

Elk River Chain of Lakes Fish Shelters Project Update

Watershed Protection Plan Implementation Team Project



**Annual ERCOL-WPIT Meeting
with local units of government
March 19, 2014**

Dean Branson Three Lakes Association
Fred Sittel Friends of Clam Lake, and
Three Lakes Association

Fish Shelters Project

MDEQ Permit Conditions

- ✓ **Five-year permit issued June 2012**
- ✓ **MDNR Fisheries Division biologist support**
- ✓ **Riparian owner permission**
- ✓ **Minimum 10-foot clearance for boat navigation**
- ✓ **Use durable natural materials**
- ✓ **82 Locations in five lakes...**
 - Intermediate Lake
 - Lake Bellaire
 - Clam Lake
 - Torch Lake
 - Elk Lake

Fish Shelters Project

Structure types

- ✓ **Hardwood slab tree**



- ✓ **Hardwood crate filled with natural brush**



- ✓ **Hardwood stump with root ball**



Fish Shelters Project

Installing fish shelters



Fish Shelters Project

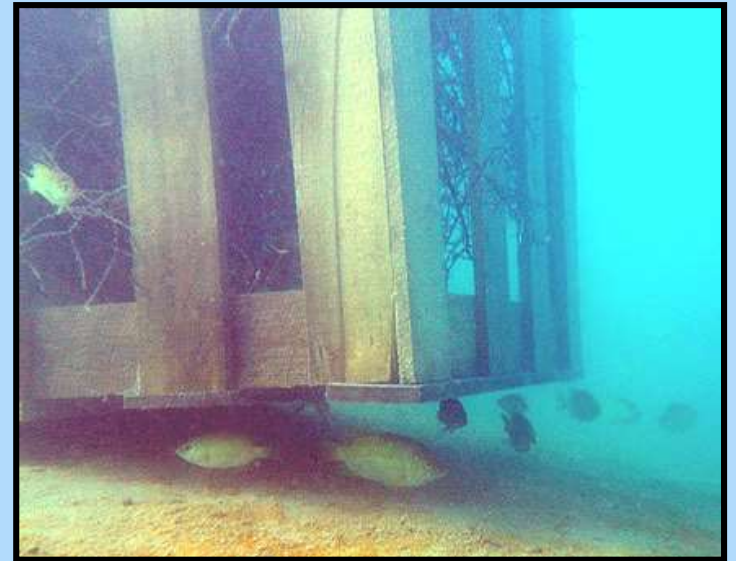
Scuba diver observations



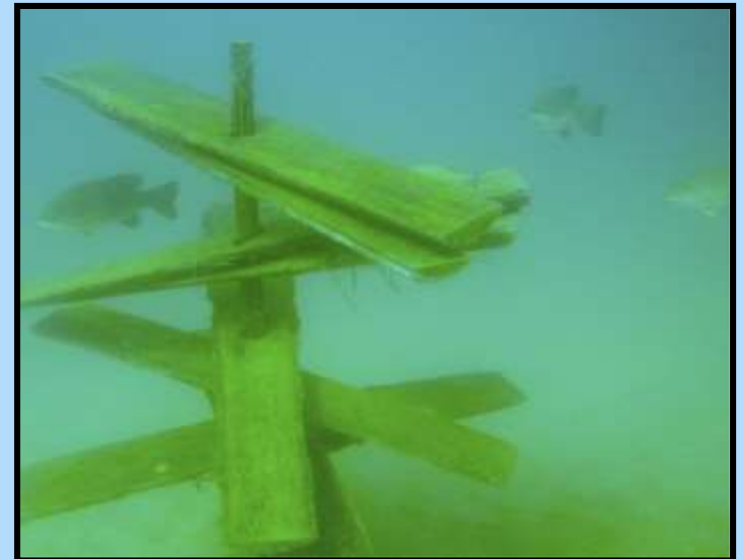
Many small fish

Fish Shelters Project

Initial Observations



- ✓ Rapid colonization
- ✓ Smallmouth bass & rock bass



Fish Shelters Project

Financial Considerations

**About \$100 per location (three structures)
plus \$50 per location (working pontoon)**

Typical Contributions

Volunteer organizers
Volunteer labor; about 30 people
Use of vehicles & trailers
Use of cutting & fastening tools
Field stones for ballast
Coffee bean sacks
Stumps & brush
Slab wood boards
Cash

Typical Purchases

Dimensioned lumber
Wood dowels
Natural rope
Nails
Drill bits
Concrete
Barge rental

Fish Shelters Project

Finding fish shelters



Locations of installed fish shelters ...

- **Lake Bellaire:** <http://goo.gl/maps/xvlqy>
- **Torch Lake:** <http://goo.gl/maps/cZuQL>
- **Elk Lake:** <http://goo.gl/maps/OxP4P>
- **Intermediate Lake:** <http://goo.gl/maps/V5kHR>
- **Clam Lake:** <http://goo.gl/maps/nfvc3>

Elk Lake Fish Shelters

GPS Coordinates

Public · 395 views
Created on Sep 20, 2012 · By Kristy · Updated Feb 17, 2013
\$+1 0

	Elk Lake - E01	
Name:	E01	
Lake:	Elk Lake	
Latitude:	44.91245° N	
Longitude:	85.36173° W	
	Elk Lake - E02	
Name:	E02	
Lake:	Elk Lake	
Latitude:	44.90678° N	

*For additional information visit
collaborating organization's websites*

Fish Shelters Project

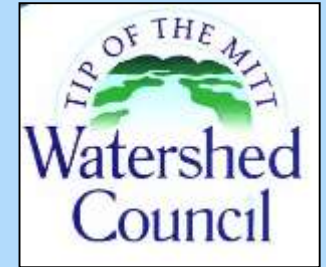
Current status

57 locations completed
as of March 19, 2014



Fish Shelters Project

Collaborating Organizations



Fish Shelters Project

Conclusions

- ✓ Fish shelters project is very popular
- ✓ Shelters compensate for lack of woody habitat in lakes
- ✓ Smaller fish love the brush filled crate
- ✓ Big fish love slab tree

