

Appendix A Southeast Landscape Planning Committee



The following provides an overview of the Southeast Landscape Planning Team and Committee members.

Planning Team

John Beckwith – Hiawatha Valley Resource Conservation and Development Council
Richard Biske – The Nature Conservancy
Larry Gates – Private landowner
Angela Gupta – University of Minnesota Extension
John Harford – Olmsted County Environmental Resources Department
Terri Peters – Wabasha County Soil and Water Conservation District

Southeast Landscape Committee *[in development]*

John Beckwith
Rich Biske
William Bruins
Lou Chicquette
Larry Gates
Brad Gatzlaff
Valiree Green
Angela Gupta
John Harford
Sheila Harmes
Tom McMillin
Russ Oettel
Terri Peters
Donna Rasmussen
Hannah Texler
Jodie Provost
Tim Schlagenhaft
Justin Watkins

Appendix B Glossary



Acronyms used in this Plan:

| | |
|--------------|---|
| 1W1P | (BWSR) One Watershed One Plan |
| 2c | 2c Managed Forest Land tax program |
| BMPs | Best management practices |
| BWSR | (Minnesota) Board of Soil and Water Resources |
| DFC | Desired future condition |
| DNR | (Minnesota) Department of Natural Resources |
| ECS | Ecological Classification System |
| EQIP | Environmental Quality Incentive Program |
| FAP | (State) Forest Action Plan |
| FIA | (USDA Forest Service) Forest Inventory and Analysis |
| GEIS | Generic Environmental Impact Statement |
| GIS | Geographic information system |
| IFRA | Important Forest Resource Area |
| LSOHC | Lessard-Sams Outdoor Heritage Council |
| MFRC | Minnesota Forest Resources Council |
| MPCA | Minnesota Pollution Control Agency |
| NIACS | Northern Institute of Applied Climate Science |
| NLCD | National Land Cover Database |
| NRCS | Natural Resource Conservation Service |
| NPC | Native plant community |
| PFM | Private Forest Management (Program) |
| PFMM | Private Forest Management Module |
| SGCN | Species of Greatest Conservation Need |
| SFIA | Sustainable Forest Incentive Act |
| SFRA | Sustainable Forest Resources Act |
| USDA | United States Department of Agriculture |
| WRAPS | (MPCA) Watershed Resource and Protection Strategies |

Definitions of terms used in this Plan:

10-Year Work Plan. Refers to the Objectives and Action Items developed by the Southeast Regional Landscape Committee’s Planning Team, which will be implemented over the course of the next ten years via Annual Work Programs.

Age Class. An interval into which the age range of trees or forest stands is divided for classification or use (e.g., 0-10 years, 10-20 years, etc.). (DNR-SFRMP Definitions)

Annual Work Program. Refers to the portion of the 10-Year Work Plan that the Southeast Regional Landscape Committee will implement per fiscal year.

Average Annual Mortality of Growing Stock (“mortality”). Volume of growing stock trees that were alive at the time of the previous inventory and are dead in the current inventory. Tree death associated with insects, disease, fire, animals, weather, and other factors are included. (FIA Definitions)

Average Annual Net Growth (“net growth”). The average annual change in the volume of trees during the period between inventories. Components include the change in volume of trees that have met the minimum size requirements over the inventory period, plus the volume of trees reaching the minimum size (≥ 5.0 inches dbh) during the period (ingrowth), minus the volume of trees that died during the period, minus the volume of cull during the period. Mortality removals (trees killed in the harvesting process and left on site) and diversion removals (trees removed from the forest-land base due to a change from forest to non-forest land) are not included. (FIA Definitions)

Average Annual Removals of Growing Stock (“removals”). Trees that were growing-stock trees on timberland at the time of the previous inventory and were removed from timberland by the time of the current inventory. Removals are cut and utilized trees, trees killed as a result of harvest operations but not utilized and live trees associated with land-use reclassifications. (FIA Definitions)

Biological Diversity. The variety and abundance of species, their genetic composition, and the communities and landscapes in which they occur, including the ecological structures, functions, and processes occurring at all of these levels. (Minnesota Statute Chapters 89 and 89A. Sustainable Forest Resources Act).

Cover Type. Expressed as the tree species having the greatest presence (i.e., in terms of volume for older stands or number of trees for younger stands) in a forest stand. (DNR-SFRMP Definitions)

Ecological Classification System (ECS). A method to identify, describe, and map units of land with different capabilities to support natural resources. This is done by integrating climatic, geologic, hydrologic, topographic, soil, and vegetation data. (DNR-SFRMP Definitions)

Forest Easement. Voluntary land protection agreements that restrict development while ensuring biological diversity, sustainable timber management, and public access. (MN DNR website definition, “conservation easement”)

Forest Health. The perceived condition of a forest derived from concerns about such factors as its age, structure, composition, function, vigor, presence of unusual levels of insects and disease, and resilience to disturbance—*note* perception and interpretation of forest health are influenced by individual and cultural viewpoints, land management objectives, spatial and temporal scales, the relative health of the stands that comprise the forest, and the appearance of the forest at a point in time. (“The Dictionary of Forestry”, John A. Helms, editor, Society of American Foresters.).

Forestland/Forest Land. Land at least 10-percent stocked by trees of any size, including land that formerly had such tree cover and that will be naturally or artificially regenerated. Forest land includes transition zones, such as areas between heavily forested and non-forested lands that are at least 10-percent stocked with trees and forest areas adjacent to urban and built-up lands. The minimum area for classification of forest land is 1 acre and 120 feet wide measured stem-to-stem from the outer-most edge. Unimproved roads and trails, streams, and clearings in forest areas are classified as forest if less than 120 feet wide. Forest land includes three sub-categories: timberland, reserved forestland, and other forestland. (FIA Definitions)

Forest Management. The regeneration, management, utilization, and/or conservation of forests to meet specific goals and objectives (“The Dictionary of Forestry”, John A. Helms, editor, Society of American Foresters.).

Forest Resources. Those natural assets of forest lands, including timber and other forest crops; biological diversity; recreation; fish and wildlife habitat; wilderness; rare and distinctive flora and fauna; air; water; soil; climate; and educational, aesthetic, and historic values (Minnesota Statute Chapters 89 and 89A. Sustainable Forest Resources Act).

Forest Stand. A group of trees occupying a given area and sufficiently uniform in species composition, age, structure, site quality, and condition so as to be distinguishable from the forest on adjoining areas. (DNR-SFRMP Definitions)

Fragmentation. Changes across a landscape that break large continuous areas of a particular land cover (e.g. forest) into smaller isolated patches. (Michael Kilgore, U of MN)

Goals – measurable benchmarks to strive towards in addressing visions and resolving issues in the next 10 years.

Growing Stock. All live trees of commercial species that meet minimum merchantability standards (at least 5 inches in diameter at breast height.). In general, these trees have at least one solid 8-foot section, are reasonably free from defect on the merchantable bole, and at least 34% or more of the volume is merchantable. Excludes rough or rotten cull trees. (FIA Definitions)

Healthy Forest Healthy Waters. A project of the Committee that will utilize Clean Water Fund resources to provide outreach to 100 landowners and provide technical assistance for protection and water-friendly management on 7,500 acres of land in an effort to maintain good water quality in key minor watersheds within Southeast Minnesota. The project will take place between July 2014 and June 2015.

Issue. A problem, challenge, or unresolved conflict that requires resolution to improve progress towards Desired Future Conditions.

Natural Area. A physical and biological area in nearly natural condition that exemplifies an ecological community and its associated vegetation and other biotic, soil, geologic and aquatic features. (“The Dictionary of Forestry”, John A. Helms, editor, Society of American Foresters.)

Native Species. An indigenous species that is normally found as part of a particular ecosystem. (“The Dictionary of Forestry”, John A. Helms, editor, Society of American Foresters.)

Prescribed Burning. To deliberately burn wildlands (e.g., forests, prairie or savanna); in either their natural or their modified state) and under specified conditions within a predetermined area to meet management objectives for the site. (DNR-SFRMP Definitions)

Reforestation. The process of natural or artificial forest regeneration, including securing seed, growing seedlings, preparing sites, planting seed, planting trees, removing deleterious growth and underbrush and other activities related to forest regeneration. (Minnesota Statute Chapters 89 and 89A. Sustainable Forest Resources Act).

Regeneration. The act of renewing tree cover by establishing young trees naturally (e.g., stump sprouts, root suckers, natural seeding) or artificially (e.g., tree planting, seeding). (DNR-SFRMP Definitions)

Riparian Areas. The area of land and water forming a transition from aquatic to terrestrial ecosystems along streams, lakes, and open water wetlands. (DNR-SFRMP Definitions)

Silviculture. The theory and practice of controlling the establishment, composition, growth, and quality of forest stands to achieve certain desired conditions or management objectives. (DNR-SFRMP Definitions)

Southeast Landscape - Area where visions, goals and strategies apply. The Southeast Landscape includes the counties of Dodge, Fillmore, Freeborn, Goodhue, Houston, Le Sueur, Mower, Olmstead, Rice, Steele, Wabasha, Waseca, and Winona.

Southeast Regional Landscape Committee (“the Committee”) - Group of interested stakeholders established to develop a strategic landscape plan and work to increase coordination, implementation, and monitoring of the plan. The committee is open to anyone from the public who is interested in sustainable forest resources management in Minnesota.

Spatial Analysis. The mapping and measuring of spatial patterns in a landscape or given area. (MN DNR – Jim Manolis)

Strategy. Strategies are general approaches or methods to accomplish the vegetative management goals which ultimately move the landscape toward achieving the overall vision or desired future conditions. Strategies provide land managers with written descriptions of the general tools and techniques suggested to accomplish the goals and provide a basis for the further development of the appropriate tactical methods.

Subsection. A subsection is one level within the Ecological Classification System (ECS). From largest to smallest in terms of geographic area, the ECS is comprised of the following levels: Province > Section > Subsection > Land Type Association > Land Type > Land Type Phase. Subsections are generally 1-4 million acres in size in Minnesota, with the average being 2.25 million acres. Seventeen subsections are scheduled for the SFRMP process (see subsection map and SFRMP schedule). (DNR-SFRMP Definitions)

Subsection Forest Resource Management Plans (SFRMP). A DNR plan for vegetation management on forest lands administered by DNR Forestry and Wildlife that uses ECS subsections as the basic unit of delineation. Initial focus will be to identify forest stands and road access needs for the duration of the seven-year plan. There is potential to be more comprehensive in the future. (DNR-SFRMP Definitions)

Sustainable. Meeting the needs of the present without compromising the ability of future generations to meet their own needs (Minnesota Statute Chapters 89 and 89A. Sustainable Forest Resources Act).

Timber. Trees that will produce forest products of value, whether standing or down, and including but not limited to logs, bolts, pulpwood, posts, poles, cordwood, lumber and decorative material. (Minnesota Statute Chapters 89 and 89A. Sustainable Forest Resources Act).

Timberland. Forest land that is producing or is capable of producing crops of industrial wood and not withdrawn from timber utilization by statute or administrative regulation. (Note: Areas qualifying as timberland are capable of producing in excess of 20 cubic feet per acre per year of industrial wood in natural stands. Currently inaccessible and inoperable areas are included, but these likely are a very small number of acres.) (FIA Definitions)

Vision (e.g. Common Theme, Desired Future Condition, Desired Outcome) - refers to a desired condition for an area 100 years or more in the future.



Appendix C Bibliography

Note: References for sources used throughout the Plan are below. Specific references for sources used in Section 2, Parts C and D are listed separately beginning on p. C-2.

Class, L., and Skally, C. 2001. Forest Resource Management in Southeast Minnesota: A Landscape Perspective. Minnesota Forest Resources Council Document LP-0502. Pgs 65. (available online at <http://www.frc.state.mn.us/Info/MFRCdocs/lp-0502-final2.pdf>)

Helms, J.A Editor. 1998. The Dictionary of Forestry. Society of American Foresters. Pgs 210.

Homer, C., Dewitz, J., Fry, J., Coan, M., Hossain, N., Larson, C., Herold, N., McKerrow, A., VanDriel, J.N., and Wickham, J. 2007. Completion of the 2001 National Land Cover Database for the Conterminous United States. *Photogrammetric Engineering and Remote Sensing*, Vol. 73, No. 4, pp 337-341.

Jakes, P. J. 1977. Minnesota Forest Statistics, 1977. Resource Bulletin NC-53. St. Paul, MN: USDA Forest Service, North Central Forest Experiment Station. (available online at http://www.ncrs.fs.fed.us/pubs/rb/rb_nc053.pdf)

Jin, S., Yang, L., Danielson, P., Homer, C., Fry, J., and Xian, G. 2013. A comprehensive change detection method for updating the National Land Cover Database to circa 2011. *Remote Sensing of Environment*, 132: 159 – 175.

Marschner, F. J. 1930. Interpretation of Francis J. Marschner's Map of the Original Vegetation of Minnesota. Based on the notes of the Public Land Survey, 1847 - 1907. (available online at <http://deli.dnr.state.mn.us>)

Miles P, Chen C, and Leatherberry E. Minnesota Forest Statistics, 1995. USDA Forest Service, North Central Research Station. Resource Bulletin NC-158. (available online at http://www.ncrs.fs.fed.us/pubs/rb/rb_nc158.pdf)

Minnesota Department of Natural Resources. "Ecological Classification System." Available at: www.dnr.state.mn.us/ecs/index.

Minnesota Department of Natural Resources Division of Forestry. "Interpretations – Silviculture Program." Available at: www.dnr.state.mn.us/forestry/ecs_silv/interpretations.html.

Minnesota Department of Natural Resources. Data Deli. Available at: <http://deli.dnr.state.mn.us/>

Minnesota Forest Resources Council. “Landscape Level Forest Management.” Available at: http://mn.gov/frc/initiatives_llm.html.

MN State Legislation. 1995. Sustainable Forest Resources Act. Chapter 89A. (available online at <http://www.leg.state.mn.us>)

MN State Legislation. Chapter 89.001. Available online at <http://www.leg.state.mn.us>.

Minnesota Forest Resource Council. 2014. “Northeast Landscape Forest Resources Plan.” Landscape Program Document. LP-0914.

Minnesota Forest Resource Council, St. Paul, Minnesota. Available online at www.frc.state.mn.us.

Swanston, C. and M. Janowiak. 2012. Forest Adaptation Resources: Climate change tools and approaches for land managers. Gen. Tech. Rep.

NRS-87. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. 121 p. Available at:

www.nrs.fs.fed.us/pubs/40543.

Southeast Landscape Regional Committee. 2003. “Forest Resource Management Plan: Southeast Landscape.” #LP-0603. Minnesota Forest Resources Council. Available online at:

http://mn.gov/frc/documents/council/landscape/SE%20Landscape/MFRC_Southeast_LA_Plan_1.25_2003-06-01.pdf

References for Section 2, Part C “Conditions and Trends Report” and Part D “Demographic Data Report”

Almendinger, J. 2000. Public Land Survey Bearing Tree Data, late 1800’s and United States Forest Service Forest Inventory and Analysis.

Available in: Minnesota Forest Resources Council. 2000. “Southeast Minnesota Landscape Current Conditions and Trends Assessment.”

Further information at: <http://files.dnr.state.mn.us/eco/nhnrp/brgtree.pdf>

Arends, H. Minnesota Department of Natural Resources, State Program Director. Personal communication 2/18/2014.

Cieminski, K. and St. Stucker, Minnesota Biological Survey, MN DNR Division of Ecological and Water Resources, 2013.

Deckard, D.; MN DNR Forest Economist. 2009 Compiled from: Minnesota Forest Products Primary Processors Database, 8-19-2014.

Deckard, D.. MN DNR Forest Economist. 2011. Compiled from: MNDNR 2010 Sawmill Survey and USFS 2011 Pulpwood Survey, 8-19-2014.

Deckard, D.; MN DNR Forest Economist. 2013. Data queried from MNDEED QCEW (Quarterly Census of Employment and Wages) 8-19-2014.

Deckard, D. and J. Skurla. 2011. “Economic Contribution of Minnesota’s Forest Products Industry – 2011 edition.” Available at:

<http://files.dnr.state.mn.us/forestry/um/economiccontributionMNforestproductsindustry2011.pdf>

Deckard, D. Minnesota Department of Natural Resources, Forest Economist. Personal communication, 2013. In: Minnesota Forest Resource Council. 2014. *Northeast Landscape Conditions & Trends Report*. Landscape Program Document #LT0114. Minnesota Forest Resource Council, St. Paul, Minnesota. Available online at www.frc.state.mn.us.

Explore Minnesota. 2012. “PRELIMINARY Top Minnesota Attractions by Region, 2010.” www.exploreminnesota.com

FIA (1990-2013): Forest Inventory and Analysis estimates. Miles, P.D. Forest Inventory EVALIDator web-application version 1.5.1.05. St. Paul, MN: U.S. Department of Agriculture, Forest Service, Northern Research Station. [Available only on internet: <http://apps.fs.fed.us/Evalidator/tmtribute.jsp>.]

(GAP 2008): U.S. Geological Survey. 2008. Gap Analysis Program (GAP) Stewardship Dataset. On MN DNR Deli. <http://deli.dnr.state.mn.us/index.html>.

(GAP 1992): U.S. Geological Survey. Gap Analysis Program (GAP) Land Cover Dataset.

Grund, M. 2013. "Monitoring Population Trends of White-tailed Deer in Minnesota - 2013." MN DNR, Farmland Wildlife Populations and Research Group.

Hall, C. 2013. MN DNR, Minnesota Biological Survey, Amphibian and Reptile Specialist. Personal communication Oct. 2013.

Kelly, T. (2005). 2004 Outdoor Recreation Participation Survey of Minnesotans: Report on Findings. Saint Paul, MN: Minnesota Department of Natural Resources, Office of Management and Budget Services. In Davenport, M, I. Schneider, A. Date, and L. Filter. 2010. Minnesota's Network of Parks and Trails, An Inventory of Recreation Experience Opportunities in Minnesota: South Region Profile. University of Minnesota, College of Design. Available online at: http://ccl.design.umn.edu/documents/SouthRegionRecreationInventory05-26-10forweb_000.pdf.

Lenhart, C. and J. Niebert. 2011. “Quantifying differential streamflow response of Minnesota ecoregions to climate change and implications for management.” Report as of FY2010 for 2010MN270B.

Marschner, F. J. 1974. The original vegetation of Minnesota. North Central Forest Experiment Station, Forest Service, U.S. Dept. of Agriculture, St. Paul, MN.

Minnesota Department of Agriculture (MDA). 2006. “Emerald Ash Borer Introduction Risk Model for Minnesota.” MDA Plant Protection Division, Invasive Species Exclusion Unit. Available at: <http://www.mda.state.mn.us/Global/MDADocs/pestsplants/eab/riskmodel.aspx>

Minnesota Department of Agriculture (MDA). 2007. GIS sawmill data from MDA. [no further metadata available].

Minnesota Department of Agriculture (MDA) 2008. Gypsy Moth Program.

Minnesota Department of Agriculture (MDA). 2011. “Biological Control of Emerald Ash Borer in Minnesota.” Available at: <http://www.mda.state.mn.us/~media/Files/plants/eab/eabbiocontrolinmn.ashx>

Minnesota Department of Agriculture (MDA) Early Detection and Distribution Mapping System (EDD MapS). 2013. This application uses Google Maps to pinpoint locations where reports have come in for newly invasive terrestrial plant species: <http://gis.mda.state.mn.us/earlydetection/>

Minnesota Department of Employment and Economic Development (MN DEED). 1990-2012.

Minnesota Department of Natural Resources (MN DNR). “Minnesota Deer Harvest Report” 2003 and 2013. Division of Fish and Wildlife.

Minnesota Department of Natural Resources (MN DNR). 2006. *Tomorrow’s Habitat for the Wild and Rare: An Action Plan for Minnesota Wildlife*, Comprehensive Wildlife Conservation Strategy, Division of Ecological Services, Minnesota Dept. of Natural Resources.

Minnesota Department of Natural Resources, Division of Fisheries (MN DNR, Div. of Fisheries). 2009. “Minnesota Trout Streams.” On MN DNR Deli. <http://deli.dnr.state.mn.us/index.html>

Minnesota Department of Natural Resources, Division of Forestry (MN DNR) 2009. “State Forest Boundaries.” Forest Resource Assessment. On MN DNR Deli. <http://deli.dnr.state.mn.us/index.html>

Minnesota Department of Natural Resources (MN DNR). 2013 (1). “Minnesota County Biological Survey.” Accessed 11/21/2013. Available at: <http://www.dnr.state.mn.us/mbs/index.html>. (MN DNR Data Deli.)

Minnesota Department of Natural Resources (MN DNR). 2013 (2). Minnesota’s List of Endangered, Threatened, and Special Concern Species, 2013. MN DNR Division of Ecological and Water Resources. Available online at: http://files.dnr.state.mn.us/natural_resources/ets/endlist.pdf

Minnesota Department of Natural Resources (MN DNR). 2013 (3). “Rare Species Guide.” Accessed 11/21/2013. Available at: <http://www.dnr.state.mn.us/rsg/index.html>.

Minnesota Department of Natural Resources Division of Ecological and Water Resources. 2013 (4). On MN DNR Deli. <http://deli.dnr.state.mn.us/index.html>

Minnesota Department of Natural Resources (MN DNR), Division of Parks and Trails. 2013. Contact for data query: John Lawton, MNIT.

Minnesota Department of Natural Resources (MN DNR), Division of Lands & Minerals (Div. of LAM) and Minnesota Geological Survey (MN GS). GIS mining data, 2014. [no further metadata available].

Minnesota Department of Revenue; Minnesota Department of Employment and Economic Development. In Explore Minnesota Tourism. 2014. Tourism and Minnesota's Economy factsheet. Available online at: <http://www.exploreminnesota.com/industry-minnesota/research-reports/researchdetails/index.aspx?nid=135>.

Minnesota Department of Transportation (MnDOT). GIS data, 2008-2012. [no further metadata available].

Minnesota Pollution Control Agency (MPCA). 2013 (1). "Impaired Waters List." Accessed 11/21/2013. Available at: <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/minnesotas-impaired-waters-and-tmdls/impaired-waters-list.html>.

Minnesota Pollution Control Agency (MPCA). 2013 (2). "Milestone Trends by Decade." Available at: <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/surface-water/streams-and-rivers/minnesota-milestone-river-monitoring-program.html>.

Minnesota State Demographic Center. 2014. "Minnesota County Population Projections by Age and Gender, 2015-2045. Compiled by Megan Dayton, March 2014. Note: Population projections are based on 2010 U.S. Census Bureau information. <http://mn.gov/admin/demography/data-by-topic/population-data/our-projections/>.

(MN DNR WHAF 2011): Minnesota Department of Natural Resources (MN DNR) Watershed Health Assessment Framework (WHAF). 2011. <http://www.dnr.state.mn.us/whaf/index.html>

(MNTaxa): Minnesota Department of Natural Resources (MN DNR). 2013. MNTaxa: The State of Minnesota Vascular Plant Checklist. http://www.dnr.state.mn.us/eco/mcbs/plant_lists.html

(NLCD 2001): Homer, C., Dewitz, J., Fry, J., Coan, M., Hossain, N., Larson, C., Herold, N., McKerrow, A., VanDriel, J.N., and Wickham, J. 2007. [Completion of the 2001 National Land Cover Database for the Conterminous United States](#). *Photogrammetric Engineering and Remote Sensing*, Vol. 73, No. 4, pp 337-341.

(NLCD 2006): Fry, J., Xian, G., Jin, S., Dewitz, J., Homer, C., Yang, L., Barnes, C., Herold, N., and Wickham, J., 2011. [Completion of the 2006 National Land Cover Database for the Conterminous United States](#), *PE&RS*, Vol. 77(9):858-864.

(NLCD 2011): Jin, S., Yang, L., Danielson, P., Homer, C., Fry, J., and Xian, G. 2013. [A comprehensive change detection method for updating the National Land Cover Database to circa 2011](#). *Remote Sensing of Environment*, 132: 159 – 175.

North Star Economics, Inc. and Trout Unlimited. 2008. "The Economic Impact of Recreational Trout Angling in the Driftless Area," p. 4.

- Pradhananga, A., Davenport, M., & Cornicelli, L. (2013). 2013 survey of deer management on private lands in southeast Minnesota. University of Minnesota, Minnesota Cooperative Fish and Wildlife Research Unit, Department of Fisheries, Wildlife, and Conservation Biology and Department of Forest Resources.
- Robertson, M. Minnesota State Demographic Center, January, 2013; Revised and Corrected April, 2013. Available at: <http://www.demography.state.mn.us/projectionsHousehold2015-2040.htm>.
- Runkel, A.C, J.R. Steenberg, R.G. Tipping, A.J. Retzler. 2013. “Geologic controls on groundwater and surface water flow in southeastern Minnesota and its impact on nitrate concentrations in streams.” Minnesota Geological Survey.
- Snook, V.A. and D. J. Dieterman. 2006. A Roving Creel Survey of Selected Southeast Minnesota Trout Streams – 2005. Minnesota Department of Natural Resources, report: F-29-R(P)-25. Available online at: http://files.dnr.state.mn.us/areas/fisheries/lanesboro/Creel_Report_Final_7_25_06.pdf.
- Spatial Analysis Project (SAP), Minnesota DNR Forestry Community and Private Lands Program (2006).
- Streitz, A. Changes to River Baseflow Across Minnesota. Presentation, Midwest Ground Water Conference, October 1, 2012. Minnesota Pollution Control Agency.
- Taff, S. Minnesota Land Economics. 2014. “Estimated Land Values.” University of Minnesota. landeconomics.umn.edu.
- United States Bureau of Labor Statistics (US BLS), Quarterly Census of Employment and Wages, State and County Wages Database, 2003-2012. Available at: <http://www.bls.gov/cew/data.htm>
- U.S. Census Bureau (USCB), Population Division, 2012 (U CB (1)). Table 1. Annual Estimates of the Population for the United States, Regions, States, and Puerto Rico: April 1, 2010 to July 1, 2012 (NST-EST2012-01). Release Date: December 2012
- United States Census Bureau, State & County Quickfacts (US CB (2)); 2007-2012. Available at: <http://quickfacts.census.gov/qfd/states/>.
- U.S. Census Bureau (US CB (3)), Small Area Income and Poverty Estimates. 2011.
- USDA NASS. USDA National Agricultural Statistics Service Quick Stats. Accessed Feb. 13-20, 2014. Available at: <http://quickstats.nass.usda.gov/>
- Watkins, J., N. Rasmussen, G. Johnson, A. Streitz, K. Ahmad, B. Beyerl, and J. Roebuck. 2013. “Nitrate-Nitrogen in the Springs and Trout Streams of Southeast Minnesota.” Minnesota Pollution Control Agency.

Appendix D Technical Support Documents



The following is a list of the technical support documents that were created prior to development of the Plan. These documents are summarized in Section 2 of this Plan and may be found online at http://mn.gov/frc/resources_documents.html.

- Resource Atlas
- Conditions and Trends Report
- Demographic Data Report
- Forest Policy Inventory
- Key Stakeholder Survey Report
- Key Stakeholder Focus Groups Report

Appendix E

Native Plant Communities of the Southeast Landscape



The following table provides an inventory of all native plant communities (NPCs) at the System and Class level that can be found within all five Ecological Classification System (ECS) Subsections that intersect with the Southeast Landscape. (Note: Only those NPCs that fall within the intersection of the Subsections and the Southeast Landscape are shown.) This data is available on the Minnesota DNR’s Data Deli, and can also be found in: MN DNR. 2003. Field Guide to the Native Plant Communities of Minnesota, The Eastern Broadleaf Forest Province.

| ECS Subsection | NPC Systems | NPC Class Codes | NPC Classes |
|-----------------|-----------------------|--------------------------|--|
| Blufflands | Cliff/Talus | CTs12 | Southern Dry Cliff |
| | | CTs23 | Southern Open Talus |
| | | CTs33 | Southern Mesic Cliff |
| | | CTs43 | Southern Maderate Cliff |
| | | CTs46 | Southern Algific Talus |
| | | CTs53 | Southern Wet Cliff |
| | Fire-Dependent Forest | FDs27 | Southern Dry-Mesic Pine-Oak Woodland |
| | | FDs36 | Southern Dry-Mesic Oak-Aspen Forest |
| | | FDs38 | Southern Dry-Mesic Oak-Hickory Woodland |
| | Floodplain Forest | FFs59 | Southern Terrace Forest |
| | | FFs68 | Southern Floodplain Forest |
| | Mesic Hardwood Forest | MHc38 | Central Mesic Cold-Slope Hardwood-Conifer Forest |
| | | MHs37 | Southern Dry-Mesic Oak Forest |
| | | MHs38 | Southern Mesic Oak-Basswood Forest |
| | | MHs39 | Southern Mesic Maple-Basswood Forest |
| | | MHs49 | Southern Wet-Mesic Hardwood Forest |
| | | MHw36 | Northwestern Wet-Mesic Hardwood Forest |
| | Marsh | MRn83 | Northern Mixed Cattail Marsh |
| | | MRn93 | Northern Bulrush-Spikerush Marsh |
| | Open Rich Peatland | OPp93 | Prairie Extremely Rich Fen |
| | River Shore | RVx32 | Sand/Gravel/Cobble River Shore |
| | Upland Prairie | UPs13 | Southern Dry Prairie |
| | | UPs14 | Southern Dry Savanna |
| UPs23 | | Southern Mesic Prairie | |
| Wet Forest | WFs57 | Southern Wet Ash Swamp | |
| Wet Meadow/Carr | WMn82 | Northern Wet Meadow/Carr | |

| ECS Subsection | NPC Systems | NPC Class Codes | NPC Classes | |
|-----------------------|-----------------------|------------------------------------|--|---|
| Rochester Plateau | | WMs83 | Southern Seepage Meadow/Carr | |
| | Wetland Prairie | WPs54 | Southern Wet Prairie | |
| | Cliff/Talus | CTs12 | Southern Dry Cliff | |
| | | CTs23 | Southern Open Talus | |
| | | CTs33 | Southern Mesic Cliff | |
| | | CTs43 | Southern Maderate Cliff | |
| | | CTs46 | Southern Algific Talus | |
| | | Fire-Dependent Forest | FDs27 | Southern Dry-Mesic Pine-Oak Woodland |
| | FDs36 | | Southern Dry-Mesic Oak-Aspen Forest | |
| | FDs37 | | Southern Dry-Mesic Oak (Maple) Woodland | |
| | FDs38 | | Southern Dry-Mesic Oak-Hickory Woodland | |
| | Floodplain Forest | FFs59 | Southern Terrace Forest | |
| | Mesic Hardwood Forest | MHc38 | Central Mesic Cold-Slope Hardwood-Conifer Forest | |
| | | MHs37 | Southern Dry-Mesic Oak Forest | |
| | | MHs38 | Southern Mesic Oak-Basswood Forest | |
| | | MHs39 | Southern Mesic Maple-Basswood Forest | |
| | | MHs49 | Southern Wet-Mesic Hardwood Forest | |
| | Marsh | MRn93 | Northern Bulrush-Spikerush Marsh | |
| | Open Rich Peatland | OPp93 | Prairie Extremely Rich Fen | |
| | River Shore | RVx32 | Sand/Gravel/Cobble River Shore | |
| | Upland Prairie | UPs13 | Southern Dry Prairie | |
| | | UPs14 | Southern Dry Savanna | |
| | | UPs23 | Southern Mesic Prairie | |
| | | UPs24 | Southern Mesic Savanna | |
| | | Wet Forest | WFs57 | Southern Wet Ash Swamp |
| | Wet Meadow/Carr | WMn82 | Northern Wet Meadow/Carr | |
| | | WMs83 | Southern Seepage Meadow/Carr | |
| | Wetland Prairie | WPs54 | Southern Wet Prairie | |
| | Oak Savanna | Fire-Dependent Forest | FDs36 | Southern Dry-Mesic Oak-Aspen Forest |
| | | | FDs37 | Southern Dry-Mesic Oak (Maple) Woodland |
| Floodplain Forest | | FFs59 | Southern Terrace Forest | |
| | | FFs68 | Southern Floodplain Forest | |
| Mesic Hardwood Forest | | MHs37 | Southern Dry-Mesic Oak Forest | |
| | | MHs38 | Southern Mesic Oak-Basswood Forest | |
| | | MHs39 | Southern Mesic Maple-Basswood Forest | |
| | MHs49 | Southern Wet-Mesic Hardwood Forest | | |

| ECS Subsection | NPC Systems | NPC Class Codes | NPC Classes |
|-------------------------|------------------------|------------------------------|---|
| | Marsh | MRn93 | Northern Bulrush-Spikerush Marsh |
| | | MRp93 | Prairie Bulrush-Arrowhead Marsh |
| | Open Rich Peatland | OPp93 | Prairie Extremely Rich Fen |
| | Upland Prairie | UPs13 | Southern Dry Prairie |
| | | UPs14 | Southern Dry Savanna |
| | | UPs23 | Southern Mesic Prairie |
| | Wet Forest | WFs57 | Southern Wet Ash Swamp |
| | Wet Meadow/Carr | WMn82 | Northern Wet Meadow/Carr |
| WMs83 | | Southern Seepage Meadow/Carr | |
| Wetland Prairie | WPs54 | Southern Wet Prairie | |
| Big Woods | Cliff/Talus | CTs53 | Southern Wet Cliff |
| | Fire-Dependent Forest | FDs37 | Southern Dry-Mesic Oak (Maple) Woodland |
| | Floodplain Forest | FFs59 | Southern Terrace Forest |
| | Forested Rich Peatland | FFs68 | Southern Floodplain Forest |
| | | FPs63 | Southern Rich Conifer Swamp |
| | Lakeshore | LKi32 | Inland Lake Sand/Gravel/Cobble Shore |
| | | LKi54 | Inland Lake Clay/Mud Shore |
| | Mesic Hardwood Forest | MHs37 | Southern Dry-Mesic Oak Forest |
| | | MHs38 | Southern Mesic Oak-Basswood Forest |
| | | MHs39 | Southern Mesic Maple-Basswood Forest |
| | | MHs49 | Southern Wet-Mesic Hardwood Forest |
| | Marsh | MRn83 | Northern Mixed Cattail Marsh |
| | | MRn93 | Northern Bulrush-Spikerush Marsh |
| | Open Rich Peatland | OPn92 | Northern Rich Fen (Basin) |
| | | OPp93 | Prairie Extremely Rich Fen |
| | Upland Prairie | UPs13 | Southern Dry Prairie |
| | | UPs14 | Southern Dry Savanna |
| | | UPs23 | Southern Mesic Prairie |
| | Wet Meadow/Carr | WMn82 | Northern Wet Meadow/Carr |
| | | WMs83 | Southern Seepage Meadow/Carr |
| Minnesota River Prairie | Floodplain Forest | FFs59 | Southern Terrace Forest |
| | | FFs68 | Southern Dry-Mesic Oak Forest |
| | Mesic Hardwood Forest | MHs37 | Southern Mesic Oak-Basswood Forest |
| | | MHs38 | Southern Mesic Maple-Basswood Forest |
| | | MHs39 | Prairie Bulrush-Arrowhead Marsh |

| ECS Subsection | NPC Systems | NPC Class Codes | NPC Classes |
|-----------------------|--------------------|------------------------|-------------------------|
| | Marsh | MRp93 | Southern Dry Prairie |
| | Upland Prairie | UPs13 | Southern Mesic Prairie |
| | | UPs23 | Southern Terrace Forest |

Appendix F

FY2015-2016 Annual Work Plan



The following table provides an example of the template that the Southeast Landscape Committee will utilize to create Annual Work Plans from the 10-Year Committee Work Plan. Annual Work Plans will prioritize objectives and action items from the 10-Year Committee Work Plan for a given fiscal year and will be used to identify leadership, partners, resource and staffing needs, and potential barriers to implementing action items and achieving objectives.

[In development]

Ecological Goal:

Total forest land will be increased and fragmentation of forest land will be decreased. Forest health and quality will be protected and increased in addition to forest quantity

| Objectives | Lead / Partners | Resources Available / Resources Needed | Potential Barriers | Estimated Cost | Staffing Needs |
|--|-----------------|--|--------------------|----------------|----------------|
| Objective 1: Protect and manage 10,000 acres of critical habitat containing native plant communities. [G1-S1; G1-S3; G1-S7] | | | | | |
| Objective 2: Establish a working forest easement program tailored to Southeast Minnesota. [G1-S7] | | | | | |
| Objective 3: Establish a Forest Bank program. [G1-S7] | | | | | |

Appendix G

2003 – 2013 Accomplishments



2003 Goal 1: Increase Forest Land. Increase forest land that is high quality, biologically diverse (e.g. appropriate species on appropriate sites) and is in contiguous areas (e.g., large patches).

Table 1: 2003 Southeast Landscape Plan targets and strategies for Goal 1; accomplishments to date (Jan. 1 2014)

| Targets | Strategies/Actions | Accomplishments by Jan 1, 2014 |
|--|---|--|
| <p>Target 1: Increase Forestland Increase forest land by 3% of entire land area over the next 5-10 years (approximately 77,000 acres)</p> | <p>Strategy 1: On-the-Ground Forest Management:</p> <ul style="list-style-type: none"> • Establish appropriate species on appropriate sites (see goal) • Use prescribed fire to support regeneration of oak. • Prepare and implement Stewardship Plans. • Encourage reforestation next to existing forested areas. • Remove exotic/invasive species (e.g. buckthorn, garlic mustard, gypsy moth). • Reduce cattle in forests. • Increase seedling production and have landowners promote regeneration on their forests. <p>Strategy 2: Research / Information:</p> <ul style="list-style-type: none"> • Identify areas of exotic/invasive species. • Research methods for exotic/invasive species removal/control/prevention. • Research how private lands are being managed. • Monitor and report on indicators every year. (e.g. number of stewardship plans prepared, acres enrolled in plans, implementation activities conducted, timber harvests, buckthorn removal, etc). | <ul style="list-style-type: none"> • Worth of the Woods: The Value of Ecosystem Services. Katie Hawkins, University of Minnesota. • Blufflands on the Edge Conference. Minnesota Land Trust and other partners. April 22, 2005. • Conservation Priority Area Planning. TNC. Ephraimson process • Threats to the Forest Resources in the Midwest Driftless Area, Oak Forest Management studies. Trish Knoot, University of Iowa. • Landscape Planning & Land Use Policy Study. Mary Williams. U of MN • A Guide for Managing Forest Interior Bird Habitat. Driftless Area Initiative. |

| | | |
|--|---|--|
| <p>Target 2: Right Trees/Forests Establish appropriate species on appropriate sites:</p> <ol style="list-style-type: none"> 1. in mesic sites promote a mix of maple, cottonwood, basswood, oak, and other native species. 2. in dry (oak savanna) and dry-mesic (hardwood) sites promote regeneration and management of oak, walnut, shagbark hickory, and other native species. 3. In prairie and wetland areas promote appropriate native vegetation. | <p>Strategy 3: Economic/Policy:</p> <ul style="list-style-type: none"> • Provide tax law information to landowners • Examine pros/cons of various tax laws (e.g. mill tax, gas tax, etc.) • Research long-term economic benefits of contiguous forest land. • Develop/support laws and mechanisms to increase forest land. • Research developing a program where landowners enroll their forest land into and receive yearly payments based on the revenue from the management of all the forest land in the program. • Promote forest businesses that support sustainable management of forests. • Establish non-traditional forest product markets. <p>Strategy 4: Outreach and Technical Assistance:</p> <ul style="list-style-type: none"> • Have loggers recommend that landowners have a stewardship plan prepared and implemented for their land. • Provide unique outreach activities (field days, workshops) to various groups including: private woodlot owners, farmland owners near forested areas, marginal cropland owners, seasonal residents, elected officials and stakeholder groups. • Create a forest resources contact list for each county. <p>Strategy 5: Education:</p> <ul style="list-style-type: none"> • Promote long-term benefits of forest management. • Provide silvicultural examples for management of mesic, oak savanna and hardwood sites. • Provide workshops and field days (for example woodland advisor classes) for loggers and private landowners on stewardship planning and landscape goals. • Show successful forest management (use passive demonstration areas and active field days). | <ul style="list-style-type: none"> • Forest Bank Project: An Economic Collaboration for Improving the Management of the Private Woodlands in Southeastern Minnesota. Wabasha SWCD, University of Minnesota, and consulting foresters from the area. • Improved Marketing and Utilization Workshop. MLEP. June 2, 2005. • My Healthy Woods: Property Tax Workshops for Woodland Owners. University of Minnesota Extension. Spring, 2010. • Forest Habitat Workshop – March 2003. • Safety Harvest Workshop – March 2003. • Site Level Guidelines Training – Spring 2005. • Adult Education Directory: A Directory of Providers of Adult Natural Resources Education Programs Active in Southeast Minnesota. University of Minnesota Extension. • My Healthy Woods: A Handbook for Family Woodland Owners Managing Woods in Southeast Minnesota. Aldo Leopold Foundation. 2010. • Southeast Forestry Field Day – June 2003. • Woodland Owner Workshops – 2007 and 2008. • Annual Wabasha Forestry Day: A Workshop for Private Woodland Owners. MN DNR Forestry and Wabasha County Forestry Committee. Held annually in February. • My Healthy Woods: A Field Day at the Greenheck Family Forest. September 2010. |
|--|---|--|

2003 Goal 2: Decrease Fragmentation from Development. Support development patterns that sustain forest resources (decrease fragmentation).

Table 1: 2003 Southeast Landscape Plan targets and strategies for Goal 2; accomplishments to date (Jan. 1 2014)

| Targets | Strategies/Actions | Accomplishments to Date (Jan 1, 2014) |
|--|--|--|
| <p>Target 1: Coordination Interagency and public coordination and cooperation is critical to better forest resources planning in the region.</p> | <p>Strategy 1: On-the-Ground Forest Management</p> <ul style="list-style-type: none"> • Implement development patterns that sustain forest resources. • Activate Forest Legacy areas in the region. <p>Strategy 2: Research / Information:</p> <ul style="list-style-type: none"> • Define and promote development patterns that maintain and enhance forest resources (use success stories). • Research current and future infrastructure costs in compact/clustered development versus costs from scattered housing. • Monitor and report on indicators every year. Indicators could include: <ul style="list-style-type: none"> ✓ zoning ✓ land use patterns ✓ variances issued ✓ population • Examine county and city plans looking for places they can be enhanced with regard to forest resource conservation. | <ul style="list-style-type: none"> • Southeast Minnesota Forest Legacy Program: Purchase of 16 Conservation Easements in Wabasha County. MN Department of Natural Resources, Division of Forestry |

| | | |
|---|---|--|
| <p>Target 2: Management Sustainable management needs long-term commitments from:</p> <ol style="list-style-type: none"> 1. Political structures. 2. Funding sources. 3. Planning groups | <p>Strategy 3: Economic/Policy:</p> <ul style="list-style-type: none"> • Develop consistent policies for the region. • Establish continuity between plans. • Develop/support laws and mechanisms to increase forest land. • Develop methods to support long-term commitments from: <ul style="list-style-type: none"> ✓ political structures ✓ funding sources ✓ planning groups <p>Strategy 4: Outreach and Technical Assistance:</p> <ul style="list-style-type: none"> • Provide developers, elected officials, administrators and planners access to forest resources information (e.g. GIS) possibly via an Internet data warehouse. • Utilize private/public partnerships to assist in implementation of these strategies. One on one relationship building is important. • Develop issue papers that groups can use during discussions relating to sustaining forest resources. • Meet with groups (e.g., non-profits, civic leaders, and agencies) in the region to see how they can promote sustainable development. • Create a forest resources contact list for each county. • Establish a regional calendar of public meetings that landowners can attend. <p>Strategy 5: Education:</p> <ul style="list-style-type: none"> • Conduct regional topic meetings, forums or workshops. Example topics include how to: manage your forest, use forest tax laws, sell development rights and run in an election. <p>Convene a group of civic leaders, planners, citizens, etc., to begin discussions on sustaining forest resources while managing sprawl.</p> | <ul style="list-style-type: none"> • Whitewater Landscape Stewardship Project: Development and Coordination of a Landscape Stewardship Plan to Guide Increased Private Forest Management in the Whitewater Watershed. US Forest Service grant. • Root River Landscape Stewardship Project: Development and Coordination of a Landscape Stewardship Plan to Guide Increased Private Forest Management in the Root Watershed. US Forest Service / US EPA grant. • Hiawatha Sustainable Woods Cooperative • Oak Savanna Landscape Project. MN DNR. • Lower Mississippi River Habitat Restoration Partnership. • Whitewater Watershed Partnership. • Lower Zumbro Partnership. • Vermillion River. • Upper Mississippi Watershed Partnership. |
|---|---|--|

Appendix H Monitoring Questions Table



The following table provides monitoring questions and potential data sources for the Southeast Committee to utilize during development, implementation, coordination, and monitoring of the 10-Year Committee Work Plan via Annual Work Plans.

Ecological Goal:

Total forest land will be increased and fragmentation of forest land will be decreased. Forest health and quality will be protected and increased in addition to forest quantity

| Objectives | Monitoring Questions | Potential Data Source |
|--|--|--|
| Objective 1: Protect and manage 5,000 acres of critical habitat containing native plant communities. [G1-S1; G1-S3; G1-S6] | <ul style="list-style-type: none"> • How many acres have been protected? • How many acres contain NPCs? | <ul style="list-style-type: none"> • DNR Wildlife • DNR Eco Resources • TNC |
| Objective 2: Establish a working forest easement program tailored to Southeast Minnesota. [G1-S6] | <ul style="list-style-type: none"> • Is the program established? | <ul style="list-style-type: none"> • SE Committee |
| Objective 3: Establish a Forest Bank program. [G1-S6] | <ul style="list-style-type: none"> • Is the bank established? | <ul style="list-style-type: none"> • SE Committee |
| Objective 4: Direct Natural Resource Conservation Service Environmental Quality Incentive Program financial assistance and State conservation funds, including Clean Water Fund money, toward regional priority areas. [G1-S1; G1-S6] | <ul style="list-style-type: none"> • How much EQIP money is spent in priority areas as identified by the Committee? • How much LSOHC money is spent in priority areas as identified by the Committee? • How much CWF money is spent in priority areas as identified by the Committee? | <ul style="list-style-type: none"> • NRCS • LSOHC staff • MPCA, BWSR staff |
| Objective 5: Perform prescriptive burning on eight sites of 200 acres or more. [G1-S2; G1-S3] | <ul style="list-style-type: none"> • How many prescribed burns have occurred on sites with 200 acres or more? | <ul style="list-style-type: none"> • DNR Wildlife • DNR Eco Resources • TNC |

Social Goal:

Southeast Minnesota’s private forest landowners will receive consistent technical and financial resources to implement management strategies. Natural resources planning entities will coordinate to ensure consistent delivery of education and services to these landowners. Healthy forests (public and private) will positively impact public health and recreation in the region.

| Objectives | Monitoring Questions | Potential Data Source |
|--|--|---|
| <p>Objective 1: Work with the Minnesota Forest Resources Council to establish monitoring protocols and supporting funding for the Regional Landscape Committees; include outcome-based planning and program administration in protocols and budget requests. [G2-S1; G2-S3]</p> | <ul style="list-style-type: none"> • What monitoring protocols have been developed for the Landscape Committees? • How much funding has been established for the Landscape Committees? • How have planning and administration been incorporated into protocols and budgets? | <ul style="list-style-type: none"> • MFRC |
| <p>Objective 2: Support efforts to improve the 2c Managed Forest tax law, the Sustainable Forest Incentives Act, and other tax and incentives programs by broadening enrollment and requiring performance standards (e.g., management activities). [G2-S8]</p> | <ul style="list-style-type: none"> • What changes have been implemented to forest tax and incentive programs? • How are performance standards addressed in the SFIA and 2c programs? | <ul style="list-style-type: none"> • MFRC • DNR • Local officials |
| <p>Objective 3: Work with MN DNR Cooperative Forest Management program foresters in the region to encourage the integration of the goals and strategies in this Plan (e.g. habitat quality improvement) into forest stewardship plans for private landowners.</p> | <ul style="list-style-type: none"> • What communication structures have been established with regional foresters? • How many new forest stewardship plans incorporate the goals and strategies of the Landscape Plan? | <ul style="list-style-type: none"> • DNR CFM Program |
| <p>Objective 4: Work closely with regional partners to engage landowners. [G2-S4, G2-5, G2-S7, G2-S8, G2-S11]</p> | <ul style="list-style-type: none"> • What communication structures have been established for engaging landowners? | <ul style="list-style-type: none"> • DNR CFM Program • TNC • UMN Extension |
| <p>Objective 5: Complete the Root River, Whitewater, Cannon and Zumbro landscape stewardship plans and share with participants and relevant stakeholders. [G2-S1; G2-S3; G2-S4]</p> | <ul style="list-style-type: none"> • Are the landscape stewardship plans complete? • Have the plans been distributed to stakeholders? | <ul style="list-style-type: none"> • SE Committee • TNC |

| Objectives | Monitoring Questions | Potential Data Source |
|--|---|---|
| <p>Objective 6: Complete Healthy Watershed Plans/Landscape Stewardship Plans and incorporate into complimentary watershed-based plans, including but not limited to the Minnesota Pollution Control Agency’s Watershed Resource and Protection Strategies (WRAPS) and the Minnesota Board of Soil and Water Resources One Watershed, One Plan (1W1P). [G2-S1; G2-S9; G2-S14].</p> | <ul style="list-style-type: none"> • Have the landscape stewardship plans been incorporated into local water plans? Which plans and in what way? | <ul style="list-style-type: none"> • MPCA • BWSR |
| <p>Objective 7: Develop land-appropriate forest-based recreation on publicly administered lands, i.e. hunting, hiking. [G2-S4; G2-S12; G2-S13]</p> | <ul style="list-style-type: none"> • What new or enhanced recreation opportunities are present on public land? | <ul style="list-style-type: none"> • DNR Div. of Forestry • USDA Forest Service |
| <p>Objective 8: Support coordination of partnering agencies for implementation of the goals described in this Plan. Identify specific actions that each agency could bring to the table. [G2-S1, G2-S2, G2-S3, G2-S4, G2-S7]</p> | <ul style="list-style-type: none"> • Which partnering agencies have been engaged in goal implementation? • What action plans have been developed by partners for goal implementation? | <ul style="list-style-type: none"> • DNR • TNC • UMN Extension • SE Committee • Other local partners |
| <p>Objective 9: Survey landowners on demographics, interests, and management activities at relevant events. [G2-S7]</p> | <ul style="list-style-type: none"> • Has a survey been developed? • Where has the survey been implemented/ • What do the survey finding tell us? | <ul style="list-style-type: none"> • SE Committee • University of Minnesota |

Economic Goal:

Forested landscapes in Southeast Minnesota will continue to support a viable forest products industry, support the recreation and tourism industry, and provide numerous ecosystem services. Research and project implementation will further our understanding of the full array and value of services provided by these forests.

| Objectives | Monitoring Questions | Potential Data Source |
|--|---|---|
| <p>Objective 1: Support emerging forest products markets for Southeast Minnesota. [G3-S1; G3-S2; G3-S3; G3-S4; G3-S5]</p> | <ul style="list-style-type: none"> • What forest product markets currently exist? • Where are opportunities for new markets? • What actions have been taken to support development of new markets? | <ul style="list-style-type: none"> • MN DEED • SE Committee • Local forest product industry partners |

| Objectives | Monitoring Questions | Potential Data Source |
|--|--|---|
| <p>Objective 2: Perform an economic analysis for the Forest Bank program. [G3-S2]</p> | <ul style="list-style-type: none"> • Has an economic analysis been performed for the Forest Bank? • What do the results of the analysis tell us? | <ul style="list-style-type: none"> • SE Committee |
| <p>Objective 3: Encourage a state-wide "check-off" funding from industry to support forest protection and management. [G3-S5]</p> | <ul style="list-style-type: none"> • What efforts have been made to work with industry to develop this funding source? | <ul style="list-style-type: none"> • SE Committee • MFRC • Local industry partners |
| <p>Objective 4: Engage in other Southeast Minnesota local planning activities. [G3-S5]</p> | <ul style="list-style-type: none"> • What other local planning efforts has the SE Committee engaged in? | <ul style="list-style-type: none"> • SE Committee |