

Smith Mountain Lake Habitat Enhancement



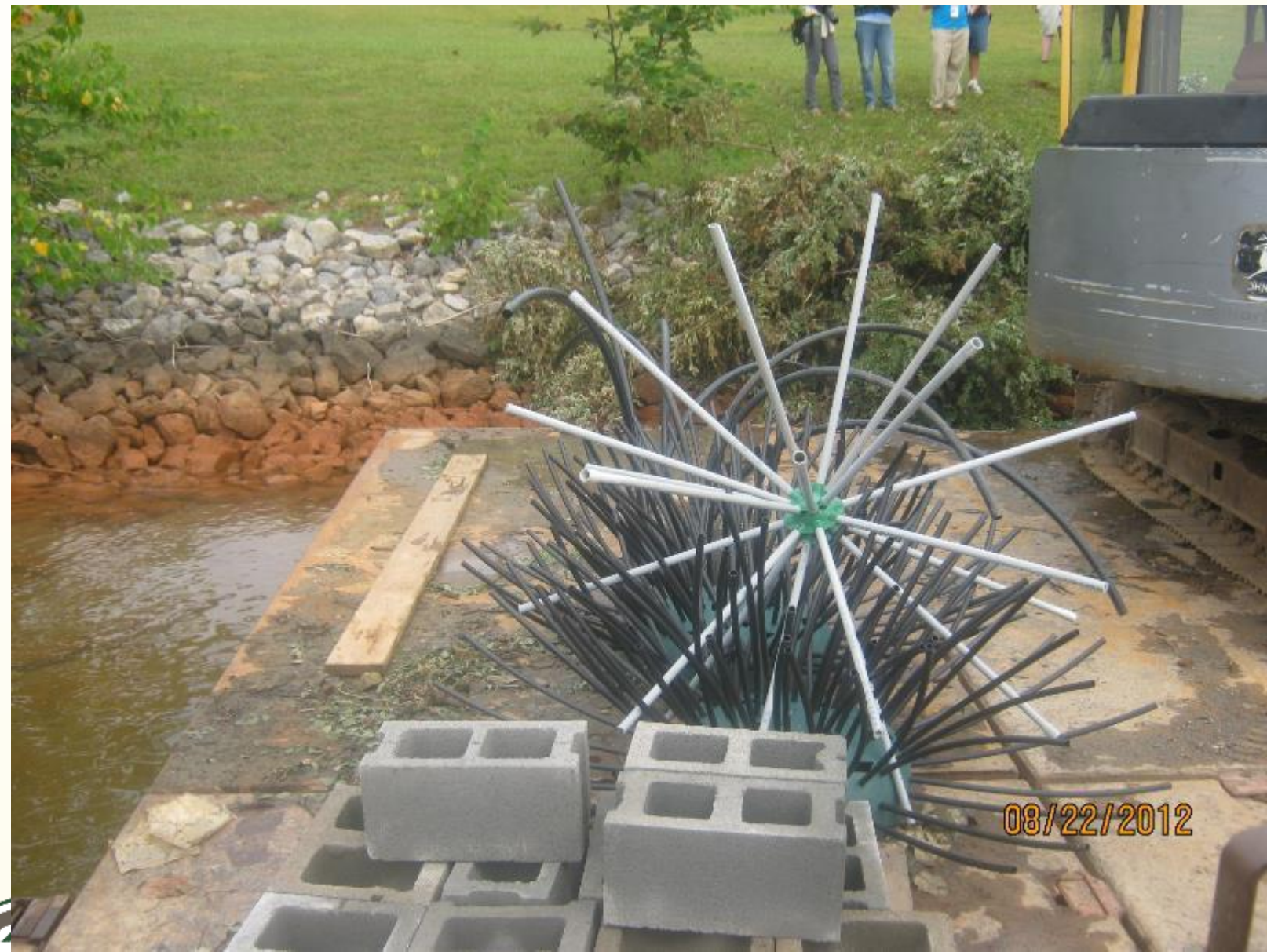
Experimental Habitat

**Project launches with
funding designated
for habitat during
FERC Relicensing**

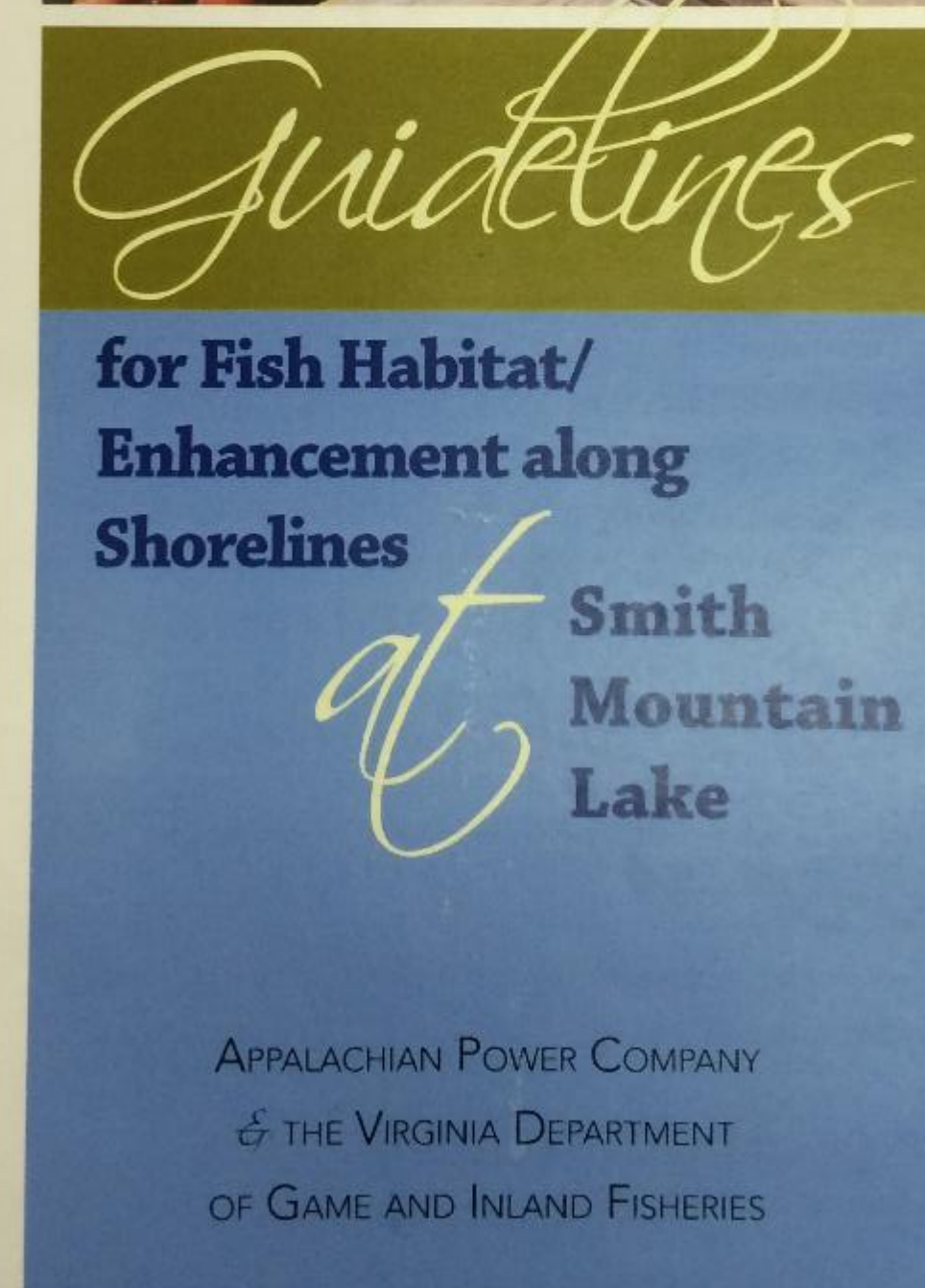
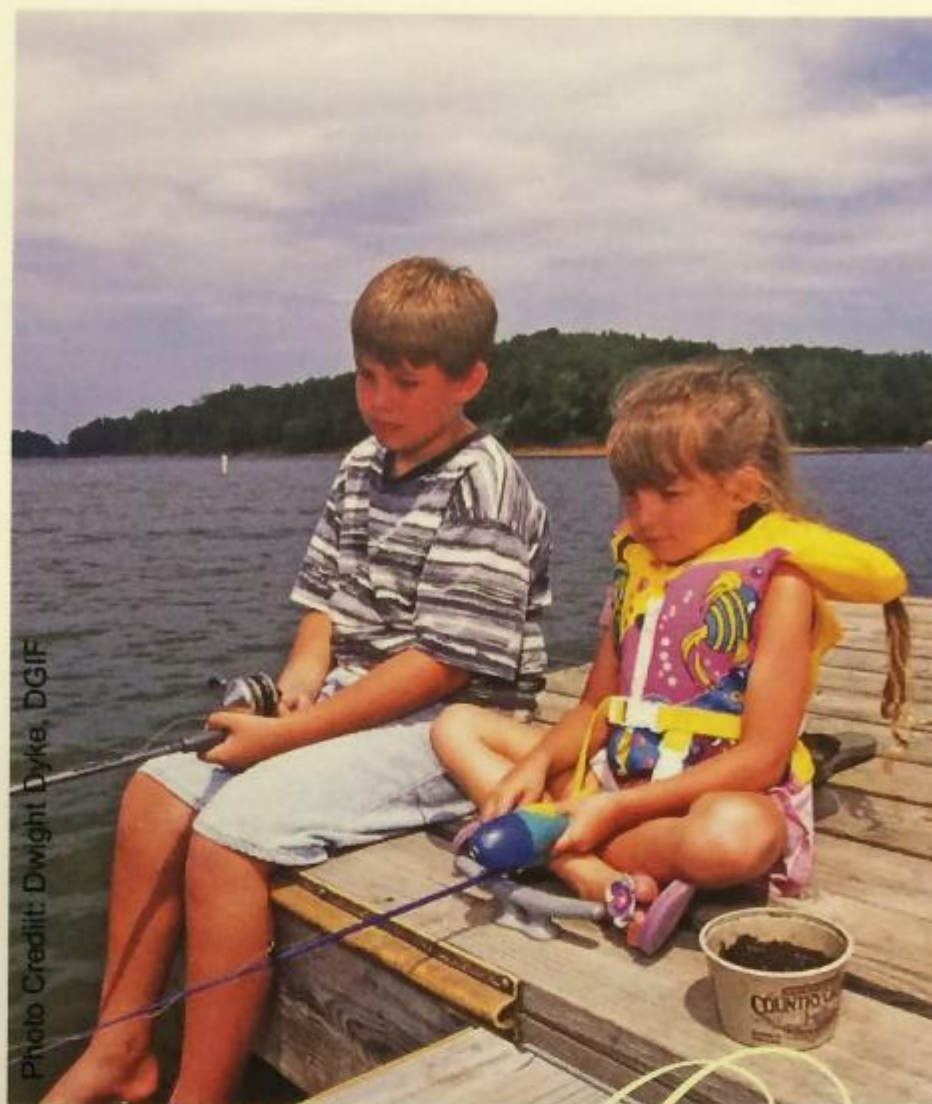




- **Plastics**
- **Various Wood Designs**
- **Bundled Trees**
- **Rock Pile**







- Experimental project helped guide future DGIF & public fish habitat enhancement programs
 - publication of brochure
 - online permit for public installation of habitat
 - advise public ongoing basis



Begin Summer 2017

- DGIF habitat projects at SML focusing on refuge for small fish due to limited shoreline habitat from:
 - Extensive shoreline development for ≈ 50 years
 - + primarily loss of fallen trees and related structure along shoreline
 - Loss of aquatic vegetation
 - + no aquatic vegetation remaining after grass carp stocking
 - + expecting no significant aquatic vegetation developing for at least 5-10 yrs.
- Long range plan, not expected to contribute significantly to fish populations in the short term
 - Habitat work for 30+ years may improve overall young fish survival
 - This is a long term commitment



Current Habitat Work

- Water Willow Plantings
- Milk Crates under Docks
- Mossback Structures Primarily 6-10 ft. depths
- Dock projects with AEP and homeowners



Water Willow

- Water willow is present but very limited
 - primarily in upper Roanoke Arm, some down to mid-lake
 - no plants in the Blackwater Arm
- Current plan is to initiate stands throughout the reservoir
 - hopefully new stands will spread naturally
- 2017 – 2018
 - 4,500 plants at 180 sites
 - plantings that were underwater or were later inundated have been consumed by grass carp
 - plantings at or near high water mark had low survival, predation from deer and geese
- 2019 – no plantings



Water Willow Picking Time



Water Willow Planting



Water Willow Planting





Milk Crates

- Milk crates have been an acceptable type of young fish habitat for many dock owners
 - provides opportunity to place habitat where needed most (highly developed shoreline)
 - placed under docks, typically not aesthetically disturbing or interfering with swimming & boating
 - milk crate bundles are zip tied to dock pilings
- 2017 - 2019
 - Approximately 2,300 crates installed at 110 docks
- The program has been very well received, even those who do not fish like the program because most people understand benefits of Habitat and related Conservation



Six Crate Unit



Crate Units Ready For Transport





Milk Crates



Milk Crates



Mossback Habitats

- Mossback structures placed near the shoreline 6-10 ft. depths
 - placed behind navigational posts or next to shoreline in areas with little or no shoreline habitat
 - dispersed primarily from AEP barge
- Used mostly by young sunfish but some juvenile bass in structures
 - juvenile fish not using much deeper than 10 ft depths
 - generally, areas with multiple structures per site had fewer fish per structure



Mossback Safe Haven Kit



Material Construction on AEP Barge



Material Construction on AEP Barge











Questions?

