. Envirothon is an environmental knowledge program and competition for high school students held in May of each year. Winners of the competition compete at the North American Canon Envirothon. <http://www.nsfa.ca/ethon.html>
- **Kids in the Forest:** Provincial staff and partners provided a fun-filled day of environmental education (including water education) to Grade six students.
- **Progressive Agriculture Safety Day (Oxford, NS):** Nova Scotia Environment staff worked with children to teach them about protecting water quality on farms. www.casa-acsa.ca/content/pages/progressive-agriculture-safety-days
- **Oceans Day on the Halifax Waterfront:** Provincial staff educated students and the public on the fascinating value of our oceans. www.dfo-mpo.gc.ca/oceans/events-evenements/oceansday-journeesdesoceans/list-liste-eng.htm
- **Provincial parks:** Several education programs were focused on water at Nova Scotia provincial parks. www.novascotiaparks.ca

Engage in outreach and partnership activities to promote water stewardship practices for residents to maintain and protect their health and property

The “When to Call Nova Scotia Environment” brochure (<http://www.gov.ns.ca/nse/dept/docs/NS.Environment.Contact.Brochure.pdf>) was published in the spring of 2011. The brochure contains information for homeowners such as when and how to hire a certified professional for services such as well drilling or digging, and how homeowners can do their part at home to protect the environment. A section entitled “Call us before you:” includes a list of activities that the homeowner is required to contact the department before undertaking, such as working around water or applying pesticides. The brochure also contains information on the Environmental Monitoring and Compliance Division, including contact information for all Nova Scotia Environment Regional and District offices.