

2006 Nova Scotia Habitat Conservation Fund Final Report

Project Title: Wood Turtle Habitat Conservation in the St. Mary's River Watershed

Project Applicant: St. Mary's River Association
PO Box 179, Sherbrooke, NS
B0J 3C0

Overview:

Wood turtles are recognized nationally as a species of "special concern" (COSEWIC 1996), and were listed in 2000 under the NS Endangered Species Act as "vulnerable". The St. Mary's River wood turtle population is likely the largest in the species range, and therefore arguably the most important. The St. Mary's River watershed is a highly fragmented "industrial landscape", and wood turtles in this watershed are at particular risk because of the "working" nature of the landscape. This species and their habitats are impacted through a variety of land use practices, such as agriculture, industrial and small private forest management, road and bridge construction, and recreation that result in individual injury, mortality, habitat loss and/or fragmentation.

Project Objectives:

The SMRA and its partners felt that the successful completion of this project would realize the following objectives:

- i. To protect important wood turtle habitats through the creation and signing of informal land use management plans/agreements for individual landowners, and users.
- ii. To build on existing knowledge of wood turtles to facilitate good conservation and management decisions wherever wood turtles are found.
- iii. Identify and protect critical wood turtle habitats such as nesting areas and over-wintering sites within the St. Mary's River watershed.
- iv. Provide a framework for the transfer of relevant information back to provincial and municipal governments for sound land use planning and integrated resource management decisions.
- v. Establish a corporate link between the project and industrial users of the watershed that will facilitate

information transfer and stewardship.

vi. Inform and engage stakeholders in discussions and activities that foster stewardship, awareness, appreciation and concern for wood turtles, their habitat, and the threats to their existence.

Project Results:

All project objectives were met in a satisfactory manner. Because of the ongoing nature of the project, the "deliverables" required to meet each of the objectives outlined for 2006 will not stop, but will be "added to" over the next months. During the 2006 field season, project staff were able to repeatedly survey potential wood turtle habitat throughout the St. Mary's River watershed, record specific site locations using GPS, and digital cameras, meet with landowners (often more than once) to discuss their findings, draft informal land-use management plans, and obtain signatures. (This part of the project successfully met the requirements of objectives i, iii, and iv.)

In 2006, signed management plans were obtained for 18 individual landowners, representing approximately 17,500 m (17.5 km) of riparian wood turtle habitat. A map showing the locations of these lands is included in Appendix 1. These agreements will provide some form of protection for important basking, foraging, nesting and over-wintering habitats by asking landowners to: agree to protect riparian areas from motorized vehicle damage, allow for the placement of signs on their property, practice good stewardship practices, and control predators if necessary. A representative sample of a management plan is included in Appendix 2. Since 2005 this particular program has resulted in signed plans from 45 land owners representing approximately 55 km of riparian habitat.

All information on wood turtle locations, distribution, numbers, and habitat use was recorded electronically, transferred to GIS, and resides with the Nova Scotia Department of Natural Resources in Antigonish. All relevant data is available to the Nova Scotia Museum of Natural History, and is presently being used to develop Special Management Practices (SMPs) for forest management activities within the province. These data are also used to assist with EIAs for this watershed, and elsewhere. Objectives ii, iii, iv and v are met with this aspect of the project.

Finally, discussions are ongoing with representatives from Neenah Paper and Stora Enso Port Hawkesbury to develop and apply appropriate SMPs to lands under forest management and their control. To date Neenah Paper has adopted a 300 m no cut distance from any known wood turtle habitat during the turtles' active season (April - October).

Summary:

This project has resulted in a significantly increased awareness amongst landowners within the watershed about wood turtle conservation. Over the past four years the St. Mary's River community has embraced the Wood Turtle Project, and the stewardship opportunities that have arisen from it. The effectiveness of the informal land management program, sponsored in part by HCF funds has attracted the attention of the Nova Scotia Nature Trust who have become interested in this historic watershed, and have recently embarked on a campaign of their own in this area. The St. Mary's Wood Turtle Project has acted as a springboard for the NSNT's St. Mary's River land conservation program.

This project has benefited wood turtles immediately and into the future. The conservation of habitat through protection and enhancement will help ensure that important habitats such as nesting beaches and over-wintering sites are always available. Ongoing discussions with landowners and industry have increased awareness throughout the watershed, and have resulted in greater community awareness, participation in stewardship initiatives, and responsibility. Survey data has been immediately valuable to government and industry planners for integrated land use decisions involving resource management activities. Lessons learned and approaches developed through this project are transferable to other jurisdictions where wood turtle conservation is also an issue.

Appendix 1 - Map illustrating the approximate locations of the property owners who have signed informal land use management plans in 2006.



Appendix 2: ST. MARY'S RIVER WOOD TURTLE STEWARDSHIP PROGRAM

WOOD TURTLE (*Glyptemys insculpta*)



The wood turtle is one of seven turtle species found in Nova Scotia, and has been designated as “vulnerable”, and protected under the provincial Endangered Species Act. Wood turtles are considered a “species at risk” because of their sensitivity to human activities and natural events.

Wood turtles are medium sized, and can be found in slow moving intervale streams and rivers, as well as agricultural and forested areas. This species is distinguished from other turtle species by their:

- medium size (16 – 24 cm in length)
- orange or red neck and legs
- brown upper shell which has the appearance of being carved from wood
- yellow and black bottom shell



THE ST. MARY'S RIVER

The St. Mary's River, and its watershed has some of the best wood turtle habitat in Nova Scotia, and supports the largest wood turtle population in the province. The river is extensive, clean, clear, and slow moving, with sand and gravel bars for nesting, riparian areas, and edges for foraging, and deep pools, channels, and ponds for over-wintering. Despite the availability of these habitats, there has been a decline in wood turtle numbers in recent years. This decline is likely the result of natural and human-caused threats to this population.

THREATS

- **Habitat changes:** Watercourse alterations, or poor forestry and agricultural management practices can result in the loss of habitat, or habitat quality, and injury or death to turtles.
- **Predators:** Raccoons, skunks, foxes, coyotes, and crows are known to prey on wood turtle eggs, young turtles, and sometimes adults.
- **Waste Disposal:** Improper disposal of garbage, or waste products in, or near wood turtle habitat often attracts predators to places where wood turtles live.
- **Road Kill:** Wood turtles are vulnerable to vehicle related mortality, or injury when they cross roads in their daily search for food, and basking sites, or seasonally for nesting and over-wintering sites.
- **Recreation:** Improper ATV use on riparian beaches and gravel bars can degrade wood turtle habitat, and put eggs and young turtles in peril.
- **Keeping wood turtles as pets:** Captive wood turtles do not contribute to the breeding population, and are sometimes moved great distances from their natural home ranges.



THE VALUE OF LANDOWNER STEWARDSHIP TO WOOD TURTLE CONSERVATION

Stewardship can be defined as, “taking responsibility for the environment and its resources.” Successful conservation of all “species at risk” requires a partnership, and commitment from government, industry, land users, and landowners. This document is intended to serve as an informal agreement between landowners who wish to play an active role in wood turtle stewardship, and conservation, and the St. Mary's River Association. Landowners that have property bordering the river have the potential to make the greatest contribution because the activities of these landowners directly impact wood turtles and their habitats. Habitats that are critical to the long term survival of wood turtles such as nesting beaches, and over-wintering sites are extremely valuable. One of the main purposes of this informal plan is to help landowners understand how they can carry out, and promote “wood turtle friendly” land use practices on their own properties. The recommendations provided in this plan are part of a long term project to protect wood turtles and their habitat. As landowners, your understanding, and willingness to become involved in the conservation of this species is gratefully appreciated.

Questions, and requests for further information about the St. Mary's River Wood Turtle Project can be directed to the St. Mary's River Association (stmarysriver@ns.sympatico.ca), or Mark Pulsifer, Project Manager, c/o Nova Scotia Department of Natural Resources (pulsifmd@gov.ns.ca).

ST. MARY'S RIVER WOOD TURTLE STEWARDSHIP PROGRAM

Landowners: Hardy and Barb Eshbaugh

Mailing Address:
209 McKee Av.
Oxford OH US 45056

Civic Address:
1849 Waternish Rd.
RR # 2 Aspen NS
BOH 1E0

PID No.: 37534278
37534260

Important habitat features:

- Foraging areas
- Basking areas
- Riparian areas
- Vernal ponds

Approximate No. meters river frontage: 1200

Important plant species:

- Speckled alder
- Raspberry
- Grasses



Figure 1 – Lands of Hardy and Barb Eshbaugh Waternish, Guysborough County

PROPERTY FEATURES AND HABITATS

Riparian Areas

Riparian areas are the transition zones between land and water. Vegetated riparian areas are extremely productive and provide habitat for wood turtles and other wildlife. These zones often provide corridors for movement, cover, basking, and feeding opportunities. Riparian areas provide many benefits to aquatic and terrestrial ecosystems including:

- Improved water quality
- Shade
- Reduced erosion and stabilized stream banks
- Groundwater recharge
- Provision of habitat and travel corridors



Agricultural Areas

Recent studies have shown that floodplains often provide ideal wood turtle habitat and important agricultural areas. Where these two land uses overlap, wood turtles are frequently injured or killed because of encounters with farm machinery. As well, in agricultural settings, livestock can disturb nesting beaches, and predators such as skunks, foxes and raccoons are often abundant, which may have detrimental effects on wood turtle nesting success, and turtle survival.



ST. MARY'S RIVER WOOD TURTLE STEWARDSHIP PROGRAM

Recommendations

The following suggested recommendations are ways in which you as a landowner can protect or improve wood turtle habitat on your property.*

- Maintain existing riparian buffers around river frontage.
- Safely remove turtles from the path of farm machinery.
- Where practical, store waste and garbage in secure containers to not attract predators.
- Encourage local trappers to trap raccoons during fur-harvesting season.
- Allow for continued use of property for wood turtle monitoring, management, and conservation activities.
- Discuss riparian land use changes with local Department of Natural Resources biologist.

* **This is not a legally binding agreement.**



Figure 2 - Aerial view of lands of Hardy and Barb Eshbaugh with approximate property lines



I agree to consider, and carry out the above mentioned activities wherever possible.

Landowner Name (Print)

Landowner (Signature)

Date

Wood Turtle Project Manager (Print)

Wood Turtle Project Manager (Signature)

Date

This stewardship plan is sponsored by the Government of Canada Habitat Stewardship Program for Species at Risk, and the St. Mary's River Association.

