



Manitou Collaborative Patch Project: Relationship to DNR's Sustainable Forest Resource Management Plan (SFRMP)

Below are examples of General Directions Statements (GDS's) from DNR's North Shore Sustainable Forest Resource Management (SFRMP) Plan being incorporated within the Patch Project silviculture prescription. By implementing strategies beyond the stand level, the collaborative is making a focused effort to address landscape issues identified by DNR and the Minnesota Forest Resource Council's (MFRC) Landscape Program.

DNR North Shore SFRMP Plan

<http://www.dnr.state.mn.us/forestry/subsection/northshorearea/plan.html>

MFRC NE Landscape Committee Report (2003):

http://www.frc.state.mn.us/initiatives_llm_committees_northeast.html

Forest composition, biodiversity, and spatial distribution- Old-forest across the landscape GDS 1-A:

- Use silvicultural treatments that retain old forest components in some stands.
- Follow the MFRC's *Voluntary Site-Level Forest Management Guidelines* to retain components of old forest in even-aged cover types.
- Provide large-diameter timber products (long-term).
- Ensure an adequate representation of older growth stages in even-aged cover types/native plant communities (NPC).

Move cover type composition closer to the range of cover type composition that historically occurred. GDS 1-B:

- Increase long lived conifers both as a cover type and a within stand component
- Increase mixed forest conditions in some stands in all cover types.

Patch management- Increase the average patch size on state lands over time, with consideration of natural spatial patterns. GDS 1-C:

- Group harvest activities to create, maintain, or enhance large conifer patches and emulate natural disturbance regime.
- When possible, cooperate with other landowners in patch management to maintain existing large patches and increase the average patch size across forestland of multiple ownerships.

Habitat fragmentation is managed to minimize the impacts on species that are negatively affected by fragmentation. GDS 1-D:

- Minimize the fragmenting of habitat with roads and forest access trails.
- Leave live trees and snags within most even-aged managed timber harvests to mitigate the effects of habitat fragmentation.

Management of state lands within MCBS sites of statewide biodiversity. GDS 1-E:

- Strive to emulate the within-stand composition, structure, and function of older vegetative growth stages (VGSs) when managing some stands.
- Apply variable retention techniques during harvest.
- Maintain or increase within-stand species, age, and structural composition that is moving toward the mix and proportion of species found in the native plant community appropriate to that site.

Rare plants and animals and their habitats are protected, maintained, or enhanced in these subsections. GDS 1-G:

- Identify and implement measures that protect rare features. Examples- protection of existing goshawk stick nest and use of less intensive site preparation measures that reduce the likelihood of the introduction or spread of exotic species.

Age class distribution across the landscape. GDS-2:

- Young, early successional forest is distributed across the landscape over time.

Within stand species composition and structure. GDS-3:

- Reserve seed trees in harvest and site preparation areas where possible.
- Use harvest systems or methods that protect advanced regeneration. Retain conditions that favor regeneration and understory initiation.
- Increase and/or maintain by reserving from harvest, target species including white pine, white spruce, upland cedar as a component within appropriate cover types.
- Manage planted and seeded stands to represent the array of plant diversity including: accepting lower stocking levels of planted species in younger plantations if other desirable species are present; planting or seeding mixed species appropriate to the site; and using intermediate harvests to enhance age, species, and structural diversity.

Wildlife Habitat. GDS-4:

- Provide both young and old forest for game and non-game species.
- Manage to retain the integrity of riparian areas and provide protection for seasonal and permanent wetlands.
- Provide for the needs of species that depend on perches, cavity trees, bark foraging sites, and downed-woody debris.
- Provide for the needs of species associated with conifer stands and mixed conifer/hardwood stands.

Riparian/Aquatic Areas. GDS-5:

- Apply the MFRC *Site-Level Forest Management Guidelines* relating to riparian areas.
- Maintain or increase old forest in riparian areas.

Timber Productivity. GDS-6:

- Thin or selectively harvest in some aspen, birch stands to capture mortality and/or increase growth rates. (long-term)

- Manage some stands for large diameter, high-quality saw-timber products by retaining adequate stocking and basal area.

Forest Pests, Pathogens, and Exotic Species. GDS-7:

- Consider the potential for wildlife impacts to planted or natural regenerating trees before damage occurs. Coordinate on preventative strategies before planting begins.
- On sites where damage from wildlife species is anticipated, use mitigation techniques to reduce damage when planting susceptible tree species.

Global climate change effects on forestlands. GDS-7C:

- Maintain connectivity that permits the migration of plants and animals as climate changes the landscape.
- Evaluate site conditions with respect to climate change when selecting tree species for regeneration.
- Maintain or increase conifers adjacent to coldwater streams to moderate the microclimate that provides a cooling effect in warm weather and retains a snowpack longer that slows discharge in the spring.

Access to State Land GDS-10:

- Forest access routes are well planned and there is a high level of collaboration with federal, private, and local units of government to share access and minimize new construction.