

## **ACTION TEAM: INFORMATION MANAGEMENT**

### **Develop and share information, expertise & resources**

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**Reinvigorate the Interagency Information Cooperative (IIC), expanding its capabilities as a decision support center for forest management planning and forest policy analysis.**

#### *Background*

- IIC already recognized by state with potential funding mechanism in place.
- With GEIS and other major planning efforts by individual large ownerships, Minnesota has already developed a wealth of information and modeling expertise.
- Environmental issues are complex and potentially quite limiting to total harvest levels from public lands without careful landscape planning.
- Opportunity exists to be more proactive in coordinating forest plans across major ownerships, sharing planning resources, information, models, and expertise. Potential gains are large. Together, MN counties and the MN DNR manage more forest lands than any state other than Alaska.
- Opportunities to better utilize faculty and staff of the University of Minnesota. Minnesota has the #1 ranked forestry program in the nation.
- MN has in place the MFRC and the MFRP. Both can likely be extremely helpful in prioritizing work, in coordinating active involvement by its members and in helping to implement timely results.

#### *Key Components & Potential Outputs*

- Integrated stand-level forest inventory information across ownerships.
- Growth projection estimates of site-specific silvicultural treatment alternatives, including new treatment alternatives.
- Shared technical modeling support to help improve forest plans for specific ownerships.
- Statewide analyses of potential opportunities to increase statewide harvest volumes of specific species and product classes.
- Comparative analyses of investment opportunities to increase timber production.
- Identification of potential opportunities to increase timber production through increased collaboration across ownerships.
- Estimates of impacts of alternative forest policies on potential timber harvest levels, e.g. impacts of policies involving extended rotation forestry, and policies related to non-declining even-flow of harvest volumes.
- Improved understanding of how timber production can be integrated with biofuels production.
- Identified ways of better integrating timber production with environmental objectives

and wildlife management.

- Improved understanding impacts of alternative desirable future conditions on timber production potentials and the time necessary to achieve those conditions
- Identification of ways of improving forest plans to reduce risks of climate change on future timber supplies.
- Identification of specific opportunities to improve stand-level inventories by utilizing new and rapidly changing remote sensing technologies.

**Improve and create policies and programs that promote harvesting, improve management, and maintain family forestlands.**

- *Maintain and enhance the privately-held working forest land base in MN, esp. through policymakers, conservation easements*
- *Examine policies to understand those that complement or enhance productivity & those that inhibit or limit productivity, both within and between organizations (promote positive, find solutions, etc.)*

**Identify and assess policy tools that are most effective in promoting harvesting, improving management and maintaining working family forests and make recommendations to policy-makers**

*Background*

- Private forestland ownership objectives are rarely related to timber harvesting or active forest management.
- Disparate land ownership objectives, volatile land prices, globalization of markets, may be contributing to forestland parcelization.
- Owners of large acreages once managed for timber and recreation are increasingly pressured to sell forestland to individuals and investment groups, often breaking large blocks of land into smaller parcels.
- New forest landowners often have little knowledge about the potential opportunities and responsibilities of sustainable forestland management.
- The loss of working forests through parcelization and subsequent development has been linked to adverse impacts on timber availability, wildlife, water quality, land cover, and hunting and other recreational activities.

*Key Components & Potential Outputs*

- Identification and establishment of goals and objectives related to forest management and maintenance of the family forestland base.
- Identification of all possible policy responses and feasible combinations of responses which may include fiscal policy (taxation, incentives), easements, land use planning, and information/technical assistance.
- Assessment of policy responses (including history/current use in Minnesota, advantages/disadvantages, best/worst case scenarios, estimate predicted outcomes/impacts, cost/benefit analysis, obstacles to implementation)
- Suggest a recommended course of action to policymakers
- Design an implementation/monitoring/evaluation plan

***Develop a plan to acquire adequate public and private funding sources, over the long term, to accomplish investments in things like forest assessment/inventory/modeling, working forests, research, etc.***

**ACTION TEAM: SILVICULTURE**

**Increase the use of long-term stand-level management plans - prescriptions - that consider the full spectrum of silvicultural practices and technologies and apply the most appropriate for increased productivity.**

- *Increase productivity through comprehensive use of silvicultural systems*

*Background*

A silvicultural system is an approach to harvesting, regenerating and growing a forest. There are various systems. Selecting a system is based on management goals, the current condition on the site and the potential of the site. Some systems are more efficient and may produce more fiber than others. A silvicultural system is the foundation of a prescription; a planned series of treatments intended to meet the management goals. It is important that a prescription is comprehensive and well documented.

*Key Components & Potential Outputs*

Offer training designed for different landowners and different levels of expertise -

System selection

Prescription writing

Encourage the use of systems not typically used because of agency policy or culture

Develop recommendations for system use and modification that consider forest type and stand condition

**ACTION TEAM: SILVICULTURE**

**Strategy: Increase research and create demonstration areas emphasizing new silvicultural systems designed to increase timber productivity and address regeneration issues in certain forest types.**

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*Background*

Silvicultural systems are used in various ways. Often, established systems are modified to accommodate different species and site conditions. Some systems are more appropriate on some sites than on others, based on species composition and age, and current stand structure, as well as species autecological characteristics.

*Key Components & Potential Outputs*

Establish sites applying known silvicultural systems on varying forest habitat, condition and composition and evaluate their changes and condition over time.

Establish sites using ecology-based management recommendations and measure productivity over time.

Explore new management systems.

## **Enable loggers to be more self-directed when conducting first-entry thinnings.**

- *Use innovative sales structures to increase efficiency*

### *Background*

Thinning stands, starting at a relatively young age, can increase timber productivity by capturing mortality and by optimizing the composition and spacing of the residual stand. However, such stands are often inefficient for a professional forester to set up, due to the large number and small size of the trees to be marked. Foresters, because of higher priority workload demands, may pass up thinning opportunities.

Loggers, with the proper training and equipment, should be able to thin these stands according to the forester's prescription without having trees individually marked. This will free up foresters to spend their time managing more complex stands, and increase the number of acres treated annually. In the longer term, this will also enable stands to be thinned more often, resulting in higher quality products and improved stand health.

### *Key Components & Potential Outputs*

- Build on existing logger training programs (MLEP, Vermilion Community College)

- Provide incentives such as loan guarantees for loggers to purchase cut to length harvesting equipment

- Public agencies may need to alter timber sale policies to allow logger-select thinning, and to be able to reward loggers for good performance.

**Work cooperatively with wildlife managers, stakeholder groups, and others to reduce the deer population in the forested part of the state.**

- *Address forestry/wildlife interactions*

*Background*

Deer browsing has become a limiting factor in successful regeneration of both conifer and hardwood sites. A central silvicultural principle for optimizing timber productivity is to match the tree species with the site. This has become impossible in some parts of the state due to heavy browse damage on desired species, especially white, red, and jack pines and red oak. The cost of protecting seedlings from browsing has escalated; over \$300,000 was spent in 2006 on state forestlands alone.

DNR-Wildlife is re-evaluating deer population goals across the state, and has held forums over the past 2 years to gather stakeholder input. Forest landowners, both public and private, need to make their voices heard as this process continues.

*Key Components & Potential Outputs*

Educate the public and legislators about the problems associated with high deer numbers (focus on reaching the urban population)

Promote funding for venison processing costs so that willing hunters could donate surplus deer to local food shelves

Introduce legislation to ban recreational deer feeding in forested parts of the state

## **Use ecological classification systems to better match site, species and silvicultural prescriptions**

### *Background*

With the many demands on forest land, need for increased productivity, the need to reduce costs, and environmental issues, using an ecological classification system combines many environmental attributes so that silvicultural prescriptions can better reflect species requirements and capitalize on natural conditions to accomplish desired forest conditions.

Using an ecological system, also, helps validates forestry decisions to maintain the social license to operate. The implementation of an ecological classification system addresses timber values by matching trees to sites and encouraging the growth of the most productive species or combination of species.

There are three systems in use in Minnesota: Native Plant Communities of Minnesota, Kotar's system, and Don Prettyman's biophysical. The native plant communities and Kotar's system are very compatible systems and work well with silvicultural systems. Kotar's system is used throughout Michigan and Wisconsin as well as parts of Minnesota. The native plant communities is a statewide system within Minnesota. Don Prettyman's biophysical is quite different from the other systems and is not used extensively in Minnesota and not outside of Minnesota. The discussion that follows will center on the two main systems.

### *Key Components & Potential Outputs*

- Education and training for practitioners through continuing education (SFEC), the university system, and mentoring
- Silvicultural interpretations/ suggestions for plant communities
- Growth and yield metrics for mixed species stands
- Demonstration sites ("seeing is believing") both successes and failures with reasons
- System to inventory and/or map ecological units
- Plant ID tools specific for Minnesota
- Develop monitoring system to measure implementation success
- Increase funding
- Provide time for individuals to learn and understand the use of an ecological

## **ACTION TEAM: SILVICULTURE**

**Research on implications of forest pests (invasive and endemic species/diseases and deer) on forest productivity, and how to control**

## **damage and spread.**

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### *Background*

With more invasive species, concerns over climate change and minimizing endemic insect and disease problems, an integrated approach between forestry practices and pest control needs developing. Problems with regeneration of trees and other vegetation have come to the forefront with increased deer populations and the earthworm destruction. The spread of the gypsy moth and the emerald ash borer has raised the issue of how to protect our forests from invasives so that other species are not put in jeopardy like the American chestnut or American elm. The increased population of Asian lady bugs displacing the native lady bug is a concern as well as a human nuisance. The spread of plant invasives threatens both terrestrial and aquatic ecosystems upsetting the natural control systems.

### *Key Components & Potential Outputs*

- Collaboration and coordinated efforts between ownerships and interest groups
- Be proactive instead of reactive
- Best use of pesticides and silvicultural practices
- Application of research findings to the field (often there is a disconnect)
- Bulletins (or something, Internet?) that compiles known information in one location