

Shoreland Restoration: Getting to the “Roots” of the Issue

Mary Blickenderfer, Ph.D.
Associate Extension Educator
University of Minnesota



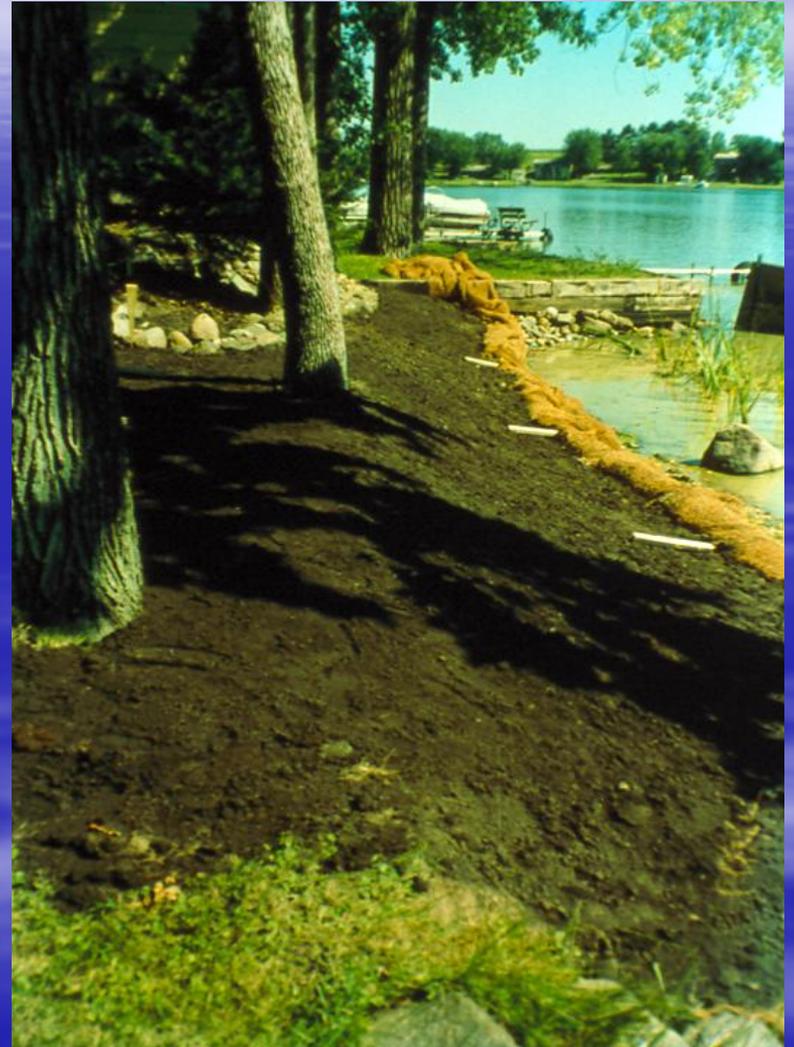
North Center Lake



before



Install coco log before work crew hauls dirt to shoreline



Plant native flowers,
grasses and sedges



Plant native aquatics
and install wave break



2 months after planting - cover crop established



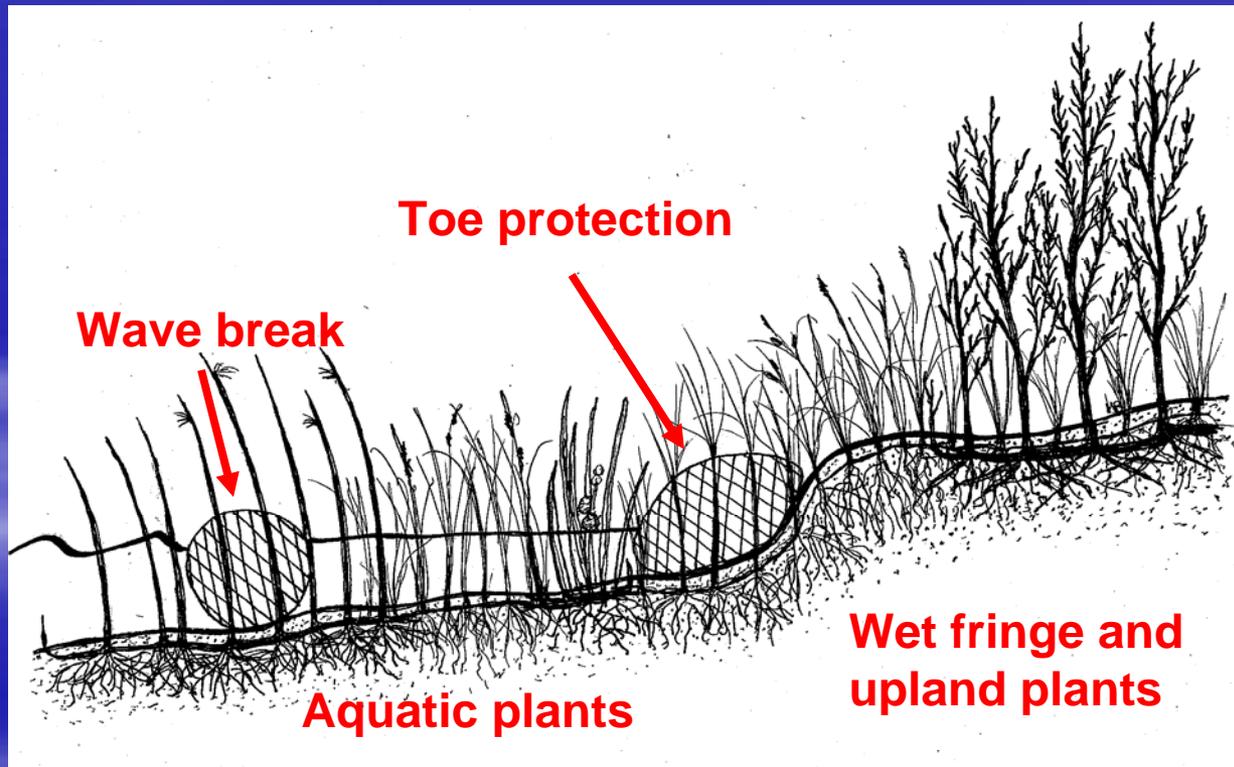
2 years after planting – natives well established



6 years after planting – restoration failed.
Contractor hired to “fix” problem.

Wisdom, discoveries, new directions

- **Treat the shoreland “SYSTEM”** – holistic approach to addressing shoreland restoration



Wisdom, discoveries, new directions

- Every restoration is a research opportunity!
- Use multiple treatments on a site
- Gather pre- and post-data
- Make use of “citizen scientists”



Wisdom, discoveries, new directions

- **Site evaluation** – what indicators do we use to predict soft armor/bioengineering success? (U of MN research 2009-2012)



Wisdom, discoveries, new directions

- **Plant selection and sequencing – on erosive sites, plant rhizomatous species first; add showy, clump-formers later**



Wisdom, discoveries, new directions

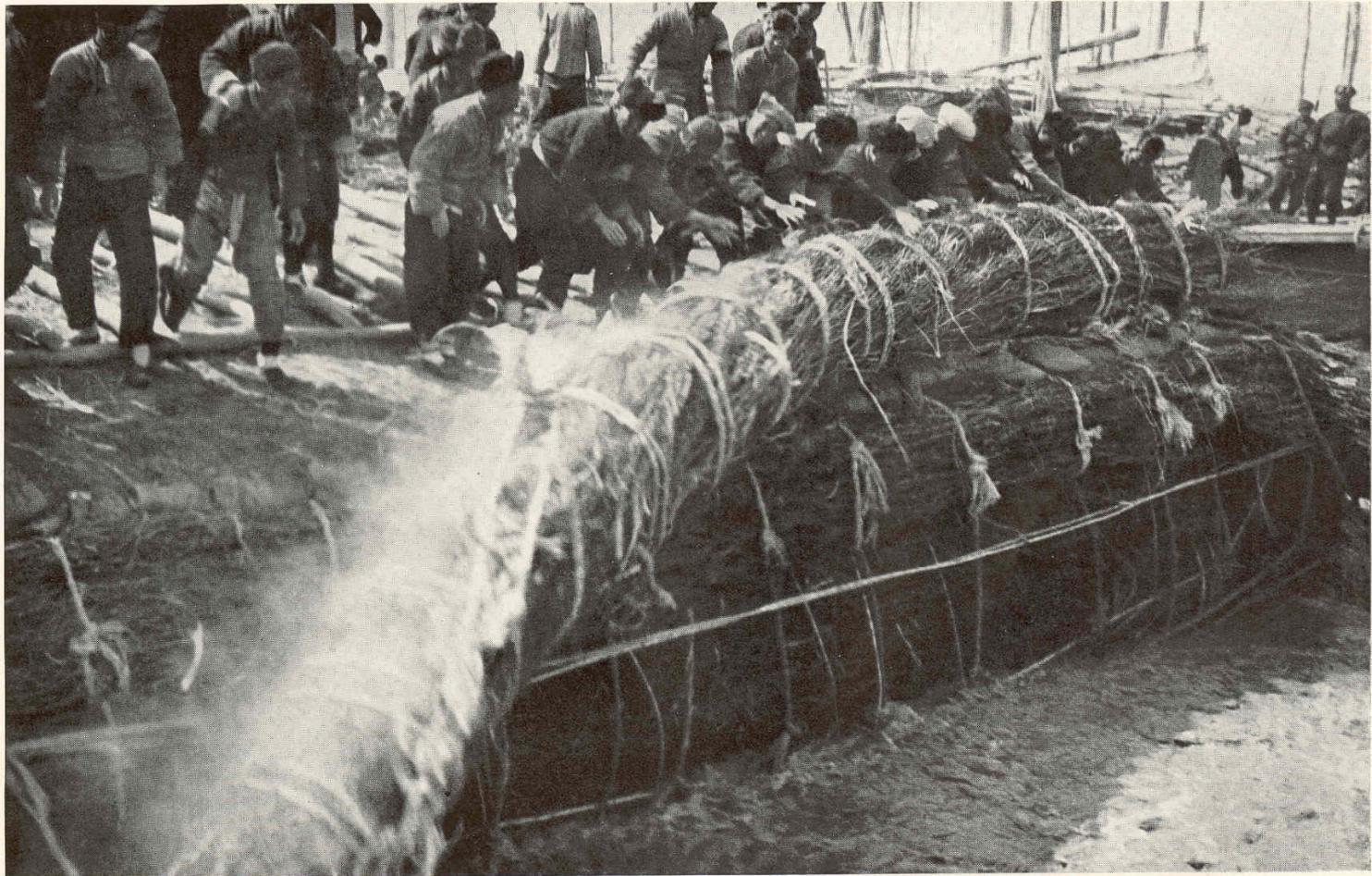
- **Bioengineering** – which bioengineering products and techniques will succeed?
(U of MN research 2009-2012)

Collect
sediment?



Coco log (toe protection)

Wrapped brush bundle
(wave break)



One Lusty Heave, and into the Dike Gap Plunges a 50-foot Stone "Sausage"

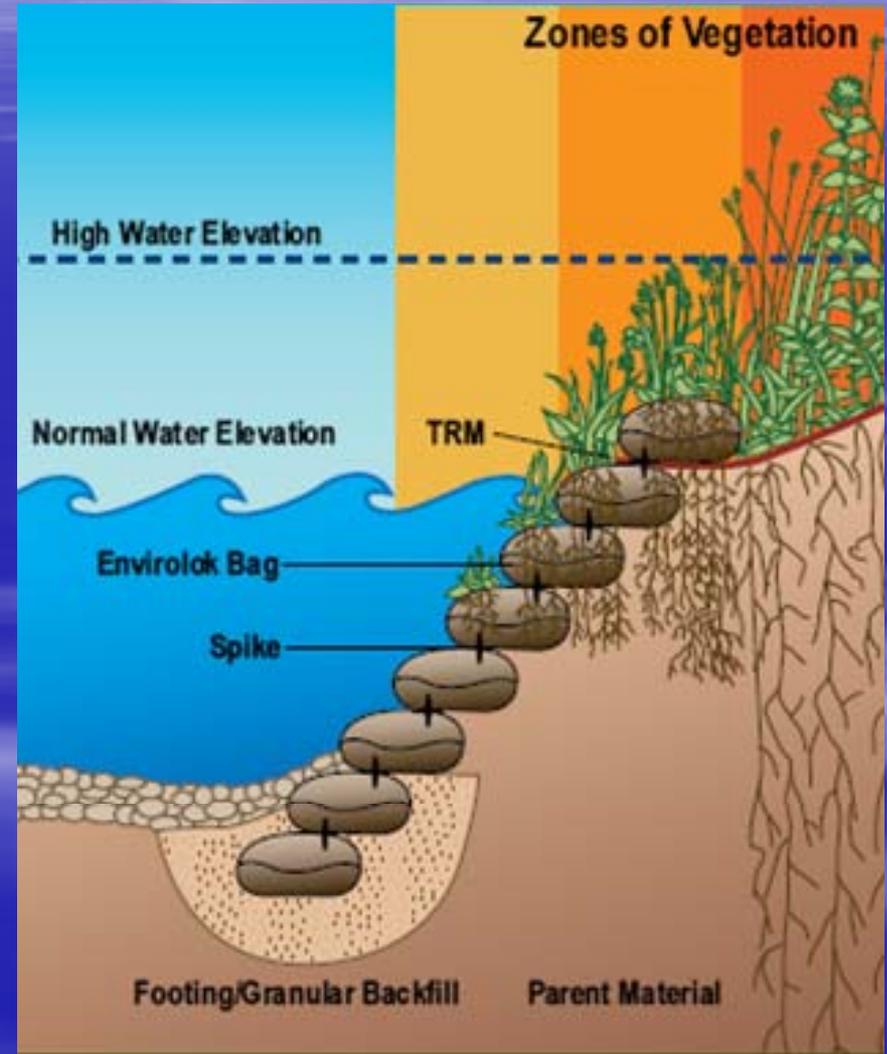
Chinese builders wrap willow sticks around a long series of "one-man-size" stones, and tie them firmly together with hemp rope. Many hands push the unwieldy roll up to, and then over, the embankment (page 223). Most Hwang Ho dikes are from 25 to 30 feet wide at the top.

Live fascine with rock, anyone?

Vegetated geogrid



Geotextile soil bags



Vegetated rip rap



Bowling ball rip rap?



Wisdom, discoveries, new directions

- Social Marketing

“Just how well do you know your audience?”

