RESTORE YOUR SHORE

NORTH BAY-MATTAWA CONSERVATION AUTHORITY

Greater Nipissing Stewardship Council Annual Meeting April 15, 2015

DRINKING WATER SOURCE PROTECTION
ACT FOR CLEAN WATER

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Callander ONTARIO Four Seasons of Reasons

Canton de CHISHOLM TOWNSHIP

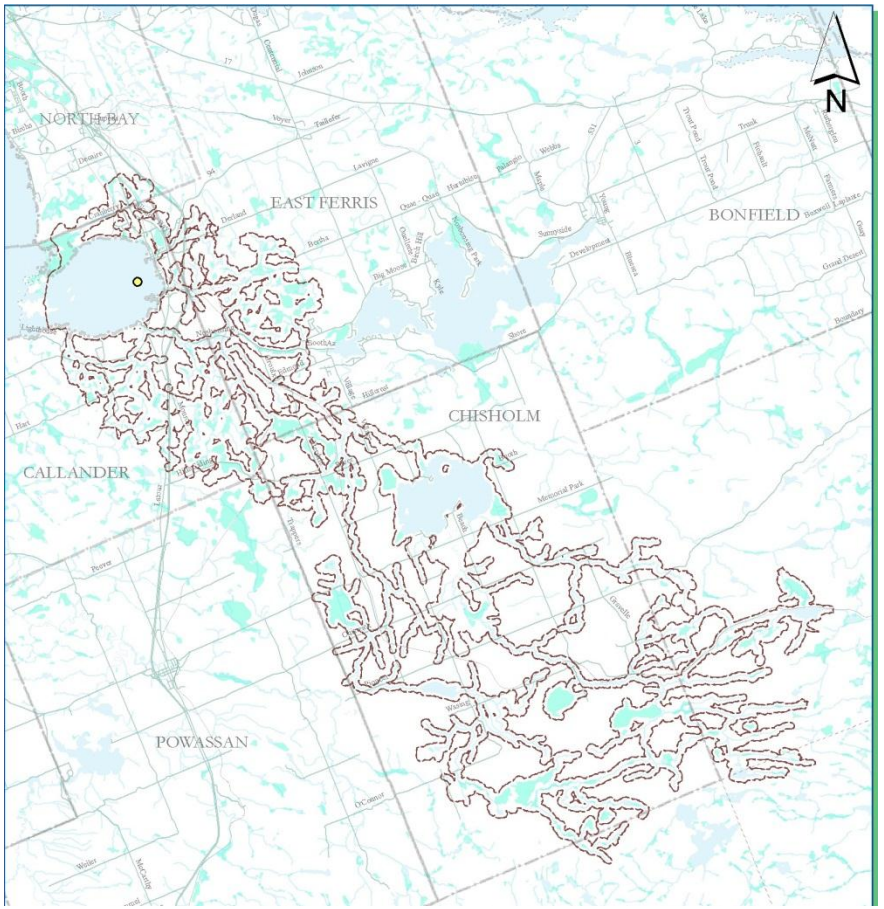
MUNICIPALITÉ EAST FERRIS MUNICIPALITY 1921

NORTH BAY ONTARIO CANADA Just North Enough to be PERFECT

The Municipality of Powassan The Heart of Good Living

Source Protection Plan for Callander Bay-Wasi

- What is SWP (Source Water Protection)?
- Targeted area (see map) Callander-Wasi watershed
- Blue-green algae problem
- Impact on fish habitat



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Callander Bay-Wasi Education & Outreach

- One program involving 5 municipalities
- Callander Issue Contributing Area Advisory Group (CIAG) formed
- Aimed at fostering phosphorus-reducing behaviours which can reduce blue-green algae levels

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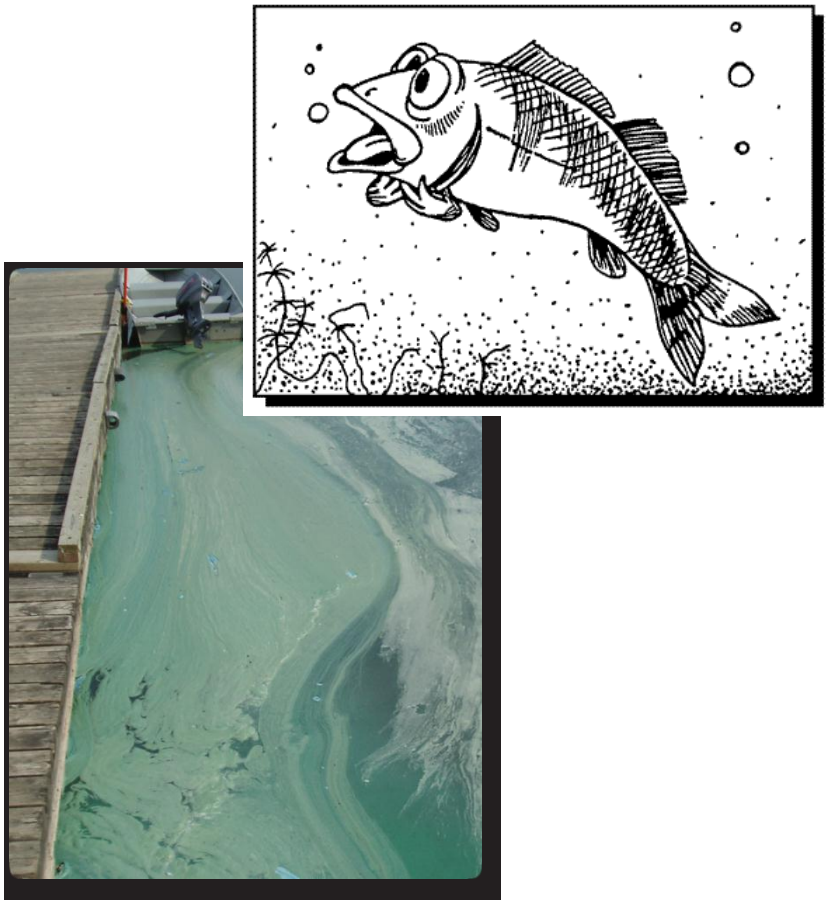
Blue-green algae

- Decomposition of algae lowers oxygen levels in water
- Increases the likelihood of fish kills
- Department of Fisheries and Ocean's **Shoreline Primer**



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What is Blue-green algae?

- Bacteria with features in common with algae
- Often blue-green, ranges in colour from olive-green to red
- Occurs naturally in a wide variety of water bodies

  ponds, rivers, lakes and streams
- Grows rapidly to form large mass or scum - “bloom”
- Phosphorus and nitrogen contribute to growth of blue-green algae

Wasi Lake, August 2013

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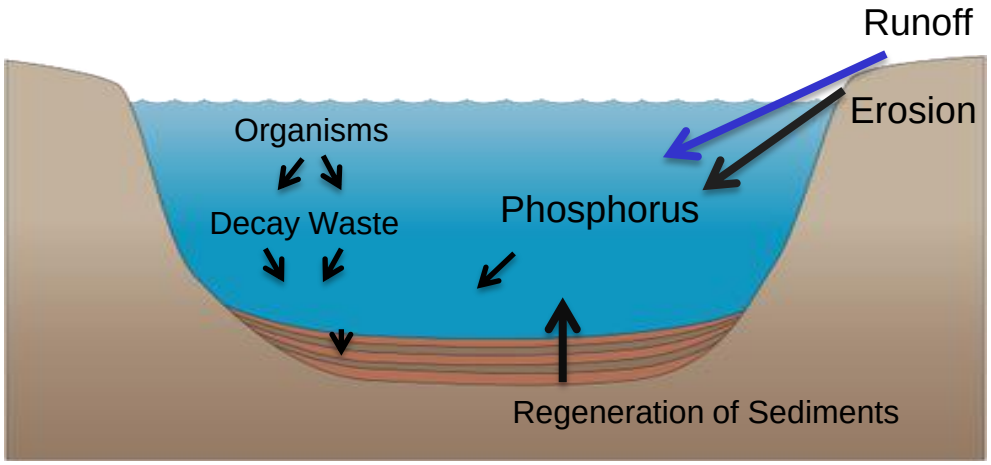
Sources of Phosphorus

Phosphorus enters waterways via

- Run-off
- Erosion
- When sediments are disturbed by
  - fast-moving water
  - human activity
  - wildlife activity
  - waves
  - wind



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Sources of Phosphorus

Human sources

- Historic contributions
- Malfunctioning septic systems
- Fertilizer applications for agriculture, lawn, & garden will run into lakes, rivers & streams when more is applied than plants can use

Callander Bay, September 2009

Naturally occurring

- Phosphate-bearing rock
- Soil and rock erosion

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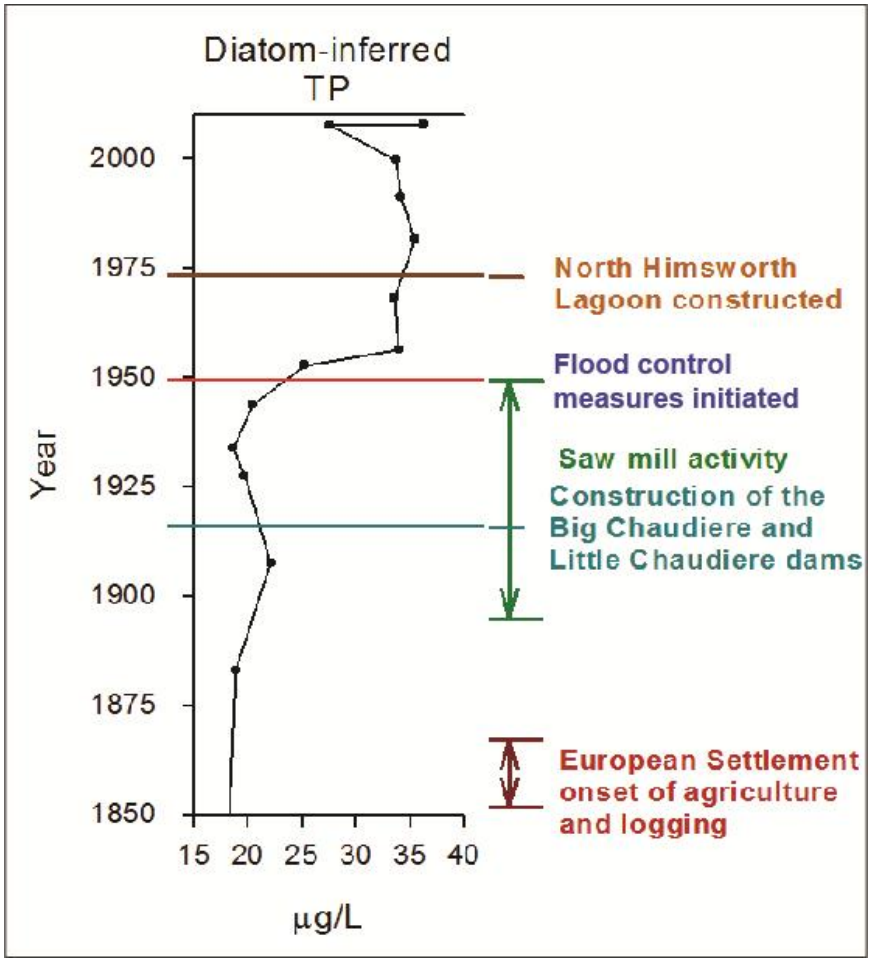
2009 Paleolimnology Study of Callander Bay

- Prior to ~1950 Callander Bay was mesotrophic
- Significant increase in phosphorus occurred in 1948 -1952 resulting in eutrophic conditions
- Since 1955 phosphorus concentrations have remained above the provincial water quality objectives



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Callander Bay-Wasi Education and Outreach

Purpose: to reduce phosphorus loads to the Callander Bay-Wasi watershed

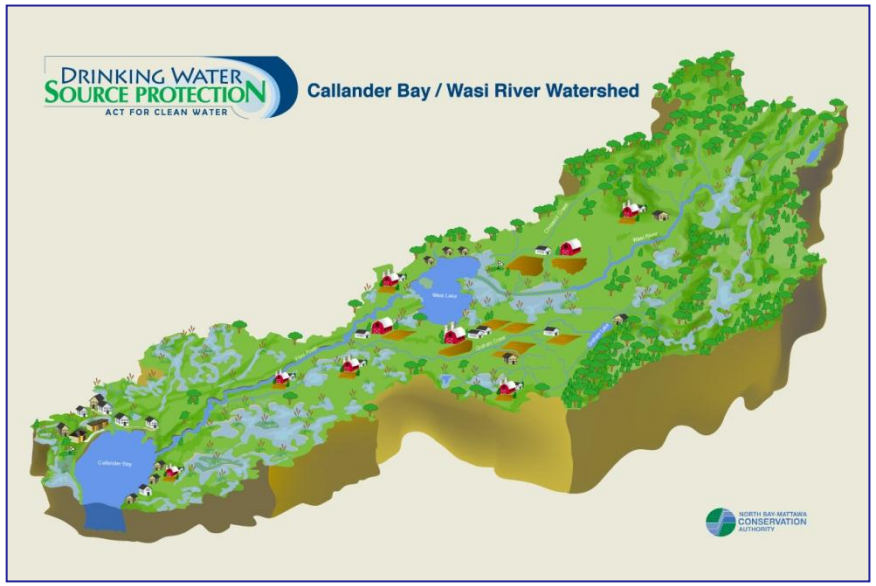
Reduce phosphorus loads by:

Reducing

- Runoff
- Erosion
- Phosphorus inputs

Increasing

- Phosphorus uptake by crops & landscapes



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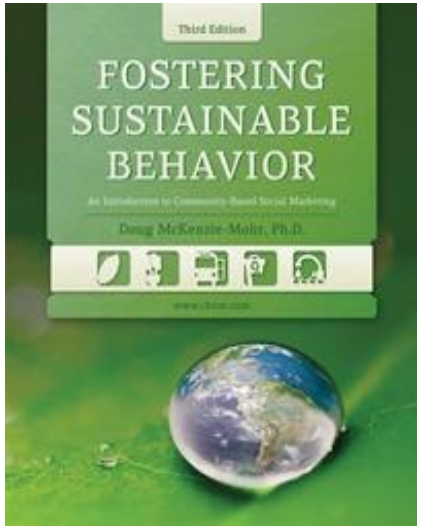
Callander Bay-Wasi Education and Outreach

Community Based Social Marketing

- Focus on environmentally sustainable behaviours – not just information
- Identifies barriers & benefits to engaging in behaviour
- Incorporates motivators / incentives to overcome barriers
- Utilizes prompts and commitments to ensure effectiveness
- Creates new social norm
- Finds champions with a sphere of influence to promote the program



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Callander Bay-Wasi Education and Outreach

Focus Groups & Surveys

- Gather local knowledge – rural, urban, agriculture, multi-sector
- Gather attitudes towards phosphorus-reducing behaviours
- Identify behaviour that would have greatest participation/impact
- Finds champions with a sphere of influence to promote the program
- Asks for commitments (public) to ensure effectiveness

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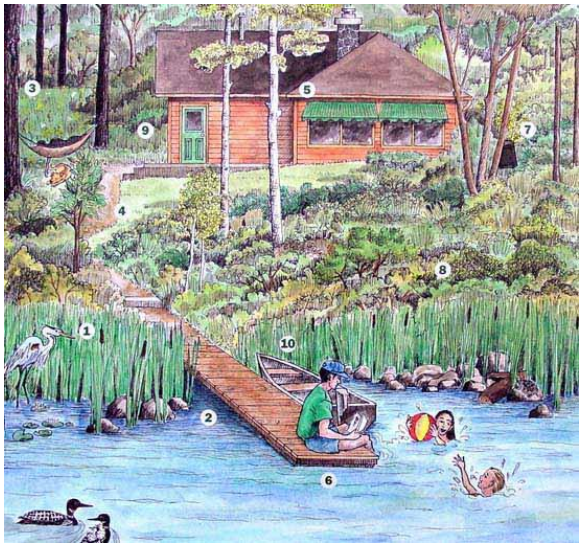
Callander Bay-Wasi Education and Outreach

Survey - Shoreline Buffer Strips

About 50% respondents lived on a watercourse

- 25% did not have a buffer strip



Barriers

- Cost
- Loss of View
- Technical guidance

Benefits

- Habitat for wildlife
- Water quality
- Aesthetics/Looks good

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Callander Bay-Wasi Education and Outreach

Barriers

- Cost to plant
- Loss of view
- Technical guidance

Incentives

- Free plants
- Views preserved
- Free consultations & planting plans

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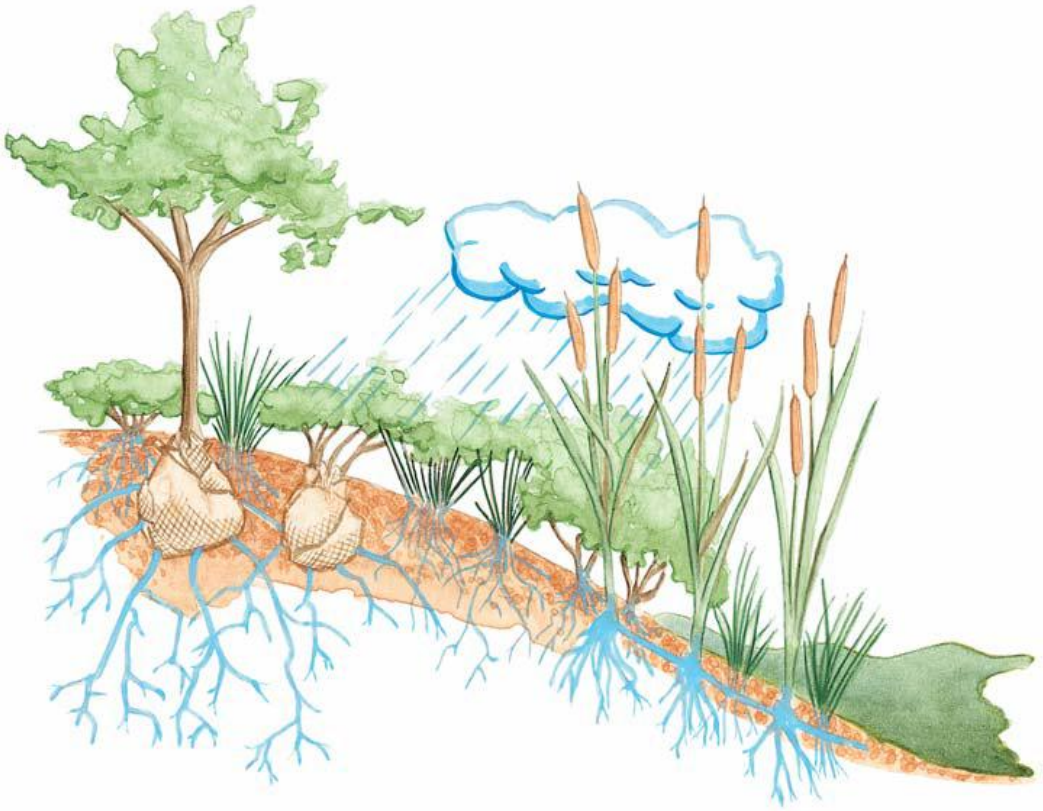
What are Buffer Strips?



- Plant vegetation
- A section of land along a waterway or shore
- Usually 15 m (45’) or more
- Buildings close to the shoreline
- Includes all sizes of plants
- Doesn’t interfere with view

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How Buffer Strips Help

Improve fish habitat by cooling receiving waters

Improve habitat for wildlife

Slow down rainwater

Help limit erosion by capturing sediment

Less sediment means less phosphorus in Wasi Lake and Callander Bay

Less phosphorus means less blue-green algae

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Restore Your Shore Program Overview

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Campaign Launch & Delivery

- Delivery: mid-April – October 2015
- Site visits & plantings will occur throughout 6 month period

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Campaign Strategies

For Awareness

- Articles in targeted newsletters, for example, the Heritage Gardeners' & North Bay Yacht Club
- Social media – Tweets & Facebook postings in related groups
- Media launch and releases
- Website
- Advertising

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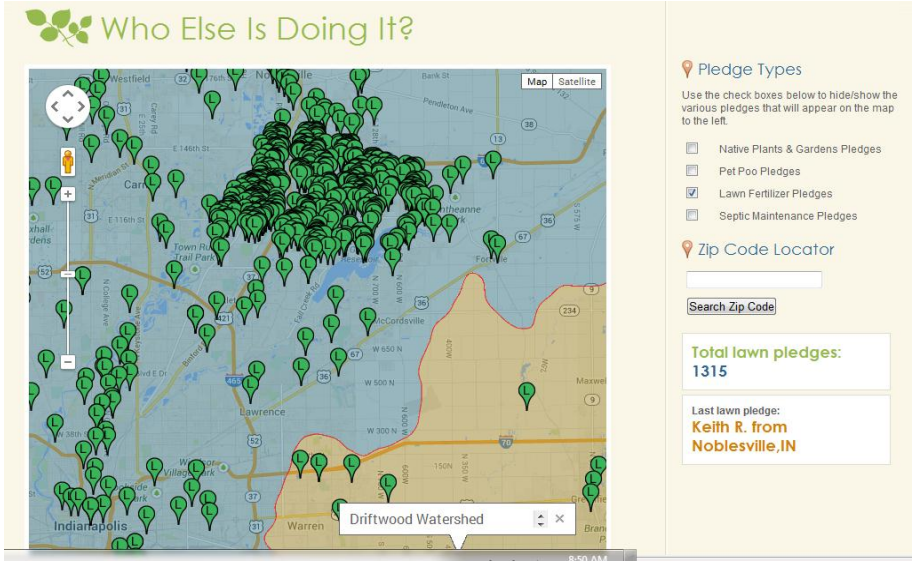
Campaign Strategies

For Awareness

- www.restoreyourshore.ca
- Links to other websites, e.g. municipalities
- Pledge map of participants online
- Mail drops
- Newspapers



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Campaign Strategies

Making Personal Connections

- East Ferris-Parry Sound - Ontario Federation of Agriculture
- North Bay Home Show
- Heritage Gardeners' Symposium
- Greater Nipissing Stewardship Council annual meeting
- Media launch in Callander
- Information centres in prominent places
- Other presentations
- Phone calls & visits to possible landowner participants
- Enlisting volunteers to champion the program

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Campaign Strategies

Gaining Commitments & Taking Action

- Site visits by expert staff to landowners by invitation
- Prepare customized planting plans
- Assess site conditions & erosion level
- Obtain signed agreements to do the work
- Organize planting events with volunteers
- Supply plants, materials and tools for planting
- Provide after care instructions & signs
- Public recognition for participants & supporters

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Campaign Strategies

Outcomes for 2015

- Visit all landowners who request a site visit
- Prepare & present 50 planting plans
- Obtain 50 landowner commitments to make their shorelines more naturalized through plantings and/or practices
- Complete plantings on at least 30 shorelines

Municipal leaders from the 5 municipalities in the Callander-Wasi watershed launch the Restore Your Shore Program April 30, 2015

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Campaign Strategies

More Outcomes

- Plant approximately 10,000 plants on shorelines
- Develop 3-5 publicly accessible demonstration sites with signage
- Involve at least 45 volunteers, including 15 youth
- increase public awareness of phosphorus-erosion-algae connection

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How to make a change

- **Help promote Restore Your Shore**
  - In your mailings – we'll provide the piece
  - On your websites – link to Restore Your Shore site
  - Making our print flyer available

- **Publicize volunteer planting events**
  - Suggest appropriate community groups we could contact
  - Send our event notices to your email distribution lists

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Restore Your Shore Team ☺

Restore Your Shore Coordinator
Peggy Walsh Craig

- 10+ years coordinating volunteer plantings in North Bay
- 30 year career in wholesale nursery trade
- property owner in Chisholm for 20 years
- agriculture graduate - University of Guelph

Restore Your Shore Technician
Tim Martens

- conducted erosion site evaluations in this watershed in 2012
- 20+ years evaluating vegetation & wildlife as contract biologist
- 10 years operating native plant nursery specializing in restoration ecology
- Fish & Wildlife Technician graduate – Sir Sandford Fleming College

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For Further Information

Department of Fisheries & Oceans' **Shoreline Primer**:

- http://www.dfo-mpo.gc.ca/Library/337927.pdf

Phosphorus Primer
What Landowners Can Do to Protect Water
Runoff & Erosion Protection
Controlling Soil Erosion on the Farm
Buffer Strips
Establishing Tree Cover

www.restoreyourshore.ca

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For Further Information

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