

NRCS Program Opportunities for Family Forest Owners

Andy Henriksen, State Forester

USDA - Natural Resources Conservation Service

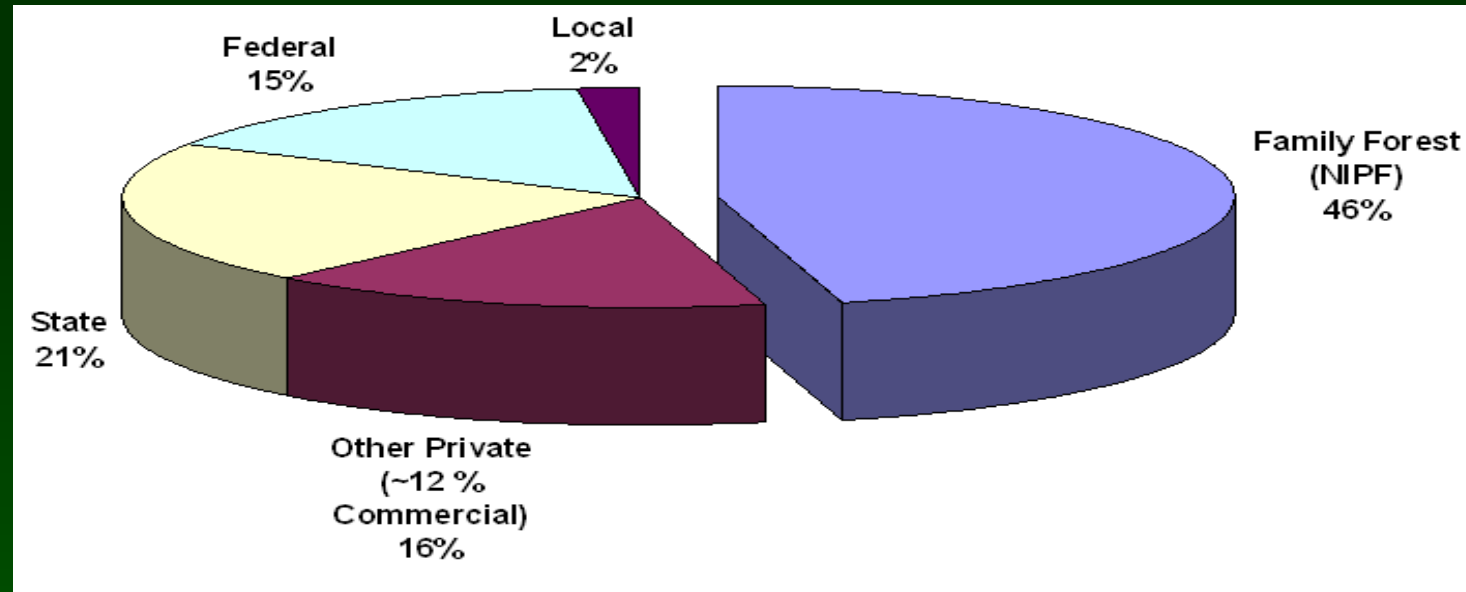
Outline of Today's Discussion

- Farm Bill Programs
 - Environmental Quality Incentives Program (EQIP)
 - Agricultural Conservation Easement Program (ACEP)
 - Conservation Stewardship Program (CSP)
- Conservation Practices and Enhancements
- Using WebSoilSurvey to access soil information for your property

NRCS Background and History

- NRCS has been providing conservation planning assistance since 1932.
- The 1996 Farm Bill created the Environmental Quality Incentives Program (EQIP)
 - Provides financial assistance to private landowner to install conservation practices and address resource concerns
- The 2008 Farm Bill introduced:
 - criteria for private sector foresters to become certified as Technical Service Providers (TSPs)
 - funding to private landowners to get Forest Management Plans developed by TSPs
- The 2014 Farm Bill consolidated programs and expanded opportunities for additional Conservation Activity Plans.

Michigan Forest Facts



- Michigan has more than 19 million acres of forestland containing more than 11.5 billion trees.
- 438,000 “family forest” owners
- NIPF landowners represent the largest source of surplus timber - 5 million cords (out of 8 million total in state)
- 84% of NIPF landowners do not actively manage their forest.

Michigan Forest Facts, cont.

- According to an MSU Forest Economist, there were \$11 billion in sales from forest products industries and approximately 60,000 direct jobs in 2003. There are about 76,000 indirect jobs also associated with the forest products industry.
- Managed forested lands also provide quality wildlife habitat for game species in Michigan. Quality habitat and hunting access to our public and commercial lands is critical--hunters and anglers spend \$3.4 billion annually in the state, supporting 50,000 more indirect jobs.
- The economic value of Michigan's non-consumptive (non-game) wildlife watching activities is \$1.2 billion.

Forests are Good for the Environment

Private lands are important links in the ecosystem and contribute to the tourism/recreation industry:

- 60% of all wildlife occur on these lands
- 70% of our surface and ground water is affected by these lands
- 70% of the state's recreational activities occur on these lands

Well-managed forests play a key role in:

- Moderating climate
- Regulating water systems
- Preventing erosion
- More vigorous and healthy forests

Forestry in EQIP

- “Agricultural Land means cropland, grassland, rangeland, pasture, and other ag. land on which ag. and **forest-related products**, or livestock are produced and resource concerns may be addressed.” (7 CFR part 1466.3)
- “Eligible land includes...**nonindustrial private forest land**, and other land...on which forest-related products are produced and resource concerns may be addressed.” (7 CFR part 1466.8)
- Nonindustrial private forest land means rural land, as determined by the Secretary, that has existing tree cover or is suitable for growing trees; and is owned by any nonindustrial private individual, group, association, corporation, Indian Tribe, or other private legal entity that has definitive decision-making authority over the land. (7 CFR part 1466.3)

Forest Management Plans

- “If an EQIP plan of operations addresses forestland, the a participant must develop and implement a forest management plan.” (7 CFR part 1466.9)
- “Forest Management Plan means a site-specific plan that is prepared by a resource manager, in consultation with the participant, and is approved by the State Conservationist. Forest mgmt. plans may include a forest stewardship plan,...another practice plan approved by the State Forester; or another plan determined appropriate by the State Conservationist.” (7 CFR part 1466.3)

To Implement Practices on Forestland...

A Landowner must have either:

- An NRCS Certified Conservation Plan;
- A Forest Stewardship Plan; *or*
- A Forest Management Plan (practice code 106)

Commonly Used Forestry Practices

“Core” Practices:

- Forest Stand Improvement (666)
 - Commercial harvests
 - Non-commercial thinning
 - Remove invasive tree species
- Forest Trails and Landings (655)
- Tree/Shrub Establishment (612)
 - Almost always requires additional supporting practices!
- Prescribed Burning (338)
- Windbreak/Shelterbelt Establishment (380)
- Riparian Forest Buffer (391)
 - Establish new RFB or expand existing RFB with planting
 - Manage existing RFB
- Brush Management (314)
 - Control invasive shrubs, e.g., Asian honeysuckle, autumn olive, multiflora rose
- Herbaceous Weed Control (315)
 - Control invasive herbaceous plants, e.g., Garlic mustard, spotted knapweed

“Supporting” Practices:

- Cover Crop (340)
- Tree/Shrub Site Preparation (490)
- Herbaceous Weed Control (315)
- Mulching (484)
- Firebreak (394)

Less Common Practices in Forest Management Plans

- Access Control (472)
 - Gates, signage
- Alley Cropping (311)
- Fuel Break (383)
- Road/Trail/Landing Closure and Treatment (654)
- Tree/Shrub Pruning (660)
- Windbreak/Shelterbelt Renovation (650)
- Woody Residue Treatment (384)
 - Slash treatment
 - Storm damage clean-up
- Conservation Cover (327)
 - Grass/herbaceous plant establishment for a variety of purposes
- Critical Area Planting (342)
 - Grass/herbaceous plant establishment in critical area
- Early Successional Habitat Development/Management (647)
- Restoration and Management of Rare or Declining Habitats (643)

FOREST STAND IMPROVEMENT

JOB SHEET - Forestry Series

666



Natural Resources Conservation Service



Michigan



Client/operating unit:	Joseph K. Landowner	County:	County Name	Tract #:	1234
Planned installation date:	1/30/15	Specifications date:	11/12/14	Field #:	1



Forest stand improvement leaves a stand well-stocked in seedlings, saplings, poles, and saw log-sized trees.

DEFINITION

Forest Stand Improvement (FSI) is the manipulation of species composition, stand structure and stocking by cutting or killing selected trees and understory vegetation.

FSI can refer to both pre-commercial (intermediate) treatments and commercial harvesting operations.

PURPOSES

- Improve forest health by reducing the potential of damage from pests and moisture stress
- Restore natural plant communities
- Achieve or maintain a desired native understory plant community for special forest products, grazing, and browsing
- Improve aesthetic and recreation values
- Improve wildlife habitat
- Alter water yield
- Increase carbon storage in selected trees

CONDITIONS WHERE PRACTICE APPLIES

All forest land.

CRITERIA

General Criteria Applicable to All Purposes

Base all management decisions on a thorough and current forest inventory and the intended purpose. Refer to Michigan Forestry Technical Note # 29 for information on conducting a forest inventory.

Base forest stand improvement choices on the

Table 1. Thinning Guidelines for Even-aged Hardwoods

Existing stand:			Thin the stand to:		
Avg. DBH (in.)	Trees per acre	Avg. spacing between trees (ft.)	Trees / Ac.	Avg. spacing between Trees (ft.)	Basal Area (sq. ft. per acre)
5	≥ 770	≤ 7	681	8	95
6	≥ 535	≤ 9	436	10	87
7	≥ 393	≤ 11	302	12	82
8	≥ 301	≤ 12	258	13	90
9	≥ 238	≤ 14	194	15	85
10	≥ 193	≤ 15	151	17	83
11	≥ 159	≤ 17	134	18	90
12	≥ 134	≤ 18	109	20	86
13	≥ 114	≤ 20	90	22	83
14	≥ 98	≤ 21	82	23	88
15	≥ 86	≤ 23	70	25	86
16	≥ 75	≤ 24	60	27	84
17	≥ 67	≤ 26	56	28	88
18	≥ 59	≤ 27	48	30	85
19	≥ 53	≤ 29	43	32	85
20	≥ 48	≤ 30	40	33	87
21	≥ 44	≤ 32	36	35	87
22	≥ 40	≤ 33	32	37	84
23	≥ 36	≤ 35	30	38	87
24	≥ 33	≤ 36	27	40	85

Table 2. Thinning Guidelines for Even-aged Conifers

Existing stand:			Thin the stand to:		
Avg. DBH (in.)	Trees per acre	Avg. spacing between trees (ft.)	Trees / Ac.	Avg. spacing between Trees (ft.)	Basal Area (sq. ft. per acre)
5	≥ 538	≤ 9	360	11	50
6	≥ 436	≤ 10	302	12	60
7	≥ 360	≤ 11	258	13	70
8	≥ 302	≤ 12	222	14	78
9	≥ 258	≤ 13	194	15	85
10	≥ 222	≤ 14	170	16	94
11	≥ 194	≤ 15	151	17	101
12	≥ 170	≤ 16	134	18	106
13	≥ 151	≤ 17	121	19	111
14	≥ 134	≤ 18	109	20	117
15	≥ 121	≤ 19	99	21	122
16	≥ 109	≤ 20	90	22	126
17	≥ 99	≤ 21	82	23	130
18	≥ 90	≤ 22	76	24	134
19	≥ 82	≤ 23	70	25	138
20	≥ 76	≤ 24	64	26	140
21	≥ 70	≤ 25	60	27	145
22	≥ 64	≤ 26	56	28	148
23	≥ 60	≤ 27	52	29	150
24	≥ 56	≤ 28	48	30	151

FOREST STAND IMPROVEMENT (666) SPECIFICATIONS

GENERAL INFORMATION:

Client name*:	Joseph K. Landowner	Tract no.:	1234	Field no. *:	1
Specifications date:	Mar 3, 2015	Planned implementation date*:	2015		
Total stand Acres:	20.8	Total acres of practice planned*:	20.8		
Map of site* – attach a sketch, map, or aerial photo indicating the location of area to be treated with FSI.					

PURPOSES (check all that apply)*:

<input checked="" type="checkbox"/>	Increase the quantity and quality of forest products by manipulating stand density and structure
<input type="checkbox"/>	Harvest forest products
<input checked="" type="checkbox"/>	Initiate forest stand regeneration
<input type="checkbox"/>	Development of renewable energy systems
<input checked="" type="checkbox"/>	Reduce wildfire hazard
<input checked="" type="checkbox"/>	Improve forest health by reducing the potential of damage from pests and moisture stress
<input checked="" type="checkbox"/>	Restore natural plant communities
<input type="checkbox"/>	Achieve or maintain a desired native understory plant community for special forest products, grazing, and browsing
<input checked="" type="checkbox"/>	Improve aesthetic and recreation values
<input checked="" type="checkbox"/>	Improve wildlife habitat
<input type="checkbox"/>	Alter water yield
<input checked="" type="checkbox"/>	Increase carbon storage in selected trees

STAND INFORMATION:

Forest Cover Type/Dominant Spp. *:	White cedar dominant with white spruce, hemlock, balsam fir, balm of gilead and aspen (see FMP for diameter distribution)				
Dominant Soil Types:		Site Index:	40 (S.I. Spp.: white cedar)		
Silvicultural (Harvest/Regeneration) System (complete applicable section below):					
<input checked="" type="checkbox"/> Uneven-aged System*			<input type="checkbox"/> Even-aged System*		
Basal Area:	225 sq. ft./ac. *	Avg. DBH*:		Trees per Ac. *:	
Type of Intermediate FSI Treatment*:	<input checked="" type="checkbox"/> Single tree selection <input type="checkbox"/> Group selection <input type="checkbox"/> Other: _____	Type of Intermediate FSI Treatment*:	<input type="checkbox"/> Single tree selection <input type="checkbox"/> Row thinning <input type="checkbox"/> Other: _____		
Type of Harvest FSI Treatment*:	<input type="checkbox"/> Single tree selection <input type="checkbox"/> Group selection <input type="checkbox"/> Other: _____	Type of Harvest FSI Treatment*:	<input type="checkbox"/> Shelterwood <input type="checkbox"/> Seed Tree <input type="checkbox"/> Clearcut <input type="checkbox"/> Other: _____		

FOREST STAND IMPROVEMENT IMPLEMENTATION DETAILS:

Diameter class ^{1/} :	Existing (pre-treatment)*:	Removals*:		Residual (post-treatment)*:
	<input type="checkbox"/> Trees/Ac. or <input checked="" type="checkbox"/> B.A. (ft ² /ac.)	Trees/Ac. or B.A.	Species	Trees/Ac. or B.A.
5-9	30	7	White Cedar	22
9-15	110	30	White Cedar	80
15+	25	0	White Cedar	25
9-15+	8	8	White Spruce	0
5-9	2	0	White Spruce	2
5-15+	12	0	Hemlock	12
5-15	6	0	Birch (Yellow and White)	6
5-9	16	14	Balsam Fir	2
9-15	6	6	Balsam Fir	0
5-15+	10	10	Balm of Gilead, Aspen	0
Total Trees/Ac.:		*		
Total BA:	225*	75*		150*

^{1/} Specify Diameter in two-inch classes, e.g., 6 = 5.0 – 6.9", or by timber size class, e.g., saplings, poletimber, sawtimber.

Additional information, including equipment to be used, and O&M details, necessary to install and maintain practice*:

Install according to the general criteria, all applicable additional criteria, and as detailed in this specification sheet and on the attached "Additional Practice Specifications for Field 1."

Forest Management Plan Criteria and Checklist
Practice/Activity Code (106) (No.)
Natural Resources Conservation Service – Michigan

Landowner Name: _____ **County:** _____
Plan Writer Name: _____ **Date Submitted:** _____
NRCS Reviewer Name: _____ **Date Reviewed:** _____

This plan meets / does not meet the criteria listed below. _____(reviewer initials)

Introduction

A forest management plan is a site-specific plan developed for a client, which addresses one or more resource concerns on land where forestry-related conservation activities or practices will be planned and applied.

A forest management plan is developed by a certified Technical Service Provider (TSP). The specific criteria required for certification of TSPs and a list of current certified TSPs is located on the TSP registry (TechReg) web site: <http://techreg.usda.gov/>.

The forest management plan will:

1. Meet Natural Resources Conservation Service (NRCS) Planning Criteria for the identified resource concern(s). See Section III of the electronic Field Office Technical Guide (eFOTG): <http://www.nrcs.usda.gov/technical/efotg/>
2. Comply with federal, state, tribal, and local laws, regulations, and permit requirements.
3. Be based on a forest inventory conducted using generally accepted forestry inventory methods.
4. Meet the client's objectives.

Property Identification and Overview

COMPONENT	Yes	No	N/A
1. Landowner Information			
a. Landowner name *			
b. Landowner address *			
c. Landowner phone number *			
d. Landowner email address (if available)			
e. Landowner signature			
2. Plan Writer Information			
a. Plan writer's name *			
b. Plan writer's address *			
c. Plan writer's phone number *			
d. Plan writer's email address			
e. Plan writer's signature			
3. Site Information			
a. Property location (county, township, range, section, etc.)			
b. Acres covered in plan *			
c. Date of plan			
d. General overall property/resource description			
e. Landowner objectives			
4. Other Information			
a. Signature block for NRCS acceptance *			
b. Description of the forest/resource inventory methods used to develop plan.			

* These items, at a minimum, must be included on the plan cover page(s).

Resource Descriptions

COMPONENT	Yes	No	N/A
5. Management Unit Description - The following should be provided for each management unit, if applicable, or they may be provided for the tract/property as a whole, only if there is no variability among land units.			
a. Acres (to the tenths of an acre)			
b. Site index			
c. Basal area and/or stocking level			
d. Common species by size class (saw, pole, sapling, etc., or diameter range)			
e. Wood products potential			
f. Soil type(s) and condition			
g. Topography			
h. Natural and cultural features			
i. Roads and trails (include on maps, if possible – see “Maps” below)			
j. Wildfire and pest risk			
k. Known fish and wildlife species			
l. Fish and wildlife species habitat elements			
m. Noxious and invasive species present			
n. Water quality and other important features			
o. Existing conservation practices			
p. Harvest history			

6. Identification of Resource Concerns			
a. Completed "Resource Considerations Field Inventory Guide Sheet" (excerpt of Form CPA-52 ¹), or other documentation of identified resource concerns ² . Resource concerns will be documented <u>for each land use</u> at a minimum.			
b. Resource assessments tools used and results of resource assessments for all resource concerns ²			

Prescriptions

COMPONENT	Yes	No	N/A
7. Desired Future Conditions (Goals) - The following should be provided <u>for each management unit</u> , if applicable.			
a. Stocking			
b. Basal area			
c. Species composition			
d. Wildlife and pollinator habitat			
e. Recreation			
8. Planned Conservation Practices³			
a. Management unit on which practice is scheduled			
b. NRCS practice name and code			
c. Amount to be applied (in tenths of acres, feet, or number)			
d. Schedule for implementation (by month and year)			
e. Necessary specifications and/or job sheets for each practice (Provide site-specific practice installation details that meet the criteria in the "Plans and Specifications" section of the applicable Conservation Practice Standard.)			

Specifications – section of the applicable Conservation Practice Standard.)			
9. Additional Management Considerations⁴ – For management activities that aren't addressed by NRCS Conservation Practices or are beyond the TSP's certification level, provide the following, if applicable.			
a. Management unit on which practice is scheduled			
b. NRCS practice name and code			
c. Amount to be applied (in tenths of acres, feet, or number)			
d. Schedule for implementation (by month and year)			

Maps

COMPONENT	Yes	No	N/A
10. Maps			
a. Location map – location of property in relation to surrounding landscape			
b. Plan map – property and management unit/stand boundaries, location of engineering/structural practices, scale, north arrow, legend with appropriate map symbols			
c. Soils map – legend, applicable soil reports, and suitabilities and limitations for use (may be in plan text)			

Additional Information

MI NRCS Webpage: www.mi.nrcs.usda.gov

Financial Assistance > Environmental Quality Incentives Program > Fiscal Year 2015
Environmental Quality Incentives Program Sign-Up

- Program Information
- Ranking Tools
- Payment Rates for Conservation Practices and Conservation Activity Plans

MI NRCS Webpage: www.mi.nrcs.usda.gov

Financial Assistance or Easement Programs

- Conservation Stewardship Program
- Agricultural Conservation Easement Program (includes former Wetland Reserve Program)

Additional Information

NRCS electronic Field Office Technical Guide (eFOTG):
<http://efotg.sc.egov.usda.gov/>

- eFOTG is a five-part web-based tool used to provide scientific references for conservation :
 - Section I – General References
 - Section II – Natural Resources Information
 - Section III - Conservation Management Systems
 - Section IV – Practice Standards and Specifications
 - Section V – Conservation Effects

Report — Forestland Erosion and Windthrow Hazard (MI)


Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. The table shows only the five most limiting features for any given soil. The soil may have additional limitations.

Washtenaw County, Michigan


Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion (MI)		Windthrow hazard (MI)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Ad—Adrian muck					
Adrian	92	Slight		Severe	
		Slope	0.02	Wetness	1.00
BnB—Boyer loamy sand, 0 to 6 percent slopes					
Boyer	85	Slight		Slight	
		Slope/erodibility	0.06		
Gf—Gilford sandy loam					
Gilford	85	Slight		Severe	
		Slope/erodibility	0.02	Wetness	1.00
Gp—Gravel pit					
Gravel pit	100	Not Rated		Not rated	
Hn—Houghton muck					
Houghton	90	Slight		Severe	

Report — Forestland Site Preparation and Potential Seedling Mortality (MI)

Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. The table shows only the five most limiting features for any given soil. The soil may have additional limitations.

Washtenaw County, Michigan

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface) (MI)		Potential for seedling mortality (MI)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Ad—Adrian muck					
Adrian	92	Poorly suited		High	
		Wetness	0.50	Wetness	1.00
BnB—Boyer loamy sand, 0 to 6 percent slopes					
Boyer	85	Well suited		Low	
Gf—Gilford sandy loam					
Gilford	85	Poorly suited		High	
		Wetness	0.50	Wetness	1.00
Gp—Gravel pit					
Gravel pit	100	Not rated		Not Rated	

Forestland Productivity

Forestland Productivity– Washtenaw County, Michigan				
Map unit symbol and soil name	Potential productivity			Trees to manage (Less Good)
	Common trees (Good!)	Site Index	Volume of wood fiber <i>Cu ft/ac</i>	
			<i>Cu ft/ac</i>	
Ad—Adrian muck				
Adrian	Green ash	69	57	—
	Quaking aspen	60	57	
	Red maple	53	29	
	Silver maple	78	29	
	Tamarack	45	29	
	White ash	69	57	
BnB—Boyer loamy sand, 0 to 6 percent slopes				
Boyer	American basswood	—	0	Eastern white pine, Northern red oak, Red pine, White oak
	Black oak	—	0	
	Northern red oak	66	57	
	Sugar maple	—	0	
	White oak	—	0	