

Challenges of Fire Protection and Suppression Across Multiple Forest Ownerships



Society Of American Foresters
Michigan Conference

November 2, 2012

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MI Dept of Natural Resources

Presentation Points

- Overview of 2012 fire season
- Overview of Duck Lake Fire
- MIDNR Role and Responsibilities
- Other Agencies Responsibilities
- Challenges
- Fuels and Fuels Management
- Prevention and Value Protection
- Prescribed Burning
- Private Lands Assistance



Fires to Date for 2012



Wildland Fire Department of Natural Resources

Michigan.gov

The Official State
of Michigan Website

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Department of Natural Resources Weekly Fire Report for week ending 10/22/2012 10:15:29 AM

Fires Report

ICC	Fires	Acres	Fires to Date	Acres Burned to Date
LP	0	0	369	2189.9
UP	0	0	114	21530.26
State Total	0	0	483	23720.16
Prescribed Burns	0	0	37	2362.9

Structures Report for week ending 10/22/2012 10:15:29 AM

Special Problem	Upper Peninsula		Lower Peninsula	
	Week	YTD	Week	YTD
Structures Threatened	0	245	0	451
Structures Saved	0	123	0	428
Commercial Destroyed	0	2	0	0
Residential Destroyed	0	50	0	6
Out Building Destroyed	0	70	0	17

Typical Fire Season

- Last ten years averaged 376 fires and 5,222 acres per year
- Recent large fires:
 - 2012 Duck Lake 21,000 acres
 - 2011 Howes Lake 810 acres
 - 2010 Meridian 8,586 acres and Range 9 1039 acres
 - 2008 4 Mile 1345 acres
 - 2007 Sleeper Lake 18,000 acres





Duck Lake Fire

May 24, 2012
Newberry, MI

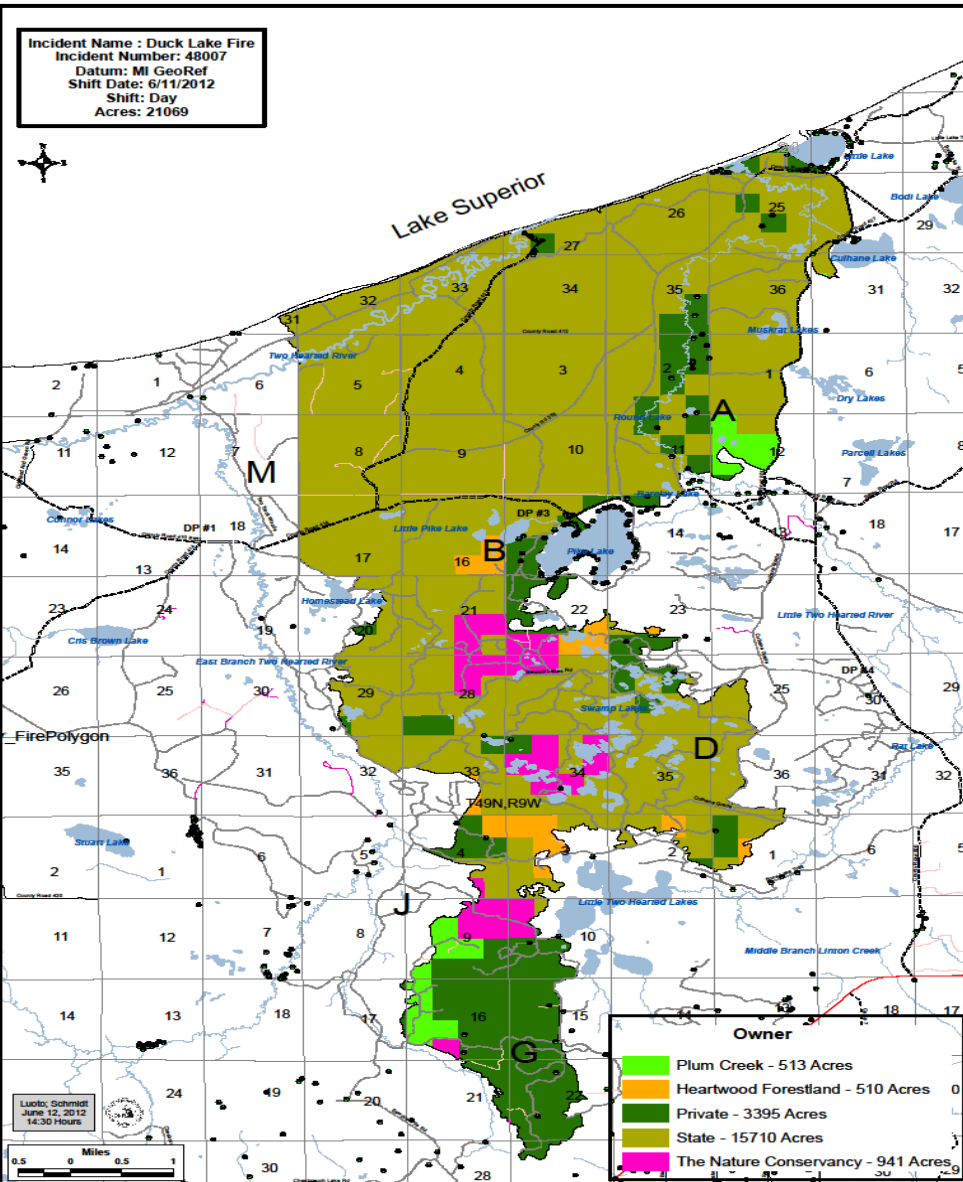


21,069 acres
74% State Land

05/28/2012

Land Ownership Involved (GIS Calculated)

Incident Name : Duck Lake Fire
Incident Number: 48007
Datum: MI GeoRef
Shift Date: 6/11/2012
Shift: Day
Acres: 21069



- Heartwood Forestland
510 Acres
- Plum Creek
513 Acres
- The Nature Conservancy
941 Acres
- Individual Private
3,395 Acres
- State Land
15,710 Acres





Values Lost

- 47 homes/cabins
- 1 store
- 1 motel
- 23 garages
- 38 sheds outbuildings
- 26 campers
- 1 logger lost all of his equipment





Statewide Wildfires

- 280 Fires Statewide before the week of May 20th
 - Approximately 1,371 Acres
- 35 Fires Statewide the week of May 20th
 - Approximately 22,598 Acres



Statewide Wildfires





Duck Lake Fire Suppression Resources

- Over 300 personnel on fire
- 31 engines
- 14 dozers
- 5 helicopters (1 Sikorsky & 4 Blackhawks)
- 2 airtankers (CL-215 MN-DNR)
- 2 water tenders
- 44 miles of fire perimeter



Cooperating Agencies

- Michigan State Police
- Luce County Sheriff
- Mich. St. Police EMC
- Luce County EMC
- Red Cross
- Salvation Army
- Newberry Village VFD
- Bay Mills VFD
- Portage Twp VFD
- Whitefish Twp VFD
- Superior Twp VFD
- Germfask Twp VFD
- Hendricks Twp VFD
- Burt Twp VFD
- Kinross Twp VFD
- WI DNR
- MN DNR
- MN USFS
- National Guard
- Wisconsin Hand Crew
- Michigan Hand Crew
- Luce Co. Road Commission





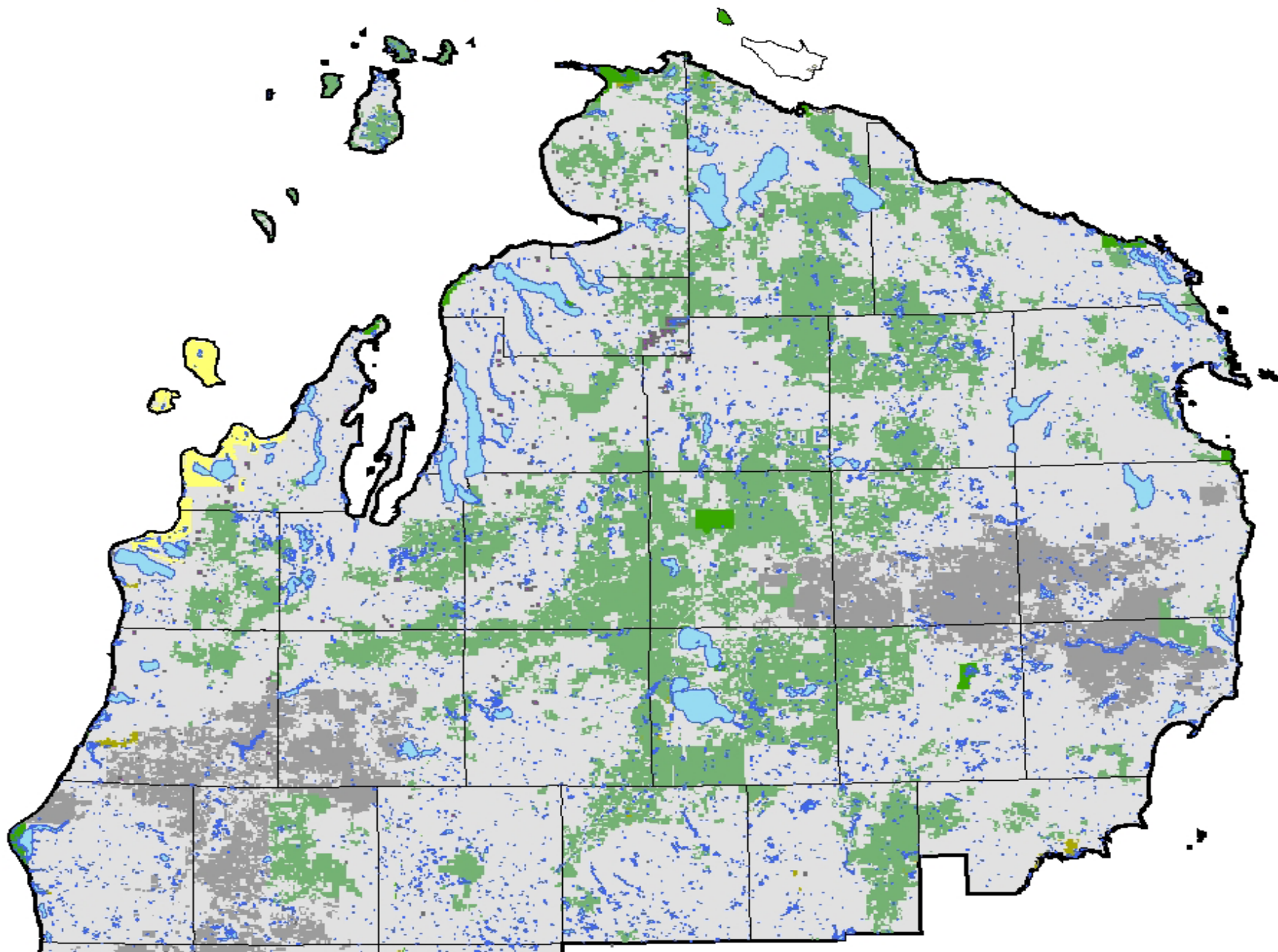


Challenges Across Multiple Forest Ownerships

- Fuels cross boundaries
- Risk- Ignitions, fuels and values
- Working with other agencies
- Public safety
- Value protection
- Educating land owners
- Using fire in land management



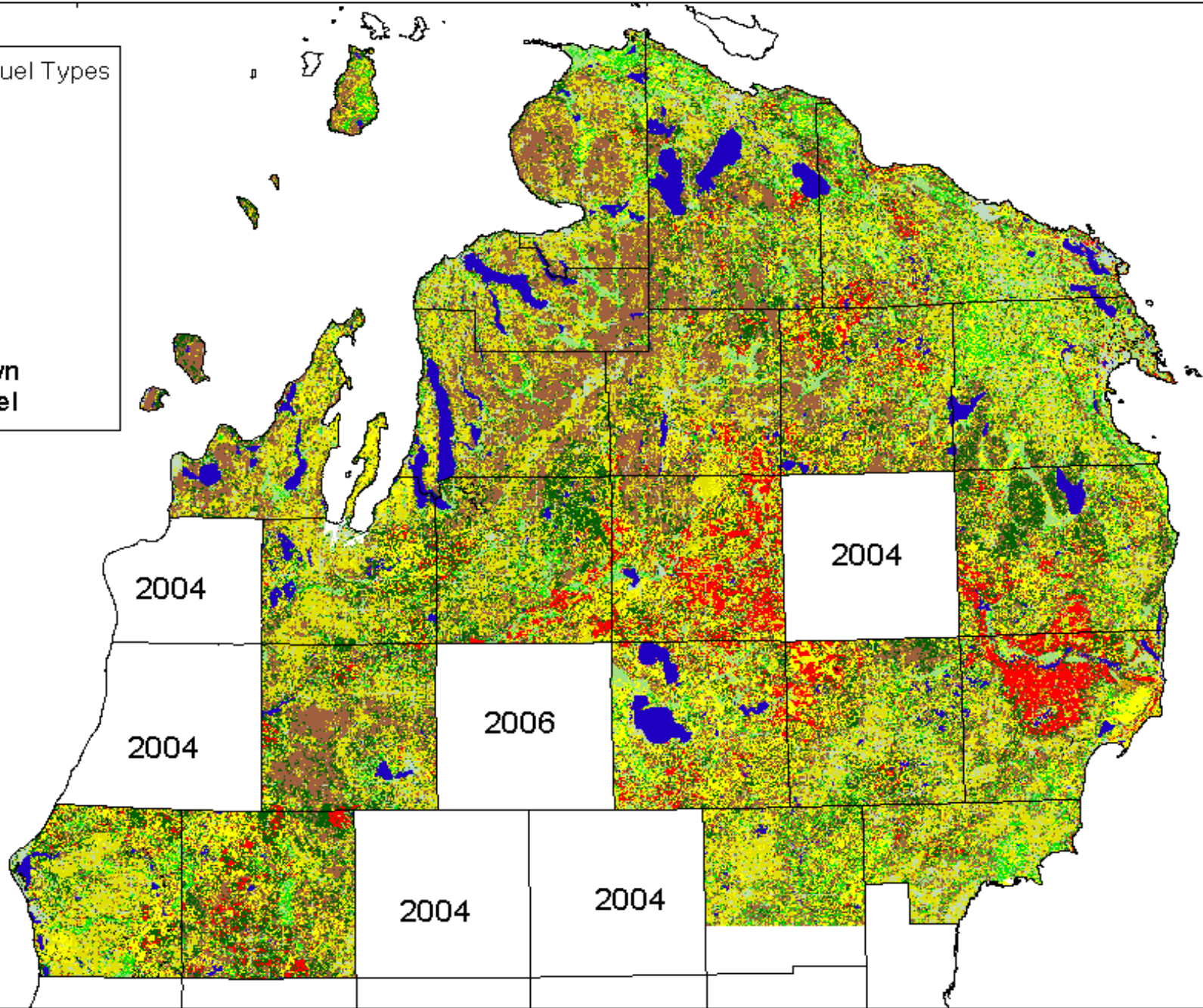
Northern Lower Peninsula Ecoregion: All Ownership



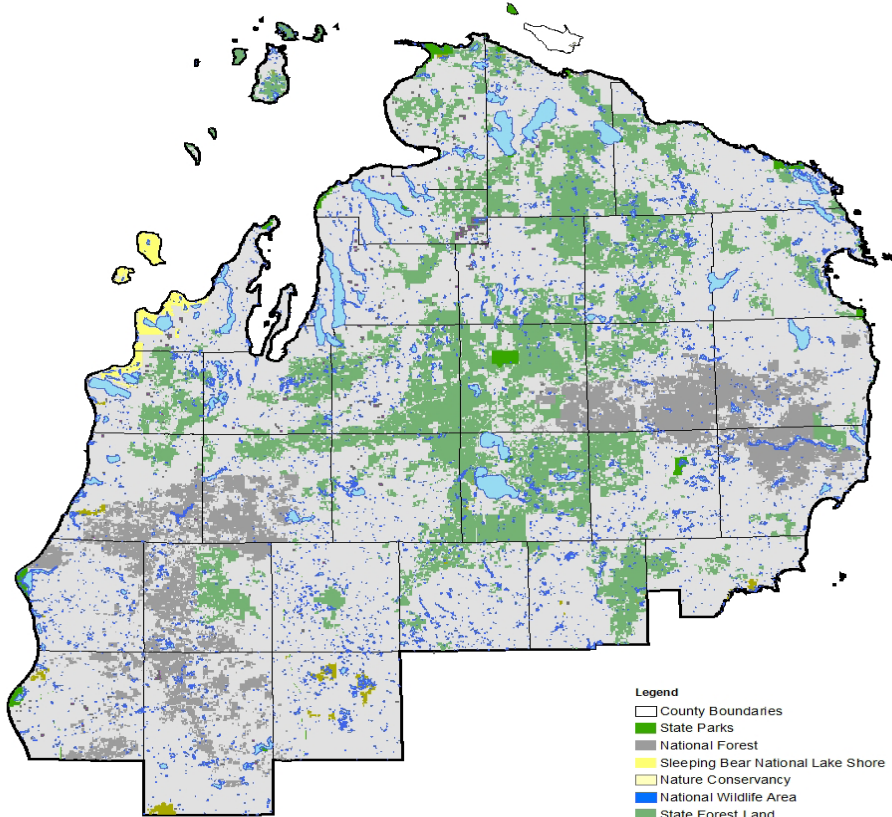
Draft NLP FBP System Fuel Map

FBP System Fuel Types

- C-4
- C-5
- D-1
- M-1
- M-2
- M-4
- O-1b
- O-1a
- Water
- Unknown
- Non Fuel

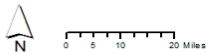


Northern Lower Peninsula Ecoregion: All Ownership

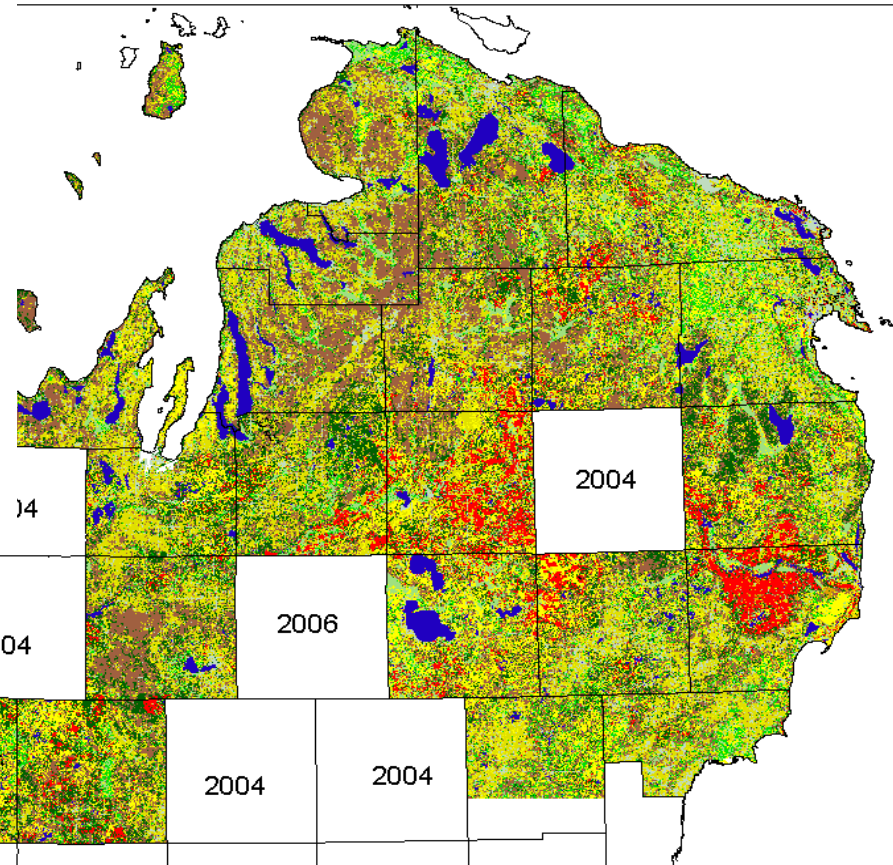


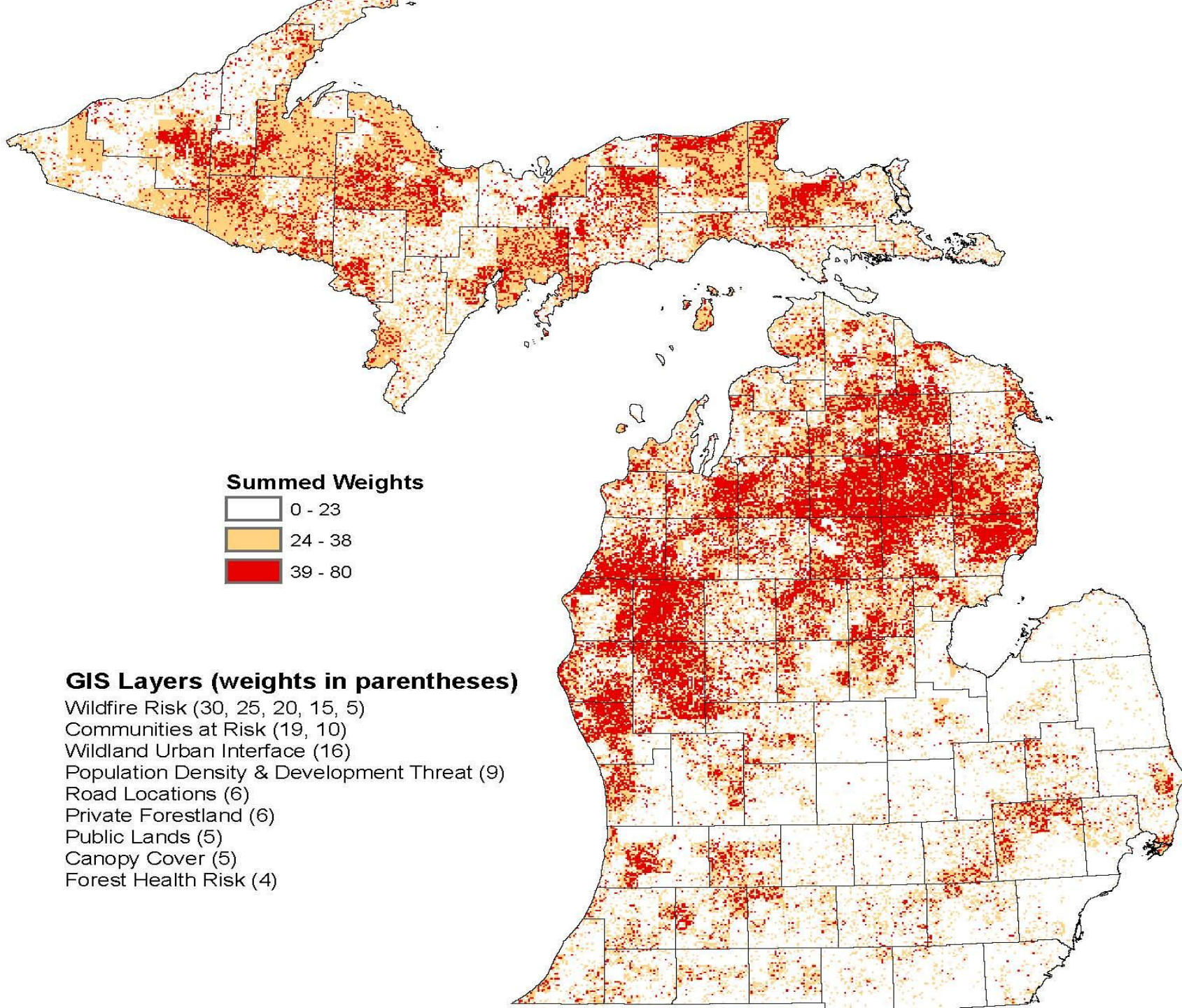
- Legend**
- County Boundaries
 - State Parks
 - National Forest
 - Sleeping Bear National Lake Shore
 - Nature Conservancy
 - National Wildlife Area
 - State Forest Land
 - State Wildlife Areas
 - Commercial Forest
 - Northern Lower Peninsula Ecoregion
 - Private Lands

Source:
 Ecoregion Boundary provided by NLP Ecosteam (1:24,000 scale)
 County Boundary provided by MDNR (1:24,000 scale)
 Federal Ownership provided by GAP Stewardship (1:24,000 scale)
 State Forest provided by MDNR (1:24,000 scale)
 SRRC Service Number: MT12_F02

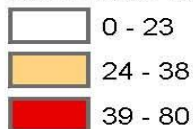


Draft NLP FBP System Fuel Map





Summed Weights



GIS Layers (weights in parentheses)

- Wildfire Risk (30, 25, 20, 15, 5)
- Communities at Risk (19, 10)
- Wildland Urban Interface (16)
- Population Density & Development Threat (9)
- Road Locations (6)
- Private Forestland (6)
- Public Lands (5)
- Canopy Cover (5)
- Forest Health Risk (4)

MI DNR Responsibilities

- Act 451 of 1994, Natural Resources and Environmental Protection Act
 - Part 515 Prevention and Suppression of Forest Fires
 - Previously was Act 329 of 1969
- Protect 19 million acres (15 million of private and 4 million of state land)



Federal Agencies Responsibilities

- USFS – Huron Manistee National Forest
 - 2.2 million acres
 - 1 million acres public, ST and Fed.
 - Fires to date 195 and average around 100 fire per year.
- National Parks Service, Fish and Wildlife Service, Bureau of Land Management



Local Agencies with Responsibility

- Local Fire Departments – hundreds of departments that handle an estimated 8 to 10 thousand wildfires
- MI National Guard – Camp Grayling and Fort Custer
- County and State Emergency Management
- Others



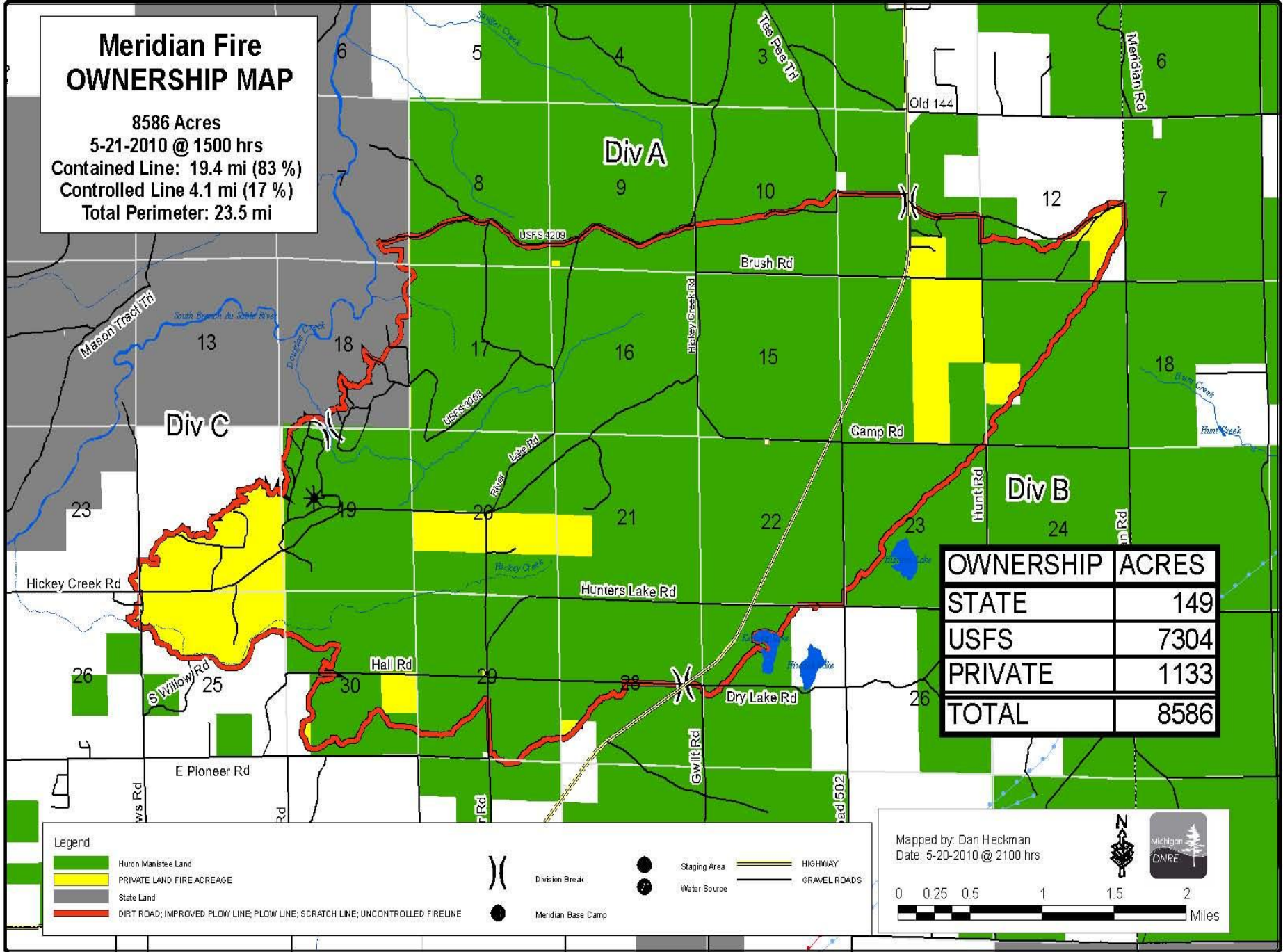
Agreements and Cooperation

- Reciprocal Fire Management Agreement with US Dept of Interior and US Dept of Agriculture and the State of MI.
 - Allows local operating plans
 - Address sharing resources, cost reimbursement, coordinating prevention programs and training efforts, communications and coverage areas



Meridian Fire OWNERSHIP MAP

8586 Acres
 5-21-2010 @ 1500 hrs
 Contained Line: 19.4 mi (83 %)
 Controlled Line 4.1 mi (17 %)
 Total Perimeter: 23.5 mi





OWNERSHIP	ACRES
STATE	149
USFS	7304
PRIVATE	1133
TOTAL	8586

Legend

- Huron Manistee Land
- PRIVATE LAND FIRE ACRES
- State Land
- DIRT ROAD; IMPROVED FLOW LINE; FLOW LINE; SCRATCH LINE; UNCONTROLLED FIRELINE
-) Division Break
- Staging Area
- Water Source
- Meridian Base Camp
- HIGHWAY
- GRAVEL ROADS

Mapped by: Dan Heckman
 Date: 5-20-2010 @ 2100 hrs

Agreements and Cooperation

- MI National Guard two agreements or plans
 - Annual operating plan with Camp Grayling
 - MOU with Military and Veterans Affairs for aviation resources



Agreements and Cooperation

- National Weather Service
- Great Lake Forest Fire Compact
- Michigan Interagency Wildfire Protection Association (MIWFPA)
- Michigan Prescribed Fire Council (MPFC)
- Mutual Aid Agreements with many local Fire Departments



What can we control?

- Weather
- Fuel
- How fires start – 95% human caused
- WUI – Wildland Urban Interface
- Suppression strategies
- Value protection



Fuels

- Fuels Classifications
- Fuel breaks on a larger scale – using natural or man-made breaks
- Fuel breaks around communities and homes
 - CWPP- Community Wildfire Protection Plan
 - Firewise





Small

Pine

Indian

Near

Paster

Lenard

Wentworth

Merton

Mack

Dutcher

Bissonette

Zelma

Burgess

Nine Point

Firewise and CWPP

- Community Wildfire Protection Plans (CWPPs) are a mechanism for communities to address their wildfire risk. These plans promote collaboration and local action, and can work in partnership with Firewise activities.
- MSU <http://firewise.msu.edu/>



Suppression Strategies

- Life Safety and Value protection increase makes suppression more difficult
- Develop working relationships with other agencies that have suppression responsibility
 - Plans
 - Incident Management Teams
 - Training



Wildland Urban Interface (WUI)

- Development or Parcelization and Development means more ignition sources in the forest
 - People
 - Powerlines
 - Equipment
 - Access- good and bad
 - Life Safety
 - Values



Fire Prevention and Value Protection

Education of land owners

- What causes fires
- How to prevent fires
- Burn permits
- Firewise
- Community education
 - Community Wildfire Protection Plan
 - Homeowner associations







30 13:40



30 14:09

Programs and Resources

- Firewise
 - <http://firewise.msu.edu/>
 - <http://www.firewise.org/>
- CWPP – Community Wildfire Protection Plan
 - <http://www.forestsandrangelands.gov/communities/cwpp.shtml>



Programs and Resources

- LANDFIRE - products are designed to be used at a landscape-scale in support of strategic vegetation, fire, and fuels management planning to evaluate management alternatives across boundaries.



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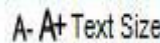
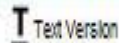
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State Forest Recreation

Urban and Community

Fire Management

• Daily Fire Danger - Fire Danger Rating

Fire Danger Rating factors in daily readings of wind, rain, temperature, humidity, plus the build up of prolonged climate effects to establish a local fire danger. Ratings are displayed for locations on the map specific to the date shown calculated at 2:00 PM. Predicted fire danger ratings can be viewed in advance of the 2:00 PM reading by choosing another date in the selection field.



Subscribe to Wildfire Management, Prescribed Burn and other forestry-related updates from the Michigan DNR

• Michigan Volunteer Fire Assistance

• Prescribed Fire in Michigan State Parks

• Michigan Wildfire Information

• Wildfire Protection

• History & Ecology of Fire in Michigan



Duck Lake Fire / Tahquamenon Falls State Park Area

Open Burning Regulations

• New Trash Burning Restrictions Take Effect October 2012

Forest Stewardship Programs



Department of Natural Resources



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Private Forest Land Programs



The Northern Great Lakes Forest Project

The Northern Great Lakes Forest Project is a record-setting conservation easement totaling 247,806 acres stretching across the Upper Peninsula from Gogebic County in the west, to Chippewa County in the east. The closure of the final phase of the Northern Great Lakes Forest Project in the fall of 2010 marked an unprecedented accomplishment in the conservation of the spectacular forests, lakes, streams and wetlands of Michigan's Upper Peninsula.



Subscribe to Assistance to Private Forestland Owners updates from the Michigan DNR

Prescribed Burning

- MI DNR can only burn on state owned lands
- Average 78 burns/yr and 4100 acres/yr
- Burn for several DNR Divisions, MDOT and Military Affairs
- Objectives include: controlling invasive species, site regeneration, endangered species mgt, opening maintenance, fuels reductions and others



Challenges to burning

- Smoke Management
- Managing for objectives across ownerships – limits large scale burning for ecosystem mgt, T+E and invasive species mgt
- Values adjacent
- Public concerns



Prescribed Burning Resources

- Landowner Incentive Program (LIP) thru DNR WLD
- Michigan Prescribed Fire Council
 - List of burn consultants
- Coalition of Prescribed Fire Councils
- Joint Fire Science Program



Joint Fire Science Program

Regional Consortia: Connect to Local Experts

Consortia Areas

- Alaska
- Appalachians
- California
- Great Basin
- Great Plains
- Lake States
- Oak Woodlands
- Northern Rockies
- Northwest

The Regional Consortia are local experts that help you get connected with other managers, practitioners and scientists working in your area. They not only provide the best fire information for your area, they demonstrate new knowledge in the field and much more. Click on your area... get connected!



Lake States Fire Science Consortium

Lake States Fire Science Consortium

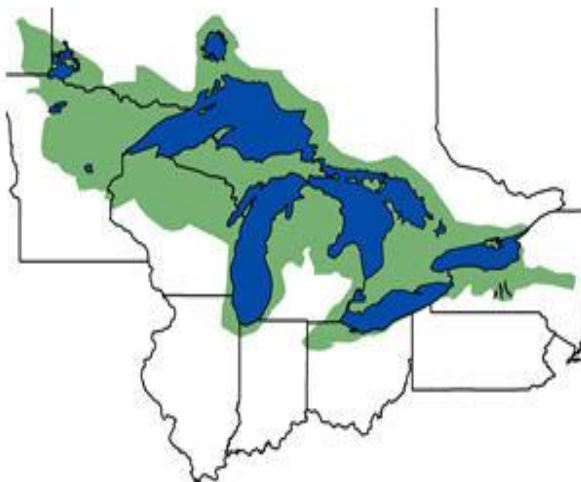
A JFSP KNOWLEDGE EXCHANGE CONSORTIUM



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Welcome to the Lake States Fire Science Consortium



The Lake States Fire Science Consortium is a network of fire managers and scientists interested in the fire-dependent forest ecosystems of the Lake States region. [Learn more](#)>

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Upcoming Webinars:

November 20, 2012

Climate change and forest ecosystem vulnerability in the Lake States: how to account for wildfire?

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MI Prescribe Fire Council



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Resources

MPFC offers these resources as a means to help the prescribed fire community. If you have other items you think would be helpful, please send them to info@firecouncil.org and if the

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Thank You!

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