

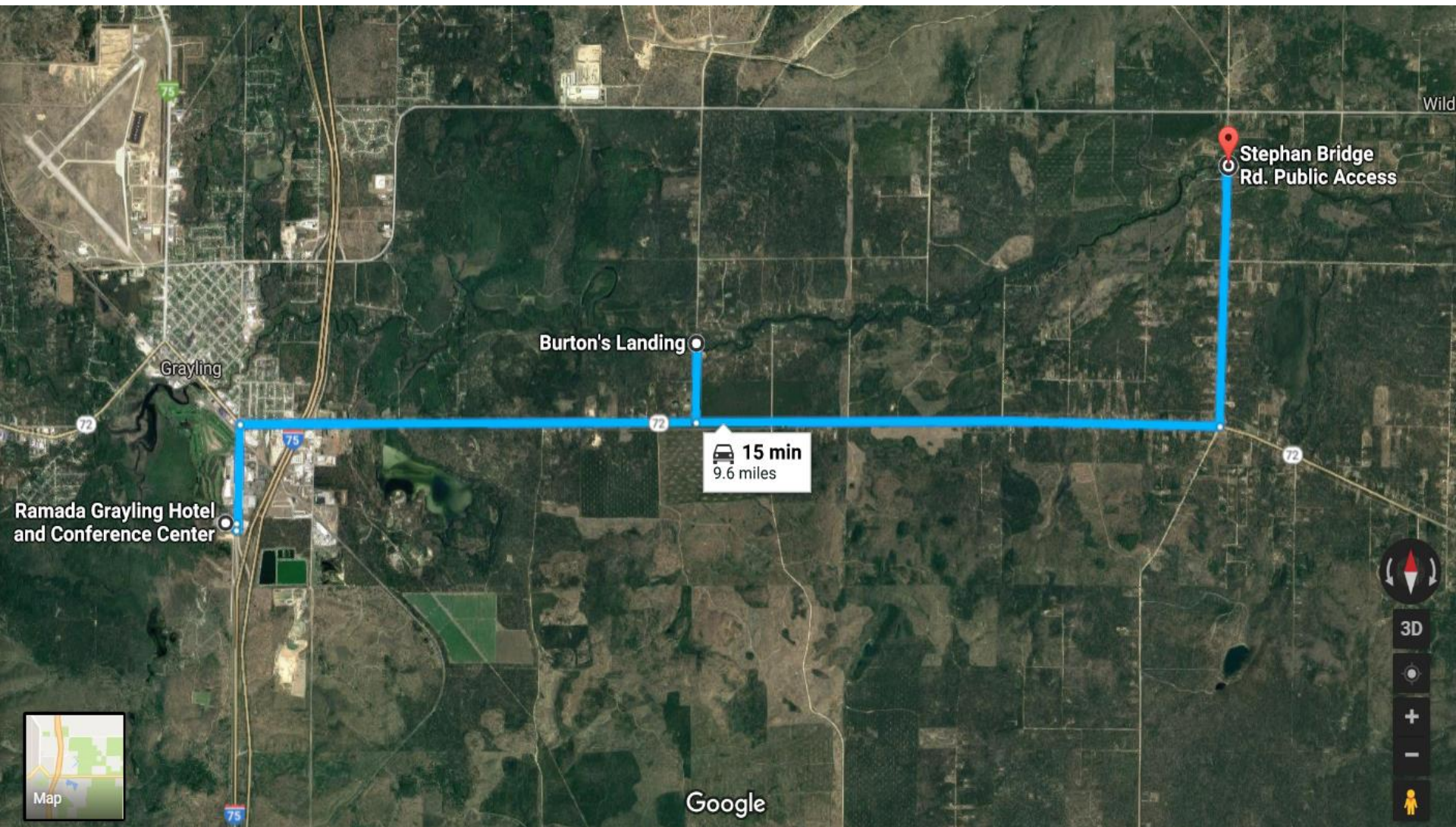
Society of American Foresters

Grayling MI October 5-6, 2017



- Welcome!
 - Fisheries biologists, AmeriCorps, not-yet-SAF-members, students
- Awards at lunch instead of evening banquet
- Happy hour at 5 pm (closing at 10 pm sharp)
 - Sponsors: Drysdale, Grossman, Martell, Smalligan, VanDyke
- Casual pig roast dinner at 6 pm by the pool
 - with fundraisers for Foresters Education Fund
- SAF business meeting and LP election Friday morning from 8 to 9 am
 - “Thursday-only people” are most welcome
- SAF 2018 Meetings
 - Spring is April 12-13 in Sault Ste Marie (with Canadians!)
 - Fall is *Oct 11-12, 18-19, 25-26* in Grayling (Industry Foresters; Arauco mill tour?)

Carpool 4+ per vehicle to drop off passengers at Burton's Landing.
Drivers only proceed to park at Stephan Bridge. Shuttle for drivers back to Burtons.
Flies only, catch and release. Beverages in cans only – no glass. Box lunch at end.



Forests for Fish

Mike Smalligan

DNR Forest Stewardship Coordinator

SmalliganM@Michigan.gov

www.Michigan.gov/ForestStewardship





is a three-year project funded by the USFS State and Private Forestry
to help natural resource professionals communicate how

Michigan's forests provide abundant clean water and quality fish habitat.



www.ForestsForFish.org and www.Facebook.com/ForestsForFish

What does Forests for Fish provide?





- Resources: educational and marketing materials (under development)
 - www.ForestsForFish.org and www.Facebook.com/ForestsForFish
- Landowners: cost share for a Forest Stewardship Plan
 - \$225 plus \$0.50 per acre up to \$2,500
- Tree Farmers: free site visit with a professional forester
 - **\$100 payment to forester to cover their travel expenses**
- Loggers: Michigan Association of Timbermen membership
 - \$155 value for loggers and \$60 value for foresters
 - MAT Annual Meeting is April 26-27, 2017 in Boyne
- Foresters: Association of Consulting Foresters membership
 - \$1,000 for new members and \$250 for current ACF members
 - **“Practice of Consulting Forestry” course in Bellaire, Feb 10-13, 2018**

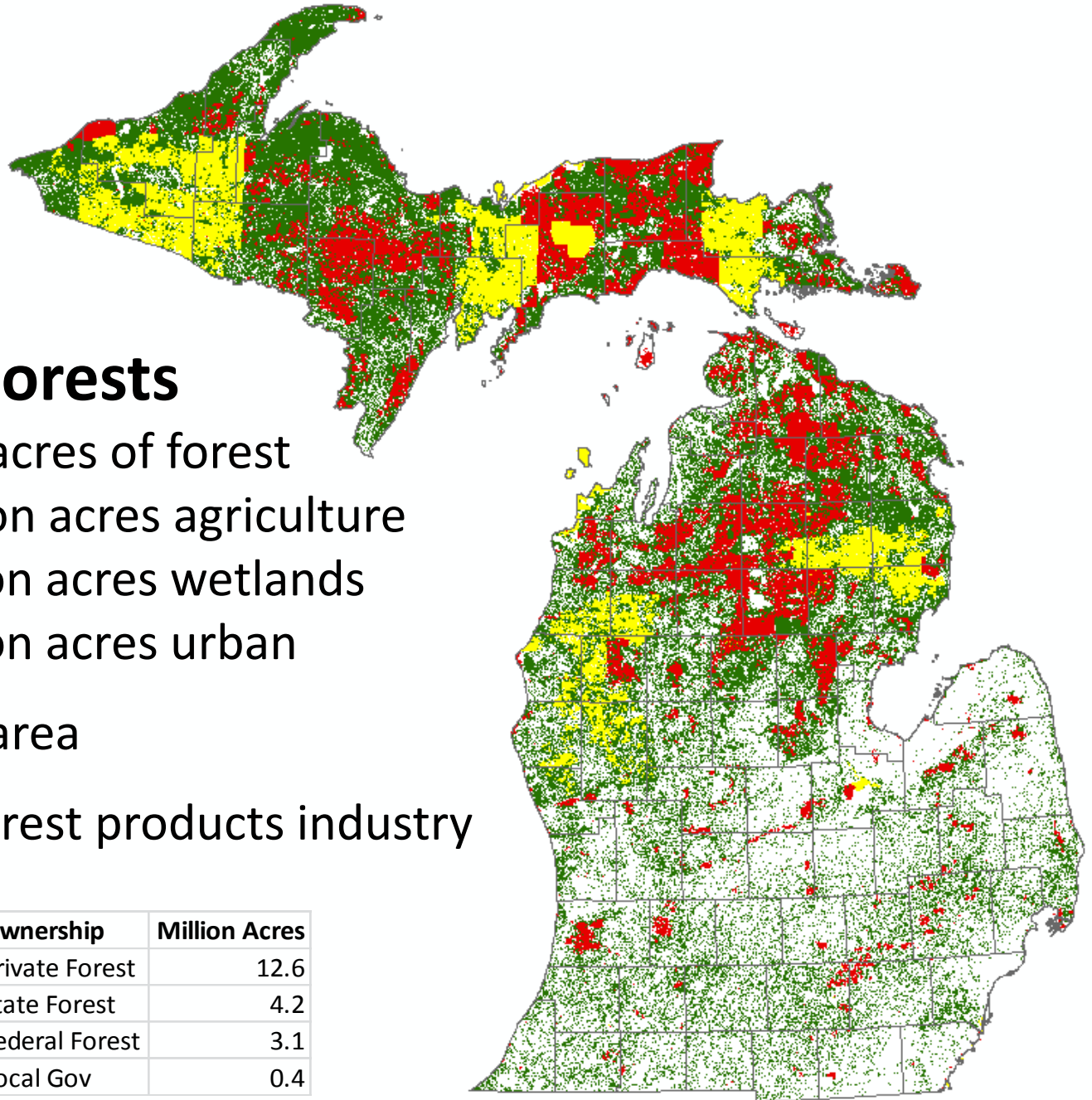
Michigan's Forests

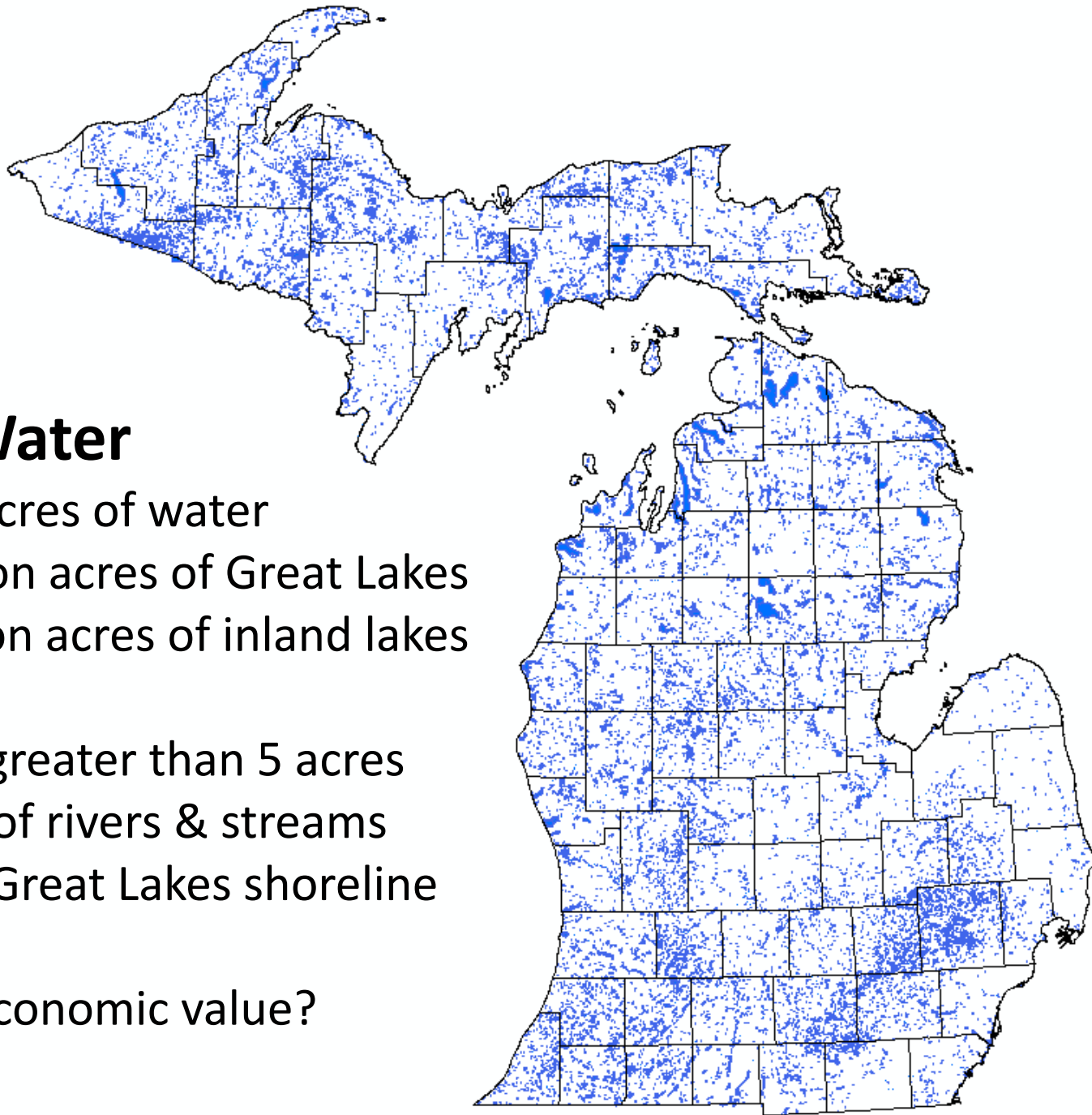
20.3 million acres of forest
10 million acres agriculture
3 million acres wetlands
2 million acres urban

56% of land area

\$20 billion forest products industry

Legend	Ownership	Million Acres
	Private Forest	12.6
	State Forest	4.2
	Federal Forest	3.1
	Local Gov	0.4





Michigan's Water

25.6 million acres of water

24.7 million acres of Great Lakes

0.9 million acres of inland lakes

10,759 lakes greater than 5 acres

76,439 miles of rivers & streams

3,049 miles Great Lakes shoreline

What is the economic value?

The Spectacular Lakes

- 6,000,000,000,000,000 gallons (6 quadrillion)
- 21% of world's available fresh water
- Michigan controls 45% of the surface area of the 5 lakes
- ***Michigan has 9% of world's fresh water!***
 - 1 Michigander for every 750 people in the world
- Great Lakes provide drinking water for 40 million people
 - Would you rather drink straight from Erie or Superior??

Water “Quality” Headlines

“Spread of Lake Erie algae raises alarm across region”
(Detroit News, September 28, 2017)

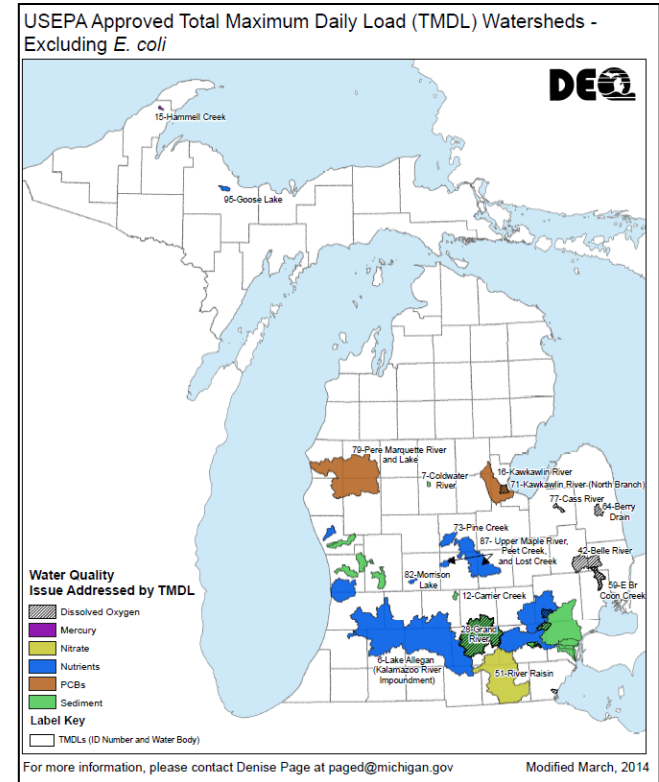
“Poor manure practices culprit in thousands of fish deaths”
(Maumee River in Ohio, August 24, 2017)

“Estimated 80,000 gallons of raw sewage overflows into Au Sable River in Grayling”
(August 13, 2016)

“248 million gallons of partially treated wastewater discharged into river”
(Saginaw River, April 11, 2017)

“U.S. Steel leaks chemical into Lake Michigan tributary, EPA reports”
(Portage IN, April 12, 2017)

“830,000 gallons of sewage released into Grand River”
(Grand Haven, September 13, 2017)



dissolved oxygen, mercury, PCBs, nitrate, nutrients, sediment

Fish Advisory: “No one should eat bluegill from the Au Sable River downstream of the Foote Dam due to PFOS.”

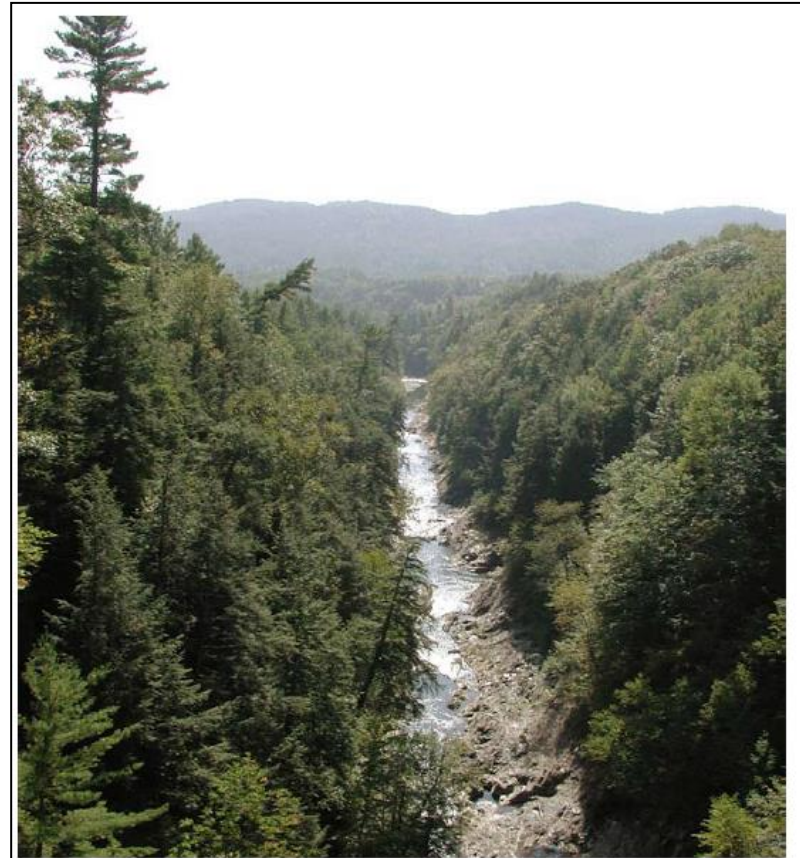
Michigan.gov/EatSafeFish 3,116 pages!!

Forests, Flint & Drinking Water

66% of freshwater originates from forests, which cover 33% of USA land area.

180 million people in 68,000 cities rely on forests to capture and filter their drinking water.

1. Protect source areas
2. Treat drinking water
3. Monitor distribution system



Forests, Water and People: Drinking water supply and forest lands in the Northeast and Midwest United States

Martina C. Barnes, Albert H. Todd, Rebecca Whitney Lilja, and Paul K. Barten



United States Department of Agriculture
Forest Service
Northeastern Area State and Private Forestry
Newtown Square, PA 19073
NA-FR-01-08
June 2009

How do Forests Provide Clean Water?

- Permanent vegetation slows water velocity
- Undisturbed soils and litter layer limit erosion of sediment
- Soil and vegetation filter pollutants
- Limited infrastructure and impermeable surfaces
- Infrequent and small quantity chemical spills
- Forests regulate timing and magnitude of streamflow



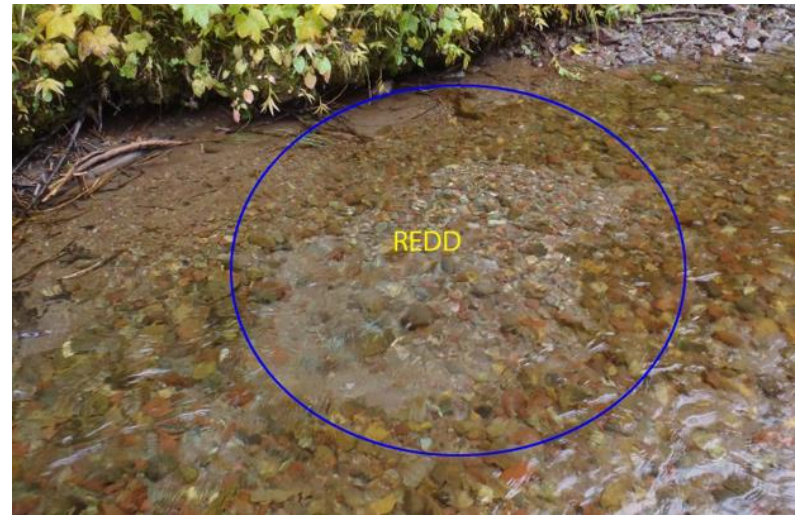
Forest Stewardship Program

“Connecting landowners with foresters to develop a Forest Stewardship Plan to help them manage, protect and enjoy their forest (*and water*).”



Managing Forests for Fish Habitat

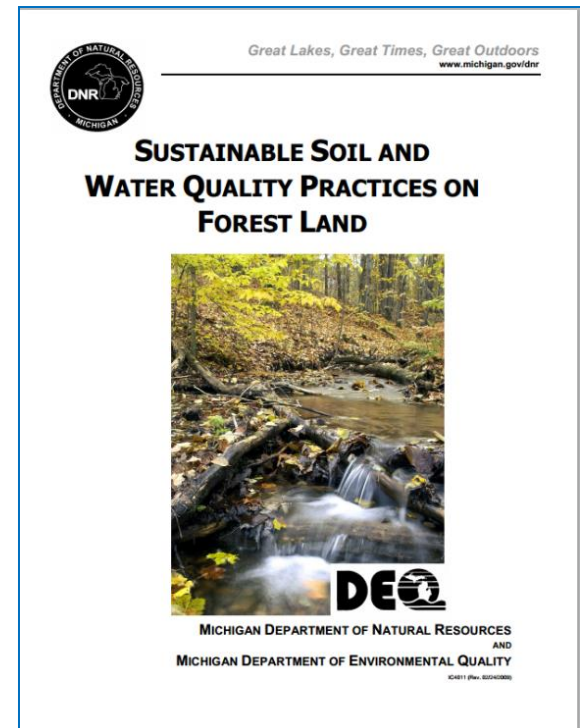
- Live and dead trees in riparian zone
 - Shade, stabilize, structure
 - Forests feed fish
- Preventing sediment
 - Sand covers gravel
 - *“Cows Kill Salmon” (skidders can too)*
- Removing barriers
 - Replace undersized culverts
 - Remove unnecessary dams
- Placing wood in the water
 - retain gravel, slow velocity, deeper pools
 - shade to lower temperature, protection from predators
 - stabilize banks, aquatic food chain



A “redd” is a fish spawning nest in gravel

Protecting Water Quality in Forests

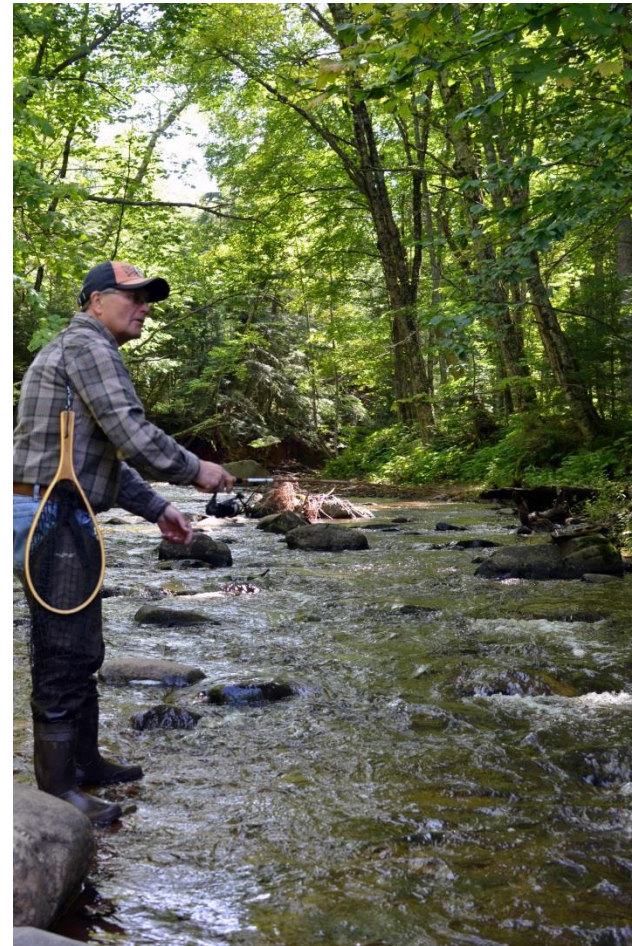
- Keep forests as (healthy) forests
 - Deforestation – tax policies
 - Degradation – insects & disease
- Best Management Practices, **every time**
 - Riparian *Management Zones*
 - Lakes, streams, vernal ponds
 - Stream Crossings
 - Wetlands
 - Forest Trails and Landings



- BMPs are an **Investment** that provide on-site and downstream **Benefits**
- Forest certification helps us define and promote our “land ethic”
 - 1,000+ loggers trained by Sustainable Forestry Initiative

Enjoying Michigan's Water Resources

- Forests provide abundant clean water
 - Drinking water for major cities
 - 223,000 seasonal homes in Michigan
- Forests provide quality fish habitat
 - Fishing on lakes and rivers
 - 789,458 registered boats in Michigan
- “Payments for Ecosystem Services”
 - Beneficiaries *should* pay providers
 - Take credit for providing public goods



Ever fish in a corn field?

120 Years of Forests and Water

- National forests could be reserved in public domain
 - “to improve and protect the forest within the reservation,
 - *or for the purpose of securing favorable conditions of water flows,*
 - and to furnish a continuous supply of timber for the use and necessities of citizens of the United States.” [Organic Act of 1897]
- National forests could be purchased that are “necessary to the regulation of the flow of navigable streams” [Weeks Acts of 1911]
- ***“Water, in all its uses and permutations, is by far the most valuable commodity that comes from well-managed forest land.”*** [NASF, 2004]

Water is a forest product!

Forests for Fish

Michigan is a unique place in the world.

Forests provide abundant clean water and quality fish habitat.

BMPs provide tremendous downstream benefits.

We manage, protect and enjoy *forest and water* resources.

Mike Smalligan, DNR Forest [and water] Stewardship Coordinator

SmalliganM@Michigan.gov or www.Michigan.gov/ForestStewardship

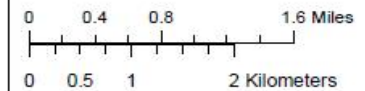
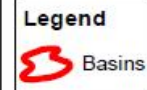
Extra slides

Agricultural vs Forested Watersheds

Basin #2	6,660 acres
Agriculture	51%
Forest	28%
Shrub	10%
Water	6%
Wetland	3%

Basin #1	1,131 acres
Agriculture	0%
Forest	80%
Shrub	3%
Water	15%
Wetland	1%

Pickerel and Kimball Lakes Drainage Basins Land Cover Types



Michigan Department of Natural Resources
Forest Resources Division
Resource Assessment Section
Mapped By: Michael Rubley
9/18/2017 Data Source: DNR GOSE
M:\DNR_Forestry\F-S\Rubley\M11\Admin\Kimball\Kimball_Template_Land.mxd



<< Muskegon River in Newaygo <<



October 2018

Search Calendar (Ctrl+E)



Sunday

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

Sep 30

Oct 1

2

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4

5

6

9/30 - 10/7

SAF Convention; Portland, OR

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10/7 - 12

SAF Convention; Por

MI SAF ??; Grayling

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10/14 - 19

SFI; Colordao

1:00pm Out of Off

21

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10/21 - 26

MI SAF ??; Grayling

28

29

30

31

Nov 1

2

3

10/28 - 11

MACD; Bellaire

1:00pm Out of Off