Chapter 4 (Part 1)
Design Ideas for a Natural Shoreline Landscape
Chapter 4 Discussion

Design Ideas for

- Buffers
- Fish and Wildlife – Attracting and Discouraging
- Stormwater Management
- Shoreline Stability
Create natural shorelines that preserve and/or restore ecological benefits to our lakes.
Different techniques can accomplish more than one goal

A design should incorporate:

- Shoreline stabilization
- Homeowner needs (swimming, boat access, relaxing areas, view)
- Fish and wildlife habitat

photo: Jane Herbert
High Impact Landscape becomes a Low Impact Lake Friendly Landscape

Lake Front Landscape integrating a more manicured approach with buffers. (Source: MSU Extension)

Lakefront Landscape: different approach. The upland and aquatic zones are outlined. (Source: MSU Extension)
Natural Shoreline Erosion Control Continuum

- **Plantings**: aquatic, wetland and/or upland.

Increasing erosion problems and/or energy potential
Designing for Buffers

Buffers can be used to:

Attract Wildlife
Discourage Wildlife
Filter Stormwater runoff
Maintain a stable shoreline

Photo: Jane Herbert
Example Buffer Design: Gradual Slope

(Source: MSU Extension.)
Before - 2001

Planted early summer 2001 – photos summer 2002

Photo: Julia Kirkwood
1st year: planted fall

Before

Following summer

Photos: Allegan Conservation District
Strategies for Being a Good Neighbor with Natural Landscaping

Create
- A border of lawn, hedge, fence, path etc. to frame the landscape

Recognize
- The rights of property owners to be different; don’t be arrogant about native plants

Advertise by education
- About what to expect before you start your project

Start small
- Develop your learning curve and minimize the rate of change

Humanize your landscape
- Add a place to sit, a bird house etc. to maximize enjoyment, aesthetic appeal and link people with nature

“To Mow or Grow” by Bret Rappaport in Wildflower, Spring 1996
Natural Shoreline Landscapes
Chapter 4: Design Ideas Part 1
Designing for Fish and Wildlife

A Shoreline Landscape that supports a diversity of wildlife should

- Contain a variety of plants
- Provide food and cover throughout the year
- Provide nesting sites
- Have upland, wetland and aquatic habitat components
Diversity of Plants = Diversity of Wildlife

Insects, birds, amphibians, reptiles, fish and mammals

Trees and shrubs:
- Fruit, nuts, seed, cover, nesting (evergreens for winter cover)

Grasses:
- Grains, seed, cover, nesting

Flowers:
- Nectar and seed

Downed woody material
- Cover, nesting
Discouraging Nuisance Animals

Key Concept: Understand what type of habitat an animal likes best and why

#1 nuisance animal: Canada Geese

• Are grazers
• Love open expansive lawns up to edge of lake

Lawns Provide:

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<th>Constant supply of food</th>
<th>No barriers</th>
<th>No hiding places for predators</th>
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- Lawns Provide a Constant Supply of Food
- Lawns Provide No Barriers
- Lawns Provide No Hiding Places for Predators
Discouraging Nuisance Animals

A well-designed buffer strip can deter geese from utilizing shoreline lawns for at least part of the year.

Photo: Jane Herbert
Exclusionary measures to protect plants from waterfowl during establishment is advisable.
Raingarden Cross-section
Residential Rain gardens

Collects and infiltrates roof runoff instead of piping directly to the lake. (Photo taken just after completion)

Collects and infiltrates small road and hillside runoff

Photos: Jane Herbert, Steve Allen

Sept 2003

Summer 2005