

**Fish Stewardship Program
Lake of Bays**













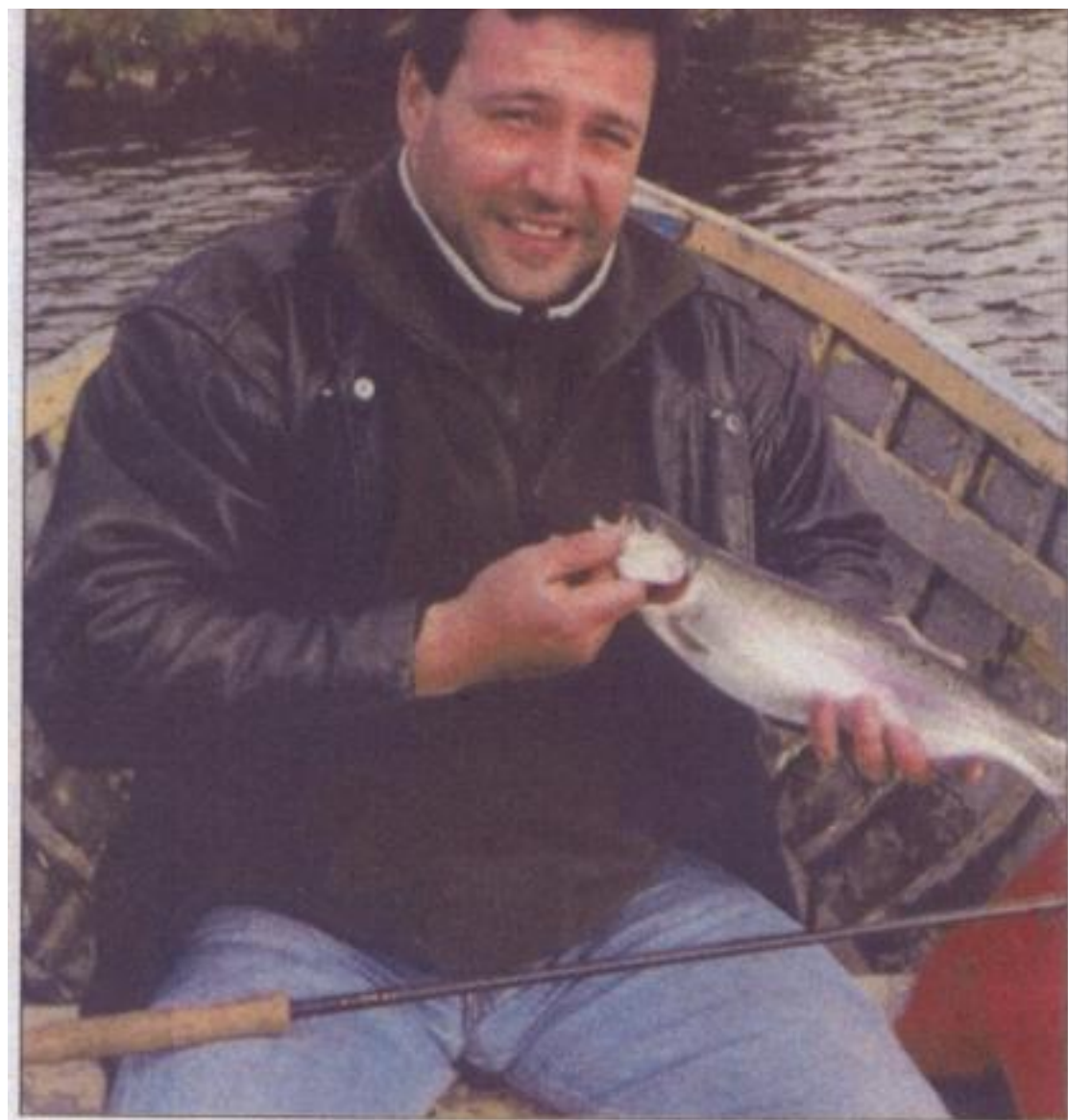


Muskoka

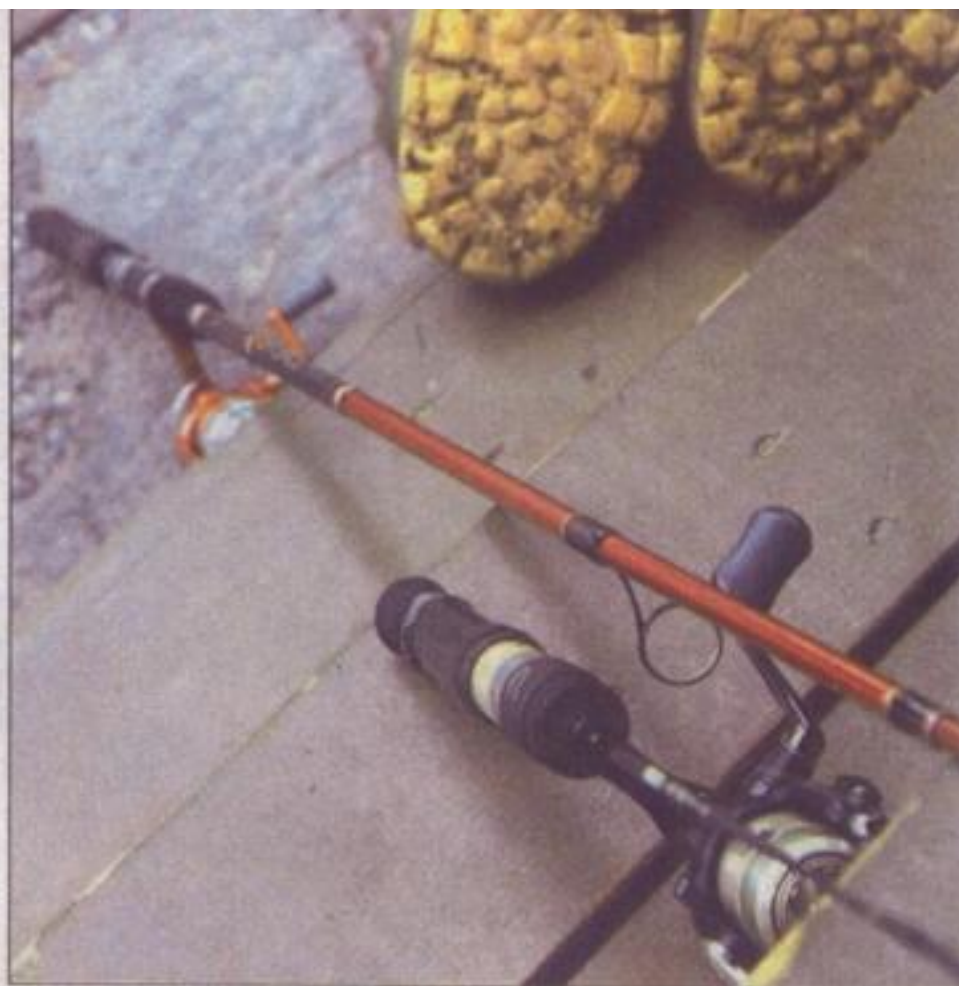
MAGAZINE

www.muskokamagazine.com July 2009

George Daniels, Lake of Bays Association executive Brian Simpson and Fraser Govan, also of the Lake of Bays Association, move a log from the path of the weir they recently built at Norway Point as part of a rehabilitation project to enhance fish spawning.

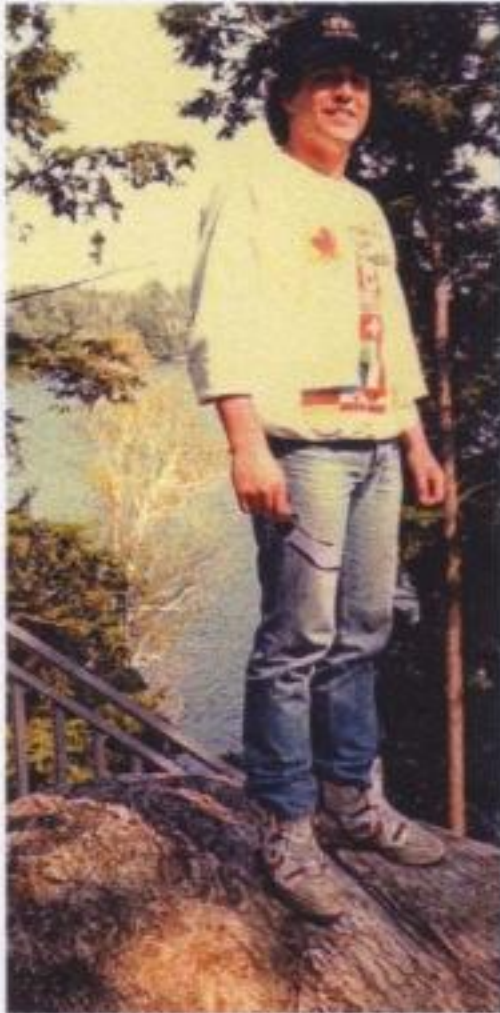


Photograph: courtesy of the Daniels Family



Andrew Daniels proudly holds up a fish he caught during a trip to Scotland in 2000 (left). George Daniels, Jackie Godard and Chris Daniels hold up the conservation ruler and fish poster launched by the fish stewardship (below).

The Andrew Daniels Lake of Bays Fish Stewardship -a living legacy-



The initiative was born out of the untimely death of 37 year old Andrew Daniels in 2004. "He was our friend and an avid Lake of Bays fisherman,"...said R. Bruce Montgomery Jr. and Bob Ransom. "In his honour and for future generations we have started the Andrew Daniels Lake of Bays Fish Stewardship Program...It is a positive way to remember Andrew while helping to protect something he cared for very much; Lake of Bays."

New conservation fish ruler for Lake of Bays

Lake Trout - Lake of Bays trout are large bodied fish that feed on herring and smelt (the 40 - 55 cm protected slot size is regulated on some lakes in FMZ 15)

Brook Trout

Smallmouth Bass - males guard their eggs and fry - experienced males are most successful



These highlighted are suggested release points

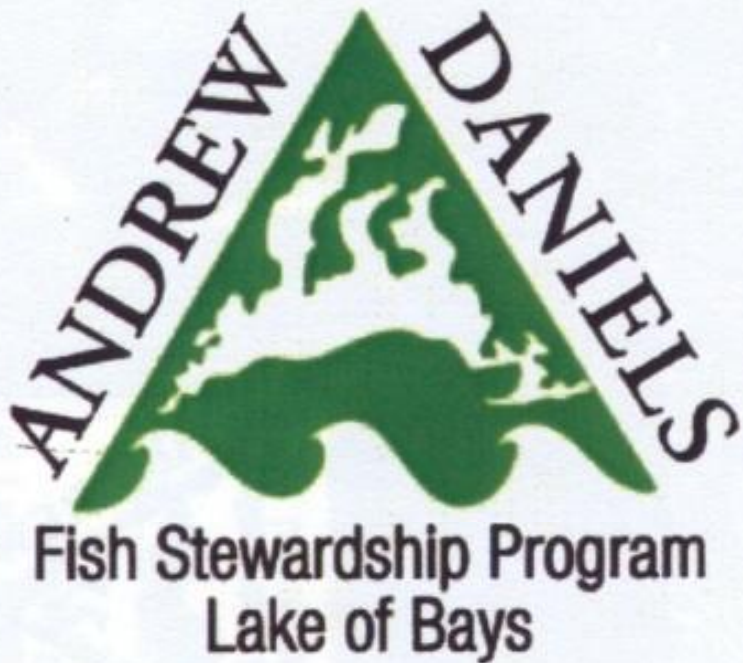
Lake of Bays fish have been analyzed for contaminants. Contact the "Toxicity Testing Centre" for details.

Ministry of Natural Resources

ANDREW DANIELS
Fish Stewardship Program
Lake of Bays
P.O. Box 10, Spring, BC V0N 1S0



FOR GOOD MEASURE: From l to r, Chris Winger (owner of CW Marine), Lake of Bays angler and Daniels family friend David Macdonald, George Daniels and Pete Rumney (owner of Port Cunnington Marina) show the Conservation Fish Ruler created by the Andrew Daniels Fish Stewardship Program.



Recruiting & Building a group of volunteers
who are made up of the stream and shoreline
landowners, lake and heritage cottagers groups
interested and concerned Muskoka citizens.

Community stream and shoreline stewardship means educating and communicating the many benefits of caring for and helping protect fish habitat.

Stewardship means on going encouragement of the volunteers and their dedication to the protection and enhancement of fish habitats..providing supportive tools.

Stewardship also means advancing and influencing fish regeneration by coming together with...
Sponsor Partners.

MNR, DFO, Twnshp. of Lake of Bays

The Lake of Bays Assoc. & Heritage Foundation.

The Shoreline Development By Law

Building a Directorate/Management Group..with

a business mind set including, but not limited to, fundraising, budgets, meetings ,
defined projects with drawings , permits etc

Conservation Fish Ruler

Bench Marks for Fish Habitat Regeneration

Lake of Bays Brook Trout spawning study, in 2005.

Lake of Bays Rainbow Smelt 2006 study

Media Support; Lake of Bays Yearbook & Newsletter, Huntsville Forester, Muskoka Magazine & others.

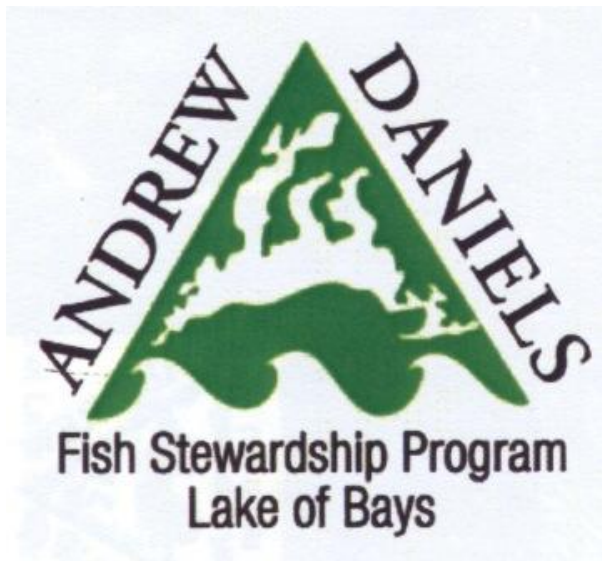
Support, Join &/or Contribute Brochure 2007

Growing Awareness = Expanded Data Base
more folks join the program

Young Stewards of Streams & Shorelines Certificate 2010. Assists High School grads with their “ Community Service “ score.

Fish Stock Brunch Foundation Fund Raiser

July 2011 Huge success..Plan to attend the 2nd Annual July 10/12



Fish Stewardship Program
Lake of Bays



MINISTRY OF NATURAL RESOURCES

Lake of Bays
Northern Pike
Spawning Observations 2006

For:
The Andrew Daniels Fish Stewardship Program
Ontario Ministry of Natural Resources
The Township of Lake of Bays

Released June 2006

This follows the 2005 brook trout
& smelt study on Lake of Bays
by the same fisheries technology team

By:
Stanley Sutey
Accipiter Fish & Wildlife Service
RR#6
Bracebridge, Ontario
P1L 1X4
705-646-4556

Marinas, Post Offices & Participating Retailers
distribute conservation fish rulers and posters

Port Cunnington Marina Pride of Lake of Bays Marine

BAYSVILLE
Marina

South Portage Marina

C W Marine

Robinsons Dorset

The Beacon



Brook Trout .. Species @ Risk.

Brook Trout are cold water fish species..(10 to 20 degrees C) that need plenty of oxygen to reproduce. There are 3 main species found in Ontario's cold water lakes and rivers. The other 2 are Brown Trout and Rainbow Trout.

“Brook Trout are a part of the ECO System that seem most sensitive to climate change -- said the MNR Fisheries Biologist “

Furthermore Brook Trout are an indicator of how our Lake of Bays , Muskoka Fish Habitat is thriving.

Lake of Bays is significant in that it has over half a dozen Stream Tributaries that support the Brook Trout Population.

Lake of Bays is one of a few large Lakes outside of Algonquin Park that has a viable Brook Trout population.

We don't want them to be comprised. Brook Trout are a vital component of our Heritage and Value to Lake of Bays and our larger aquatic system.

So lets look at how we are helping manage this resource with MNR, The Township of L. of Bays, DFO, L'o'Bays Assoc.& Heritage Fndtns.



www.ofah.org/stream

Produced by the Community Stream Steward Program; a multi-partner initiative focused on community stream stewardship development & practices

Trout Tidbits

Trout Habitat Enhancement



Courtesy of P.N.N.L.

Habitat Features

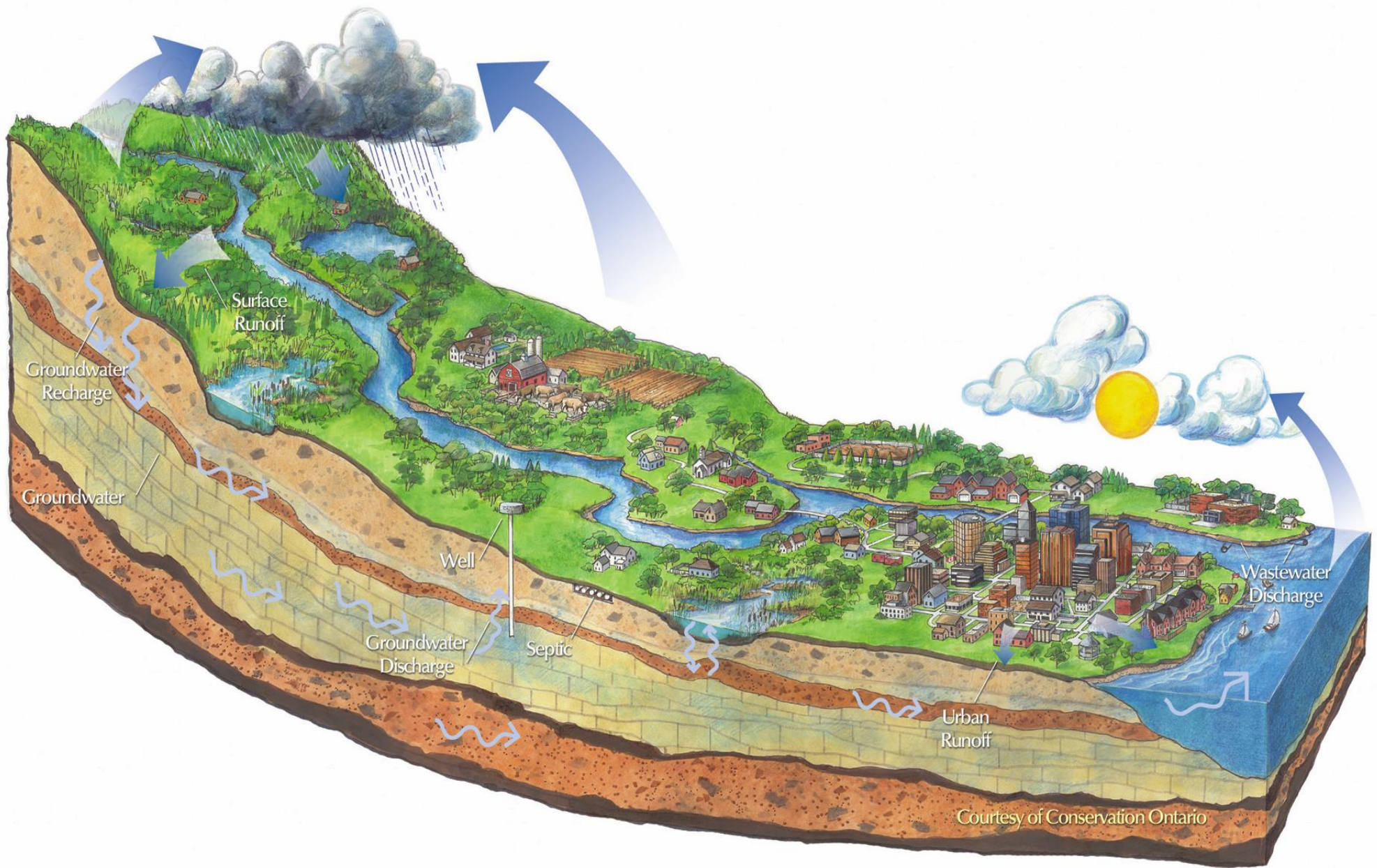
Stream and Wetland Ecosystems



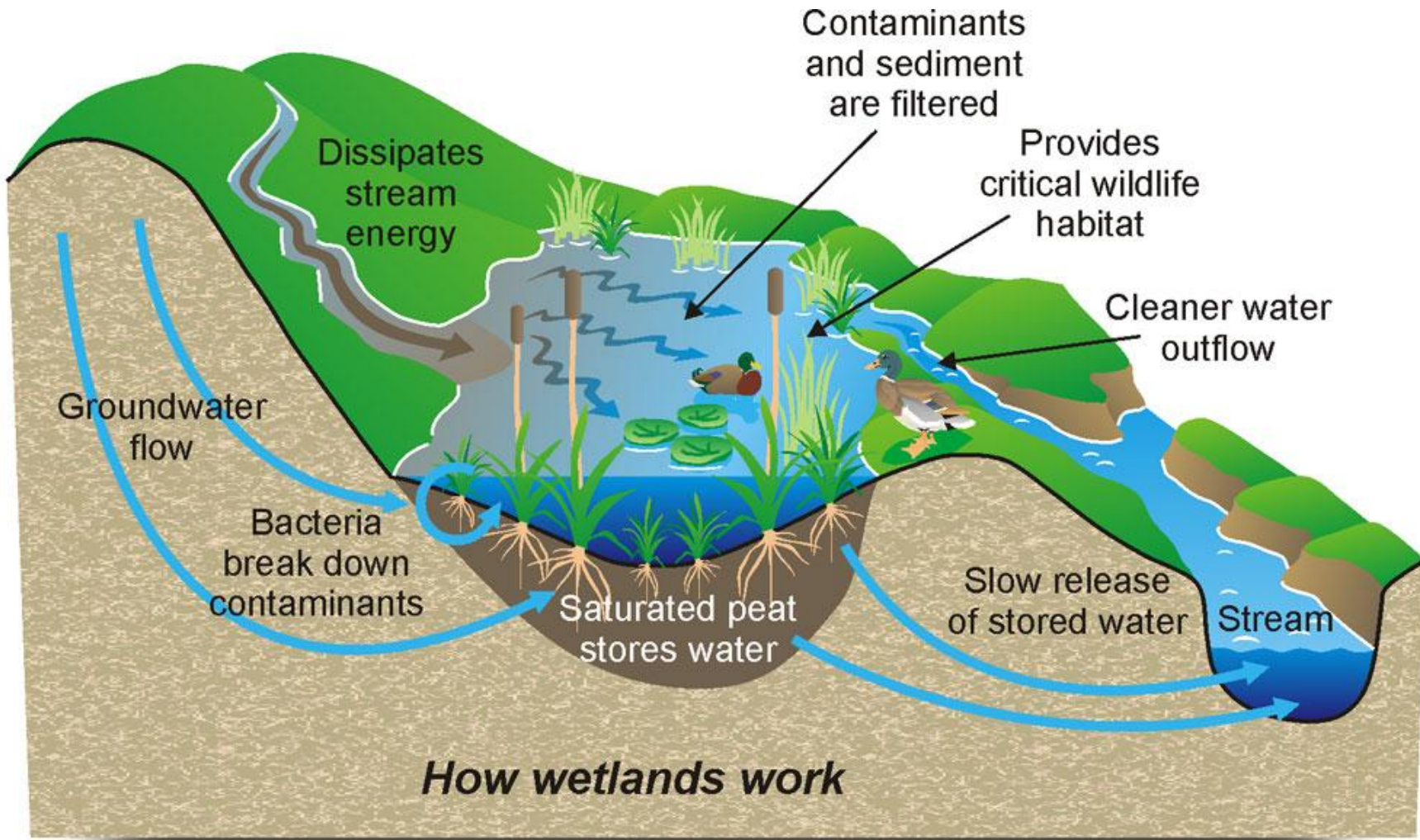
Headwaters

- Where a stream originates
- Depends on landscape
- Wetland, spring, pond complexes AND slope





Recharge
Discharge } **Groundwater** → **Streams**



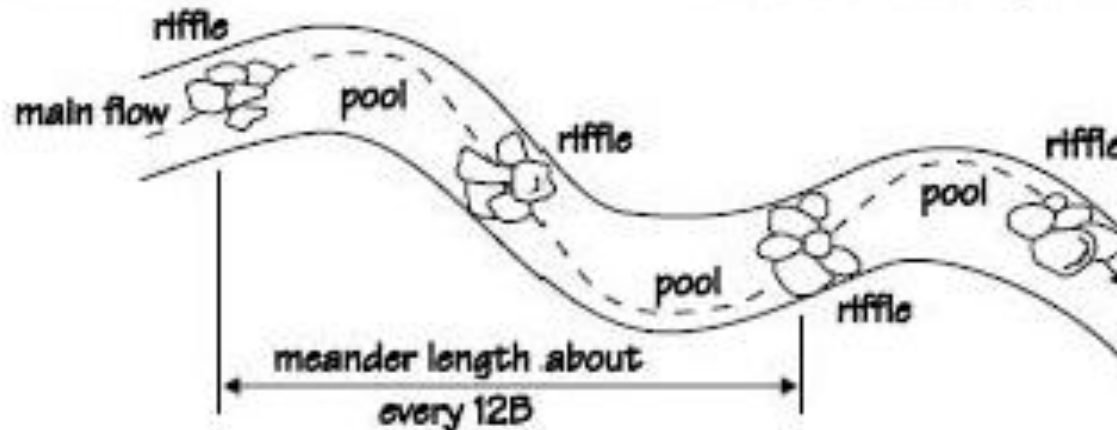
How wetlands work

Beneath the Surface

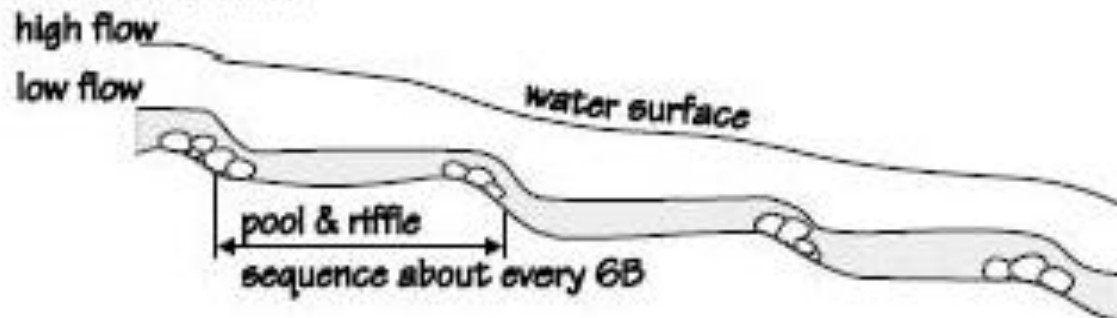
Figure 1
Average Meander, Pool and Riffle Spacing
Expressed in Bankfull Channel Widths (B)

adapted from *Stream Analysis
and Fish Habitat Design*, 1984

A. PLAN VIEW



B. PROFILE VIEW





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The characteristics of coldwater streams...

Coldwater streams are, as their name implies, cold year-round. In southern Ontario, they are dependent upon clean and cold groundwater that originates from glacial formations such as moraines. (like

Coldwater Streams



Coldwater Stream Inhabitants



www.ofah.org/stream

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What is a Riparian Buffer ?

Riparian Buffers



What are the Benefits of Riparian Buffers?

A healthy riparian buffer will...

Stream



www.ofah.org/stream

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Bank Stabilization



**Bioengineering
vs.
“Hard” Engineering**

Sedimentation

Stream Monitoring Techniques



Temperature Monitoring

Water temperature can be recorded manually or by using programmed digital recorders.

A temperature logger is a device use to record and store real time data.

- Simple To Use
- Long Lasting
- Valuable Data
- Habitat
- Species
- Can Identify:
- Problem Areas
- Groundwater Upwellings



Why Use Benthos As Bioindicators?

Benthos are excellent indicators of aquatic ecosystem health.

- Abundant and widespread
- Nobody cares (No permit required)
- Easily and inexpensively sampled
- Sedentary (unlike fish)
- Long lived (months to years)
- Many species with different tolerances
- Respond to both water and sediment chemistry
- Readily archived for future reference
- Provide early-warning



Stream benthos collection in the Raisin River watershed

(Rosenberg & Resh 1993, 1996; Mackie 2001)

Channel Morphology

Gathers data on the shape and condition of the channel using sampling transects.

Looks at:

- Water depth
- Direction and Volume of Flow
- Substrate
- Fish Cover
- Aquatic Vegetation
- Bank Slopes
- Bank Vegetation
- Undercut Banks





Restoration Project July 5, 2010 Volunteers L to R

David MacDonald, Chris Daniels, Brian MacKenzie, Ben Boivin (kneeling)

Young Stewards: Trey Montgomery, Thomas Ransom, Collin Montgomery,
Max Montgomery, Egan Montgomery

Standing by sign: Brock Montgomery, R. Bruce Montgomery Jr., George Daniels (kneeling)

Harry Edgar - not shown, Linda Keown - not shown



Rabbits Bay Restoration Project with Volunteers - July 5, 2010



Rabbits Bay Restoration Project with Volunteers - July 5, 2010



Rabbits Bay Restoration Project with Volunteers - July 5, 2010



Rabbits Bay Restoration Project with Volunteers - July 5, 2010



Steve Scholten, MNR Fisheries Biologist with Megan



Armour Stone Stream Protection, Back of Parking Area

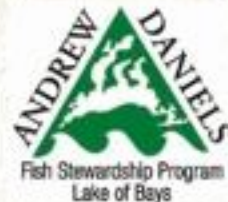
Lake of Bays

YOUNG STEWARD of our STREAMS and SHORELINES

Assisting Angling - a Tradition and a Responsibility

Let it be known that.; _____

Helps nurture our precious Fish Stocks and has contributed valuable volunteer hours as a Young Steward, thus advancing our mission to rebuild and maintain Lake of Bays Streams, Spawning Habitat and Shorelines. Dated _____

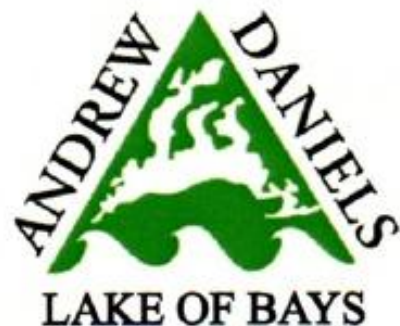


MNR Representative

ADFSP President & Secretary

Rabbits Bay Park & Boat Ramp

A Protected Stream & Shoreline Habitat



Memorial Fish Stewardship Program



Supporters:

- **Ministry of Natural Resources**

- The Edgar Family
- The Daniels Family
- Lake of Bays Association
- Community Volunteers

Ben Boivin, District Councillor / Janet Peake, Mayor

www.lakeofbays.on.ca

Lake of Bays Fish

M U S K O K A



Lake Trout



Brook Trout



Smallmouth Bass



Lake Whitefish



Largemouth Bass



Burbot



Northern Pike



Brown Bullhead



Rainbow Smelt



Rock Bass



Yellow Perch



White Sucker

Images property of Government of Ontario. Used with Permission.

Nurturing our Precious Fish Stocks

A sunset over a body of water with silhouetted hills in the background. The sky is filled with orange and yellow hues, and the water reflects the light. The text is overlaid on the upper half of the image.

A Sustainable fish population at your dock's doorstep is good for the economy and enhances the value of your property.

Fish are “the canaries in the mine” of water quality health.