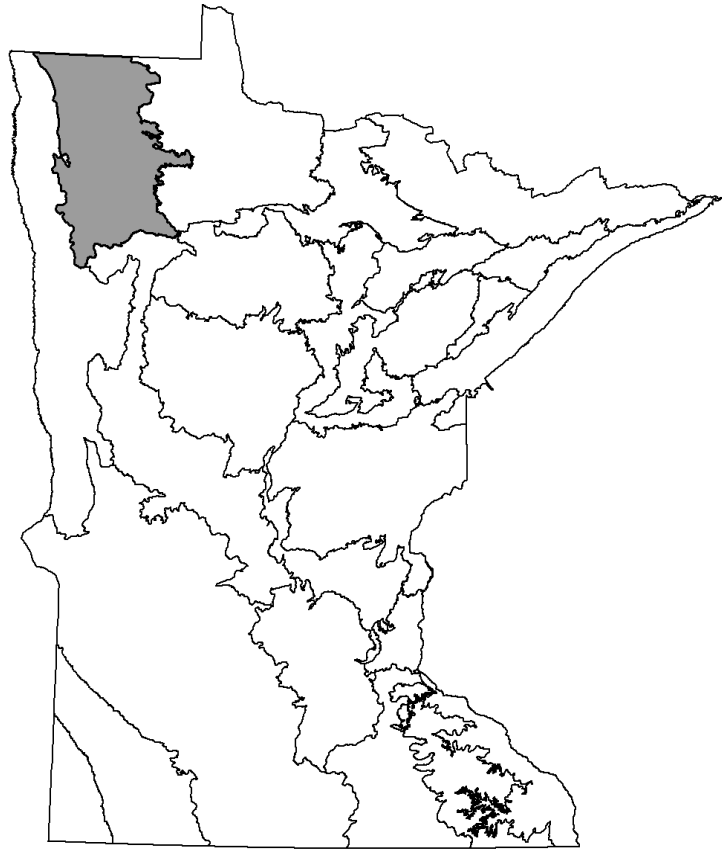


Minnesota Department of Natural Resources



Subsection Forest Resources Management Planning

Aspen Parklands SFRMP

2017 Mid-Plan Monitoring Report

Minnesota Department of Natural Resources
Division of Forestry Planning Document
Printed 06/2018

This report and additional information about the DNR Subsection Forest Resources Management Planning process can be found on the internet at [the Forest Planning Page](#).

This information is available in alternate formats upon request.

Contents

Contents

| | |
|---|----|
| Summary | 4 |
| Planning Area Description | 4 |
| Status of the Aspen Parklands SFRMP | 8 |
| The Monitoring Process | 9 |
| Information Sources, Data, and Data Analysis | 9 |
| General Trends and Observations: | 10 |
| General (Subsection-Wide) Recommended Actions: | 11 |
| Current and Desired Future Forest Composition | 11 |

Summary

The Aspen Parklands SFRMP is in effect from FY 2012-2021. This monitoring report looks at data through FY2016. This monitoring reveals whether the management actions are being implemented as written in the plan. The effectiveness of specific management actions intended to accomplish an objective may require a longer timeframe to measure results.

Many of the goals of the Aspen Parklands SFRMP focus on enhancing wildlife habitat through managing timberland, particularly Aspen/Balm of Gilead cover types. Goals include managing aspen on short rotations to influence the age class distribution, cover type composition, and stand structure within the Section.

The planning area description below from the original SFRMP shows the information and conditions used in the planning process. The current conditions are described from a dataset pulled on April 7th, 2017.

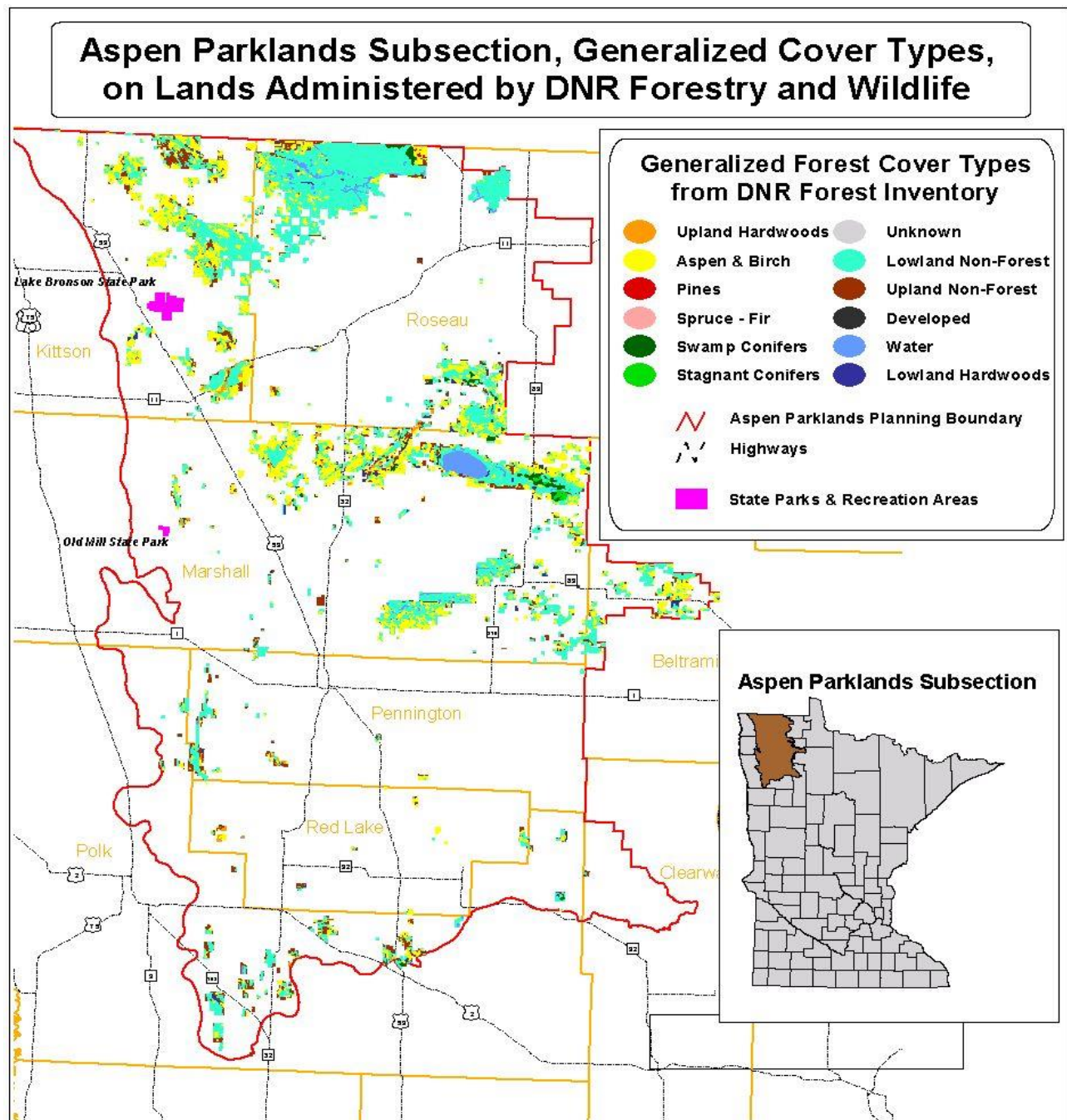
Planning Area Description

Agriculture and recreation are the major uses of land in this Subsection. Public agencies (state and federal) administer 16 percent of the land in the Subsection, with the state portion being 12 percent or 355,000 acres. Approximately 95,000 acres of DNR Forestry and Wildlife land is forest and woodlands that are considered for the resource management objectives in this plan. Other cover types totaling 250,000 acres are non-forested and may be considered for biomass harvesting to meet resource management objectives in this planning effort. Other state lands (totaling approximately 9,000 acres) such as state parks and Scientific and Natural Areas (SNAs) are not considered for resource management under this plan. However, these areas do contribute to some of the plan's goals.

As shown on Table 1.1 and Figure 1.1, the federal government owns 2 percent (68,000 acres) of the lands in the Subsection that are managed by the U.S. Fish and Wildlife Service including Agassiz National Wildlife Refuge, Glacial Ridge National Wildlife Refuge and numerous Waterfowl Production Areas (WPAs). Kittson, Marshall, Red Lake, Roseau, Pennington and Polk counties own and manage less than one percent of these lands (24,000 acres). Private lands comprise 83 percent (2.4 million acres), of this The Nature Conservancy (TNC) owns approximately 1 percent (40,000 acres) of the private lands in the Subsection. There is no industrial forest land in the Subsection.

Map 1.1, on the next page, details the cover types that exist on state administered lands in the AP Subsection.

Map 1.1. Aspen Parklands Subsection generalized cover types on lands administered by DNR Divisions of Forestry and Fish and Wildlife.



Note: The maps have been reduced and printed in grayscale in this document. It is recommended that these maps be viewed at a larger scale and in color. The colored maps and this report can be viewed at [the Aspen Parklands Plan Page](#).

Table 1.1. Land ownership in the AP Subsection – total acres¹.

| Ownership | Acres | Percent of total land base |
|---|-----------|----------------------------|
| Private ² | 2,382,000 | 83% |
| Private – Conservancy ³ | 40,000 | 1% |
| State lands included in the plan | 344,000 | 12% |
| State lands - Forestry | 7,000 | <1% |
| State lands - Wildlife | 337,000 | 12% |
| State lands excluded from the plan ⁴ | 9,000 | <1% |
| Federal | 68,000 | 2% |
| County ⁵ | 24,000 | <1% |
| Tribal | 4,000 | <1% |
| Local government ⁶ | <1,000 | <1% |
| Total | 2,873,000 | 100% |

¹ Source: 1976 to 1998 Minnesota DNR GAP Stewardship---“All Ownership Types” data. Includes all lands administered by units of DNR including Forestry, Section of Wildlife, Section of Fisheries, Parks and Trails, and Ecological and Water Resources. This SFRMP only covers Forestry and Section of Wildlife administered lands. All acres in the table have been rounded to the nearest thousand.

² Private – Includes all private land except for Private Conservancy land listed separately.

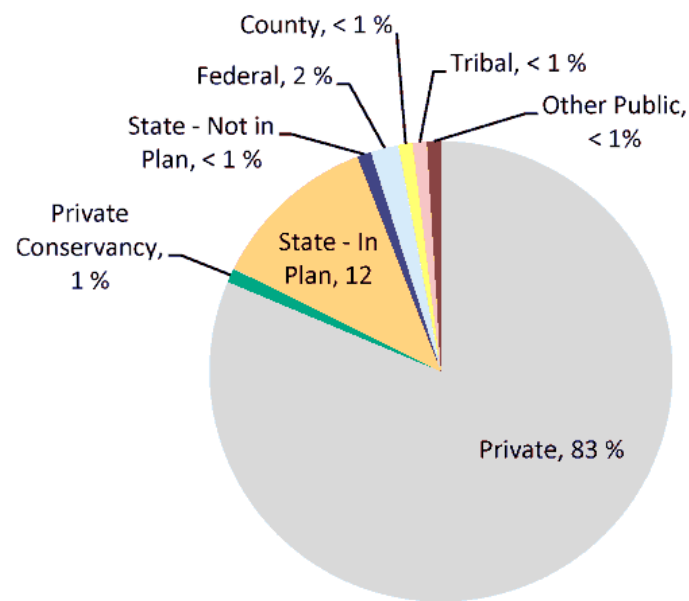
³ Private -- Conservancy Lands: The Nature Conservancy

⁴ State lands excluded from plan – Scientific and Natural Areas, Parks and Trails, Department of Transportation, Section of Fisheries, and Division of Ecological and Water Resources.

⁵ County includes both County Fee and County Administered State Owned lands.

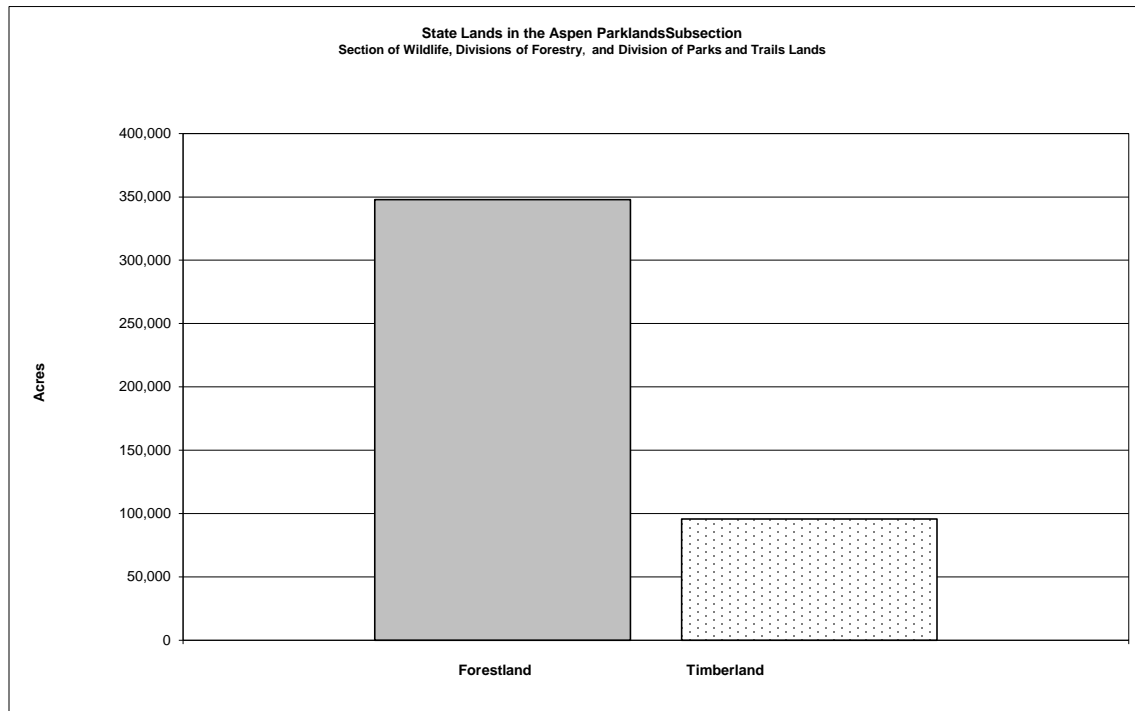
⁶ Local Government– Independent School Districts and City Ownerships.

Chart 1.1. Land ownership percentages in the AP Subsection.



Based on the Gap Analysis Program (GAP) classification completed by the DNR Division of Forestry using satellite imagery of all lands in the AP, 3.3 percent of the land area (non-water) is covered by forest. Based on the DNR forest inventory data of timberland that is considered in this plan, aspen/balm of Gilead cover types comprise 85,160 acres or 89 percent of the timberlands total. Non-forested brushland, wetlands, and grasslands comprise 250,000 acres or 73 percent of the AP's land area under state ownership.

Figure 1.1. State forestlands and timberlands in the AP Subsection.



Forestland consists of all DNR administered lands included in the forest inventory from aspen to stagnant conifers, muskeg, lowland brush, and lakes. *Timberland* includes those cover types that are capable of producing merchantable timber and are available for timber management, meaning they are not withdrawn from management based on land administrator or by reserved status such as old growth. Timberlands represent about 27 percent of the total forestland (all ownerships) in the AP. State lands reserved from harvest such as designated old-growth stands, SNAs and State Parks (1,575 acres) are not included in Timberlands.

Note: Due to updates to the forest inventory and other data sources during the planning process, there may be slight differences in acreages shown between various tables and figures in this document. These differences will not have a significant effect on the recommendations in this plan.

Status of the Aspen Parklands SFRMP

The Aspen Parklands SFRMP recommends vegetation management for the state fiscal years 2012 – 2021. Assembling available monitoring information through FY2016 provides an approximate mid-point review of plan implementation.

The Monitoring Process

Following internal guidance ([internal link to sfrmp monitoring plan](#)) developed for monitoring SFRMP implementation, the Aspen Parklands SFRMP Core Team consisting of the regional forest planner, regional timber forester, regional ecologist, and regional forest wildlife coordinator convened early in 2018 to review accomplishment data for the Aspen Parklands section. They reviewed accomplishment data for the subsection and compared those data with the goals identified in the Aspen Parklands SFRMP. At this point accomplishments towards the implementation strategy can be measured, but long term effectiveness is unable to be determined. The monitoring report will help ensure that progress toward the goals and desired future forest conditions in the Aspen Parklands plan continues; it will be attached as an appendix to the full plan:

“Each subsection team’s Core 4 will analyze and summarize monitoring results following collection of the data.

A written report, summarizing results of the annual efforts, will be prepared mid-term and at the end of the plan’s time frame.”

A Note Regarding Data Limitations

The region Core 4 team reached its conclusions based on a summary of available data; these may or may not be consistent with reality. Data sources (e.g., recording of management objectives) varied significantly in the extent to which management objectives accurately represented work that was actually done. Some reports the team needed are not yet able to be summarized by the desired variable (e.g., cover type). In some cases the team used other data sources that are available but are not ideal for the analysis conducted (e.g. before/after FIM comparisons as an indicator of progress on cover type change goals).

Information Sources, Data, and Data Analysis

A detailed list of information and data sources used in this monitoring review can be found below, along with a list of data comparisons made to determine trends and make summary observations that led to the recommended actions listed in this report. Detailed data used to develop these recommendations will be provided to the forestry and wildlife areas and EWR staff upon request.

Information Sources

1. Final Aspen Parklands SFRMP
2. FY2012 - FY2016 Annual Stand Exam Lists (ASEL) (from public review) for the Aspen Parklands

3. TSM System – reports of timber acres offered and sold FY12-FY16
4. SEL Reports:
 - Planned and Actual Actions by Forestry RAN and SFRMP for FY12 – FY16.
 - Planned and Actual On-Site-Visits by Cover Type and Age Class by Forestry RAN and SFRMP for FY12-FY16

General Trends and Observations:

Within the Aspen Parklands section SFRMP a main focus is on open areas and younger aspen stands. This requires a focused effort on harvesting aspen at a designated age. Within the section aspen stands were given a variety of designations to recommend how particular stands were treated. These designations include keeping a stand as productive aspen timber, converting to another timber type, converting to open cover types, short rotation aspen, and regeneration stands. The distinction of these efforts are not able to be picked up in the available data so is not evaluated in this monitoring report.

Acres planned on annual stand exam lists (ASELs) line up very well with the target in the plan. In the first half of the plan more than 50% of the acres were examined, this was intentional. Early in the plan there was low sell rates, however, that has changed toward the midpoint of the plan. Increased sell rates and active management are achieving the plan goals. Stumpage prices that incorporate a haul distance factor allowed stumpage to be marketable in this section.

Table 1 shows planned ASEL covertime acres during the FY12-16 monitoring period and a half of the first decade treatment level from the plan for the whole section. Aspen/BG includes Aspen, Balm of Gilead, and offsite Aspen. These covertime types were combined in the planning process.

| Covertime | FY12-16 ASEL Acres Bemidji | FY12-16 ASEL Acres Warroad | FY12-16 ASEL Acre Total | ½ first Decade Acre Target From Plan |
|---------------|----------------------------|----------------------------|-------------------------|--------------------------------------|
| Ash | 101 | 1369 | 1470 | 1031 |
| Aspen | 1048 | 17232 | 18280 | 18026 |
| Hybrid Poplar | | 5 | 5 | |
| Oak | 86 | | 86 | 54 |
| White Pine | | 4 | 4 | 2 |
| Norway Pine | | 2 | 2 | 2 |
| Jack Pine | | 43 | 43 | |
| Tamarack | | 57 | 57 | 123 |
| Black Spruce | | | | 20 |
| Total | 1235 | 18712 | 19947 | 19258 |

- The average acres by cover type on ASELs (i.e., FY12-FY16) has been slightly higher (i.e., 690 acres or 3.5% higher) compared to what was included in the final plan.
- During FY12-FY16 19948 acres were visited, resulting in 15,019 acres offered for sale in 258 permits. This is an appraisal rate of 75.3% of the planned acres, but does include APA and informal sale acres.
- Of the offered total 10,407 acres sold and 4,612 acres went unsold for a sale rate of 69.3% of the acres.
- Anticipated biomass markets have not developed, limiting some implementation currently and expected to continue to limit goals for this SFRMP into the future.

Management objectives given in SEL show an effort to meet plan goals of regenerating aspen, converting cover types to include other desired species and increasing open habitats. Data for management objectives is limited due to the change in recording system during this time period. Convert cover type, maintain similar stand and changing stand structure were the most commonly listed objectives as would be expected.

General (Subsection-Wide) Recommended Actions:

- Remind field staff of variety of aspen management.
- Emphasize importance of recording management objectives in SEL. More than one objective per site is okay and is encouraged. Clarify objective definitions within goals of plan.
- Review definitions of appraised, altered, and deferred to ensure your area is reporting accurately, especially with the amount of young aspen on exam lists in this Section.
- Build upon and continue pricing and market development to enable management.
- Review plan issues and desired future conditions with staff.

Current and Desired Future Forest Composition

Table 2 provides an overview of the total balance of acres by cover type at the midpoint of this SFRMP (2017) after conversions, increases, and decreases were accounted for. It should be noted, however, that actual conversions may take years to be recognized in FIM, and the “intent” to convert cover types should be captured by recording management objectives for each stand in SEL (formerly SRM).

Table 2: April 2017 acreage estimates compared to 2010 baseline and ten/fifty-year goals for the region.

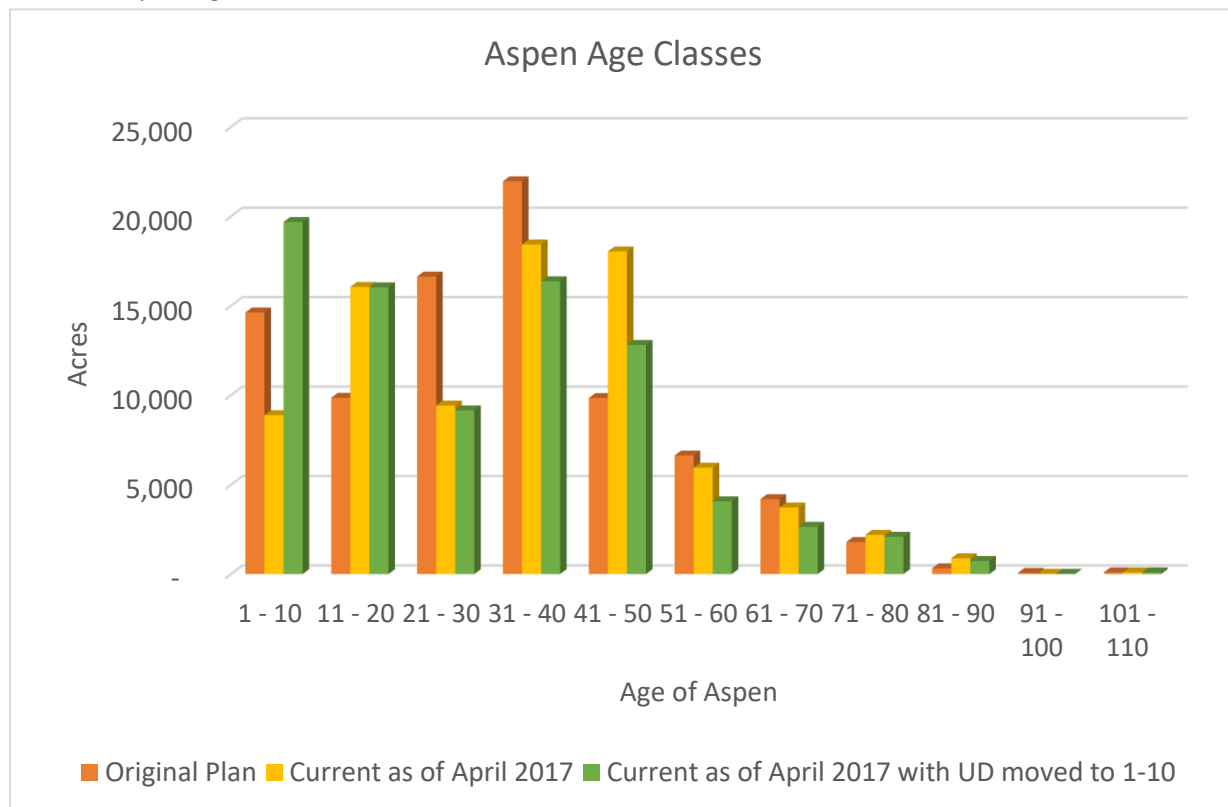
| Cover Type(s) / Group | 2010 Acres | FIM Data 2017 | | | 2021 DFFC | | 2061 DFFC | |
|-----------------------------|------------|---------------|--------------------------|--|------------|---------------------|------------|---------------------|
| | | 2017 Acres | Percent Change 2010-2017 | Percent change needed to reach 2021 goal | DFFC Acres | Percent acre change | DFFC Acres | Percent acre change |
| Grass/Brush | 181,083 | 187,524 | 3.6 | +0.7 | 188,816 | +4.3% | 196,646 | +8.6% |
| A/BG (all categories) | 85,958 | 83,686 | -2.6 | -7.5 | 77,825 | -9.5% | 69,726 | -18.9% |
| Hybrid poplar | 5 | 5 | 0 | -100 | 0 | -100% | 0 | - |
| Ash/Lowland Hardwoods | 3,101 | 3,151 | 1.6 | -1.6 | 3,101 | maintain | 2,801 | -9.7% |
| Tamarack SI ≥40 | 1,996 | 1,953 | -2.2 | +2.2 | 1,996 | maintain | 1,996 | maintain |
| Tamarack SI <40 | 1,758 | 1,767 | 0.5 | -0.5 | 1,758 | maintain | 1,758 | maintain |
| Black Spruce Lowland SI <40 | 1,161 | 1,698 | 0 | -0.0 | 1,161 | maintain | 1,161 | maintain |
| Black Spruce Lowland SI ≥40 | 536 | | | | 536 | maintain | 536 | maintain |
| Oak | 967 | 1,306 | 35.1 | +4.5 | 1,367 | +41.4% | 1,716 | +77.5% |
| Northern Hardwoods | 233 | 177 | -24 | +24 | 233 | maintain | 233 | maintain |
| Cedar | 215 | 182 | -15.3 | +15 | 215 | maintain | 515 | +139.5% |
| Jack Pine | 166 | 165 | -0.6 | +0.6 | 166 | maintain | 166 | maintain |
| White Spruce | 148 | 151 | 2.0 | -2 | 148 | maintain | 148 | maintain |

| | | | | | | | | |
|------------|---------|---------|------|-------|---------|----------|---------|----------|
| Balsam Fir | 98 | 118 | 20.4 | -20.4 | 98 | maintain | 98 | maintain |
| Birch | 94 | 91 | -3.2 | +3.2 | 94 | maintain | 94 | maintain |
| Red Pine | 80 | 77 | -3.8 | +3.8 | 80 | maintain | 0 | - |
| White Pine | 4 | 3 | -25 | +25 | 4 | maintain | 4 | maintain |
| Totals | 277,603 | 282,054 | | | 277,603 | | 277,603 | |

- ❖ Some of the acre differences may be due to reinventory and geographic line changes, not due to a change of actual forest conditions.

Chart 1 provides a visual representation of the aspen age class structure within the Aspen Parklands section. A typical age distribution curve would not be expected for aspen in this section due to the variety of target rotation ages to meet planned desired future conditions.

Chart 1: Aspen Age Class:



- ❖ Data labeled “Original Plan” is the information the planning team used to compile the SFRMP. Current conditions are as of April 7th, 2017. The data from April 2017 with UD (Under Development) moved to 1-10 shows the same information but with stands in some level of the permitting process assumed to be harvested, anticipating those changes to the age class structure.