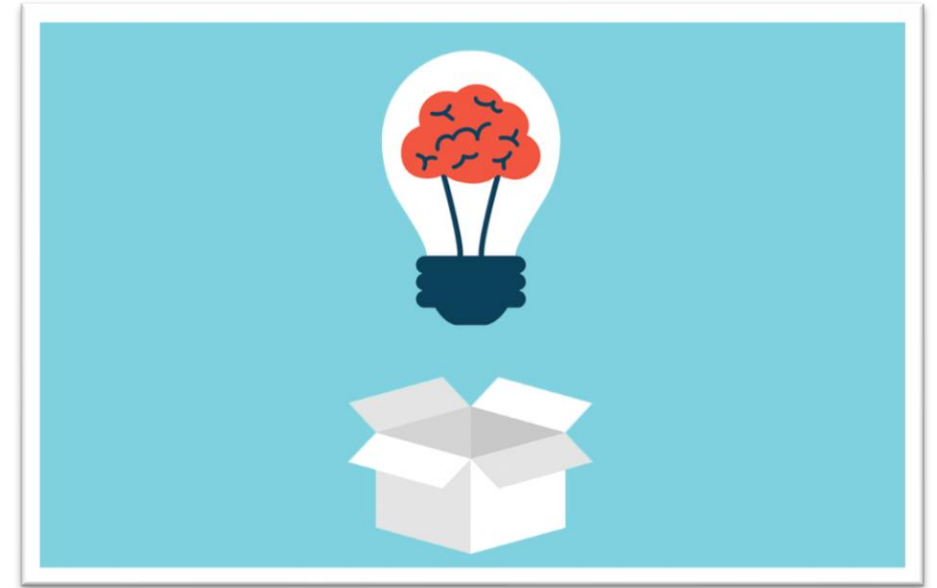


Unique Approaches to Traditional Natural Areas Management

Debbie Budyak, Environment Manager
Integrated Lakes Management

Session Overview

- Think beyond ‘traditional’
- Project overviews for two popular restoration services
- Pros and cons of stepping outside of the box





“If you want to find a needle in a haystack, burn the haystack”

- Start with goals and results in mind vs. the technique
- Determine when creative options are appropriate
- Availability of alternate solutions
- Balance ROI



Project Review: Cattail Control via Drowning

The Problem:



Considerations

- 10+ acres of cattails and surrounding wetlands
- Commitment to sustainability in conservation and restoration
- Leader in natural areas research
- Limited funding

Project Goals

- Test the effectiveness of drowning cattails as a...
 - More cost effective approach
 - Chemical-free measure of control
 - Sustainable management tool
 - Large scale option
- Determine if there is specific timing that is most effective

Management Approach

- ✓ **Cut cattails below the water line**



Management Approach



- ✓ **Cut cattails below the water line**
- ✓ **Consider timing as a factor**
 - Mid June
 - Early July
 - Early August

Management Approach



- ✓ **Cut cattails below the water line**
- ✓ **Consider timing as a factor**
 - Mid June
 - Early July
 - Early August
- ✓ **Monitor regrowth**

Early Conclusions...



Early Conclusions

- Encouraging initial results:
 - No regrowth in first two test strips by the time of the third cutting
 - Residence of wildlife is a win for our partner
- Final results measurable during this growing season
- To be determined: Is this technique practical in large-scale control?

Other “Alternative” Options

- Removing root systems



Other “Alternative” Options

- Removing root systems
- Cattail rolling



Credit: Marsh Master

Other “Alternative” Options

- Removing root systems
- Cattail rolling
- Manual vegetation removal

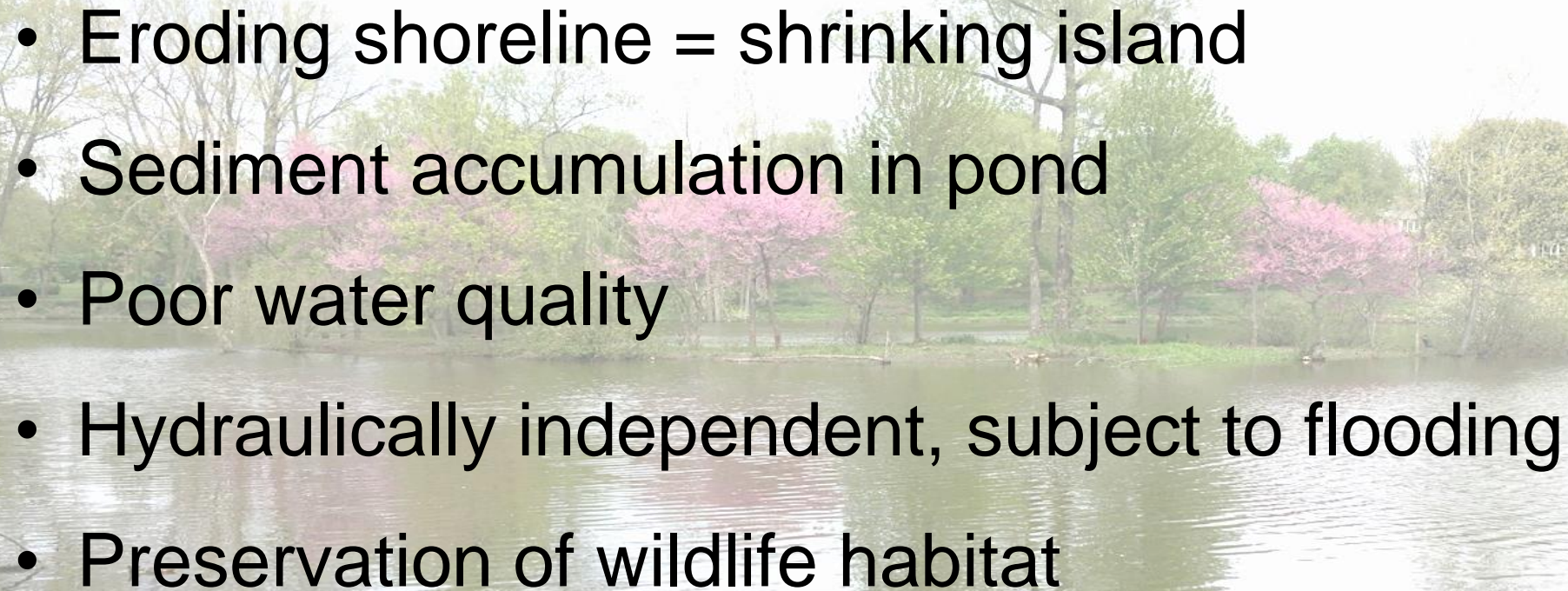


Project Review: Shoreline Stabilization

The Problem:



Considerations

- Eroding shoreline = shrinking island
 - Sediment accumulation in pond
 - Poor water quality
 - Hydraulically independent, subject to flooding
 - Preservation of wildlife habitat
- 

Project Goals

- Stabilize the island and protect against future erosion
- Create more depth
- Improve water quality
- Support habitat for local wildlife

Management Approach



- ✓ **Install coir logs around perimeter**
 - Benefit of height
 - Increase the footprint

Management Approach



- ✓ **Install coir logs around perimeter**
- ✓ **Backfill coir logs with sediment from pond**

Management Approach



- ✓ **Install coir logs around perimeter**
- ✓ **Backfill coir logs with sediment from pond**
- ✓ **Install native vegetation**
 - Further stabilize the new shoreline
 - Assist with filtering run-off into the pond
 - Create additional habitat

Early Conclusions

- Encouraging initial results:
 - Created additional 8ft of shoreline to island
 - Leveraged existing nutrient base by relocating the sediment (on the island vs. in the water)
 - Increased pond depth
 - Added height is protecting against flooding

Other “Alternative” Options

- Geo-bags



Other “Alternative” Options

- Geo-bags
- Floating islands



Credit: Vita Water Technologies

Pros & Cons to 'Thinking Outside the Box'

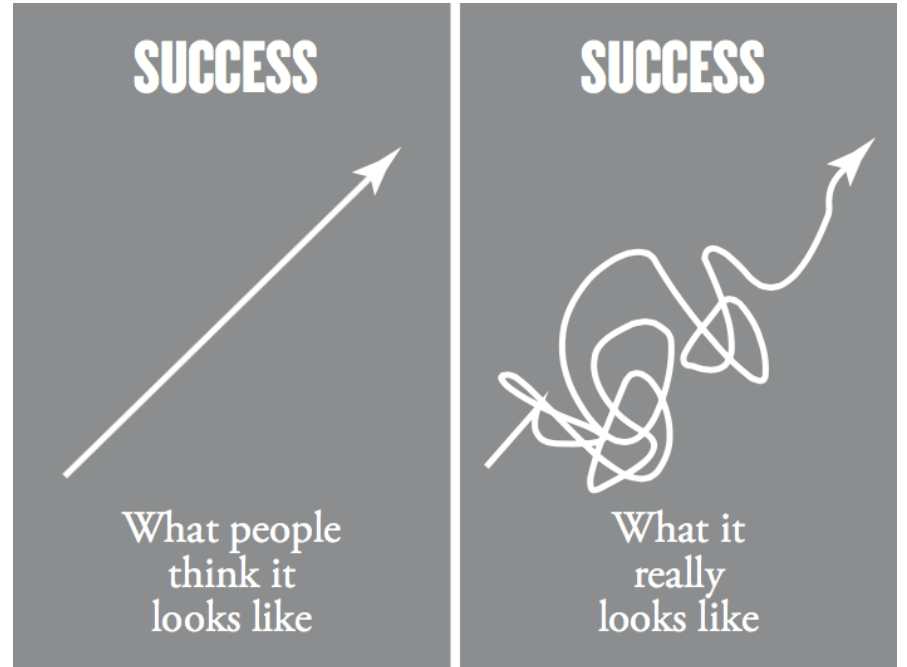
Cons...



- Opposite of tried and true
- Unintended consequences
- Balance achievement of results with creative process

Pros...

- Education, mass appeal, buy-in
- Experience and lessons learned
- Trust!



Questions?