Message From the New Coordinator

Carley Kratz
River Raisin Watershed Council
Spring 2014 Meeting
April 23, 2014
Outline

• My Background

• What Does the Watershed Council Do?
  – Education
  – Monitoring & Protection
  – Volunteer Programs
  – Recreation

• Michigan Agriculture Environmental Assurance Program (MAEAP)

• Mycofiltration: Using Fungi to Improve Water Quality
My Background

• Grew up near Bridgewater
  – Enjoyed the River Raisin from a young age

• 2009 University of Michigan, B.S.
  – Program in the Environment
    • Botany
  – Honors thesis on prescribed burns

• 2014 Michigan Technological University, Ph.D.
  – Impacts of climate change on soil microorganisms
  – Fungi in forests and wetlands
What Does the Watershed Council Do?

We Support...

• Education

• Monitoring & Protection

• Volunteer Programs

• Recreation
Education

• Public Forums
  – Libraries, Fairs, Local Governments
  – Information tailored to interest of both children and adults

• Classroom Presentations
  – Lake Erie Water Festival Partner
  – 2014-2015 School Year

• Freely Available Materials
  – Activity books for children
  – Maps
  – Grant funding guides
  – Informational books and pamphlets on gardening, fishing, pollution, septic systems, etc.
Monitoring & Protection

• River Raisin Watershed Management Plan
  – Published in 2009 by RRWC and partners
  – Includes history, geology, biology, water quality
  – Freely available to everyone
  – Useful resource when applying for funding

• Protection of Habitat
  – Work to preserve habitat for native plants, fish & wildlife
  – Help guide land use decisions

• Water Quality Monitoring
  – Long-term data collected by Heidelberg University
  – RRWC will expand nitrogen, phosphorus, sediments & dissolved oxygen measurements to more sites
    • Coordinate new measurements with macroinvertebrate sampling
Adopt-A-Stream

- 12th Year

- Volunteers learn to monitor water quality by sampling macroinvertebrates
  - Some “bugs” are more sensitive to changes in water quality than others

- Jim Martin at Adrian College is our lead Entomologist

- New partners
  - Jackson Community College
  - Lenawee County Intermediate School District
Adapted from: DEQ, River Raisin Watershed Hydrologic Study

Dave Fongers
Hydrologic Studies Unit
Land and Water Management Division
Feb. 17th 2006
May 17th Training Day
Learn how to sample aquatic bugs

May 31st Stream Search Day
Volunteer teams collect samples

June 7th Bug ID Day
Identify bugs and learn about water quality
Volunteer

• Organize local stream cleanups
  – Small cleanup events at the headwaters (June 7th) and in Monroe (TBA) this summer

• Help lead special educational sessions in your community

• Man a booth at a fair or expo

• Coordinate paddles or fishing trips
River Raisin Rescue

• Three sites will be target for cleanup in 2014
  – Manchester
    • June 21st
  – Adrian
    • July 19th
  – Dundee
    • August 23rd
Recreation

Michigan Water Trails-Public Access Site Map
Michigan Agriculture Environmental Assurance Program
Certifies farms as environmentally friendly
FREE and voluntary program
Guides farmers in livestock, crop and farmstead programs
Does NOT write citations
Organizes Tall Ship Sails on Lake Erie
No-Till Agriculture & Fungi

- Tilling breaks up fungal hyphae in the soil
- Mycorrhizal fungi help plants take up nutrients
- Fungi produce substances that hold the soil in place
Mycoremediation

• Using Fungus to Improve Water Quality
  – Reduce Erosion
  – Absorb Nutrients
  – Improve Crop Yield
  – Break Down Contaminants

• “Mycelium Running” by Paul Stamets

Image: http://www.orcas-island-rentals.com/mycoremediation.png
How It Works

- Inoculate wood chips with fungi
- Fill burlap bags with wood chips
- Stack bags to create bunkers in ecologically important areas
Importance of Citizens

• The River Raisin Watershed is as large as Rhode Island (1,080 square miles)
• We rely on the input of citizens to guide our activities
  – Recreational Opportunities
  – Volunteers Task-Force
  – Areas that Need Attention
  – Water Quality Concerns
Questions?