

**BEST MANAGEMENT
PRACTICES AND
MONITORING ON
FOREST LANDS OF THE
HIAWATHA NATIONAL
FOREST**

National Forests in Michigan

State of Michigan	61,898,240 acres
<u>National Forests in Michigan</u>	2,866,043 acres
• Hiawatha National Forest	894,127 acres
• Ottawa National Forest	993, 010 acres
• Huron-Manistee National Forest	978,906 acres

SIMILARITIES AND DIFFERENCES BETWEEN THE THREE MICHIGAN NF'S

Similar Processes

Same timber sale contract administration procedures

Standard Timber Sale Contract

Stewardship Contract

Good Neighbor Authority

Same Monitoring Protocols

Similar but Different Landscapes

Hiawatha is 46% Wetlands (37% as Forested Wetlands)

Great Variety of Forest Types on the Hiawatha

- **Dry Northern Forest** (pine- or pine-hardwood dominated forest)
 - Jack pine, jack pine-hardwoods, red pine
- **Dry-Mesic Northern Forest**
 - Pine (White pine, red pine, hemlock), Hardwoods
- **Hardwood-Conifer Swamp**
 - Red maple, black ash, yellow birch, hemlock, white pine
- **Mesic Northern Forests – Hardwoods**
 - Sugar maple, beech, white pine
- **Wooded Dune and Swell**

Timber Harvest Occurs Year-Round

- **Winter Harvest Only Soils**

- Soils are frozen 6 inches surface depth as a minimum or 12" minimum compacted snow.
- Majority of these stands are clear-cuts for Aspen Regeneration

- **Summer/Dry Summer Harvest Soils**

- Water table must be no less than 15" from the surface for summer harvest
- Variety of prescriptions such as Spruce/Fir thinning, shelterwoods for spruce/fir and aspen/birch, hardwood thinning.

- **Spring, Fall, Winter Harvest Soils**

- **Year round Harvest Soils**

2006 FOREST PLAN

Guideline

Michigan BMPs on Forest Lands should be implemented as a minimum standard for managing forest resources on Forest System Land.

Monitoring Methodologies

1. FSDMP – Forest Soil Disturbance Monitoring Protocol

- Pre and Post Harvest
- 101 Pre-harvest Payments Units, 48 Post-harvest Payment Units since 2015. Prior to that FSDMP data was used for chrono-sequencing studies Jack Pine and Northern Hardwoods (Jim Gries).

2. Michigan State BMPs Inspections

- Paired with FSDMP Post payment Unit Sampling = 48 inspections
- Audits were performed by the Michigan SFI BMP Subcommittee across northern Michigan, which included the Hiawatha in 2011, 2014 and 2016.
- Hiawatha uses a similar form to the Michigan SFI BMP Subcommittee.

3. National Core BMPS

MI State BMPs - Categories

- Equipment Operations and Maintenance
- Roads
- Road Closure and Retirement
- Stream Crossings (Permanent and Temporary)
- Skidding and Skid Trails
- Landings
- Riparian Management Zones
- Wetlands
- Other Considerations

MI -STATE BMP RESULTS

There are summary reports from my predecessor (2010-2013).

We have summarized by payment unit for the 2015 and 2016 for Forest Plan Monitoring Reports.

2017 Forest Plan Monitoring report to be completed this winter.

Analysis of 2015-2017 data comparing across the Forest BMP implementation and effectiveness.

FSDMP – FOREST SOIL DISTURBANCE MONITORING PROTOCOL

Minimum of 30 points along random transects, can go as high as 120 point on post-harvest units.

Sample payment units both pre- and post- harvest.

~~6" diameter, quick soil pits with a spade.~~

Many attributes documented. Forest floor depth and compaction seem the most interesting attributes.

Planning to do an analysis of 2015-2017 data this winter.

FSDMP attributes measured per point

- Forest Floor Depth
- Forest Floor Impacted
- Live Plant
- Invasive Plant
- Fine woody (<7 cm)
- Coarse Woody (>7 cm)
- Bare Soil
- Rock
- Topsoil Displacement
- Erosion
- Rutting
- Compaction
- Burning
- Mixed topsoil/subsoil
- Soil Disturbance Class
- Detrimental

Integrated Vegetation Management EAs

- **Raco III, 2014-2016**
- **Plumb-Bruno, 2015-2017**
- **Camp Cooks, 2015-2017**
- **Aspen-Red Pine, 2016-2018**
- **White Spruce Salvage, 2016-2017**
- **Eckerman, 2016-2018**
- **Stone-Moss, 2017-2019**
- **McNearney, 2017-2020**
- **Addis-Rock, 2018-2020**
- **Brevoort, 2018-2022**

NEPA Schedule of Proposed Actions

- <https://www.fs.fed.us/sopa/forest-level.php?110910>

