

Wisconsin Department of Natural Resources
Natural Resources Board Agenda Item

SUBJECT: Approval of the Brule River State Forest Master Plan Amendment

FOR: January 2015 Board meeting

TO BE PRESENTED BY: Teague Prichard, Division of Forestry State Lands Specialist

SUMMARY:

The Department requests approval of an amendment to the Brule River State Forest Master Plan to comply with Chapter NR 44, the Department's Master Planning Administrative Code, and Chapter 28, Wisconsin Statutes. The purpose for this master plan amendment is to modify and align the annual sustainable harvest level on the Brule River State Forest to account for the acquisition of 6,505 acres of fee lands and to account for better on the ground forest inventory data that has identified a 1,953 acre backlog in forest management practices. The current master plan was approved in 2002 and sets the annual allowable harvest level at 600 acres. The amendment eliminates the 600 acre annual harvest level cap specified in the 2002 plan. The amendment does not change the land management classifications, management areas or area objectives of the current master plan, it simply allows adjustments to the number of acres that can be managed in order to meet the plan objectives based on updated inventory and acquisitions.

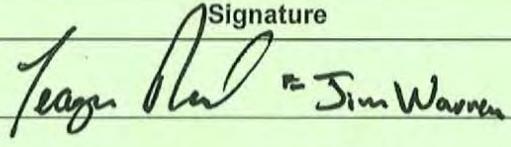
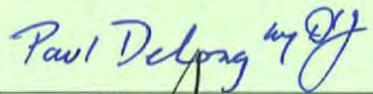
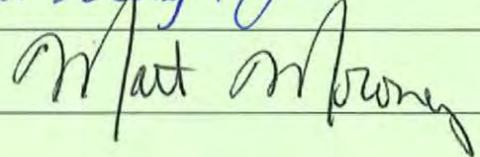
ISSUES: There were 22 public comments received on the proposed amendment. The majority of comments supported the amendment, but there were several comments that did not favor forest management of any kind, including the proposed management of newly acquired lands.

RECOMMENDATION: The Department recommends approval of the Brule River State Forest Master Plan Amendment.

LIST OF ATTACHED MATERIALS (check all that are applicable):

- Background memo
- Master Plan Amendment

- Type name of attachment if applicable
- Type name of attachment if applicable

Approved by	Signature	Date
Jim Warren Bureau Director		12/18/14
Paul DeLong, Forestry Division Administrator		12/18/14
Cathy Stepp, Secretary		1/8/15

Master Plan Amendment

Property Name: Brule River State Forest

Date Master Plan was Approved: December, 2002

Amendment to the Master Plan:

The purpose for this master plan amendment is to modify and align the annual sustainable harvest level on the Brule River State Forest to account for the acquisition of 6,505 acres of fee lands and to account for better on the ground forest inventory data that has identified a 1,953 acre backlog in forest management practices. The current master plan was approved in 2002 and sets the annual allowable harvest level at 600 acres. The amendment eliminates the 600 acre annual harvest level cap specified in the 2002 plan. The amendment does not change the land management classifications, management areas or area objectives of the current master plan; it simply allows adjustments to the number of acres that can be managed in order to meet the plan objectives based on updated inventory and acquisitions.

SUPPORTING INFORMATION

In addition to the supporting information below, Brule River State Forest, Forest Resource Assessment

Purpose and Need for the Proposed Amendment

The purpose for this master plan amendment is to modify the annual allowable harvest to take into account newly acquired lands totaling 6,505 acres on the Brule River State Forest since the plan was approved in 2002. In addition, the amendment aims to reduce the backlog of forest management practices scheduled on almost 2,000 acres based on updated forest inventory data, allowing existing master plan management objectives to be met.

Anticipated Benefits of the Proposed Amendment

Modifying the annual allowable harvest level will allow the objectives outlined in the current master plan to be met. Land management objectives and prescriptions were identified in the 2002 plan for those areas targeted for acquisition. Implementing forest management prescriptions will help meet the master plan objectives established in 2002, which are still valid today.

Unavoidable Adverse Impacts: There will be no significant adverse impacts. The current harvesting activity on the BRSF largely goes unnoticed to the property's visitors and negative comments are rarely received. It is unlikely that increasing the annual allowable harvest will have a large adverse impact as the majority of the recreation areas on the State Forest are not managed for timber production or seasonal restrictions are placed on the management activity to minimize potential conflict.

Compatibility with Statutes, Codes and Department Policies

The proposed master plan amendment is compatible with NR 44, Wis. Admin. Code and Chapter 28, Wis. Stats.

Federal Aid Limitations:

There are no Federal Aid limitations.

How the Master Plan Supports the Proposed Amendment

The purchased 6,505 acres were planned for and described in the 2002 Master Plan. A significant portion of the recently acquired lands are included within the Northern Boundary Expansion Area and shown on the master plan map on page 30. The plan directed that the acquisition would be managed similar to Management Area 1, Lake Superior Clay Plain Native Community Management Area. The acquisition became state property and was approved at the June 2007 Natural Resources Board meeting.

As stated on page 30 of the current master plan, "If acquired, this area would be managed similar to the Area 1 – Lake Superior Clay Plain – Native Community Management Area."

The Public Review Process Used

A 30-day public review period was conducted by the Department of Natural Resources from November 1 to December 1, 2014 to gather public input on a proposed amendment. The public was notified by statewide press release and postings on the Department's master planning web page and the Brule River State Forest web site. Announcements were sent to 4,462 subscribers of eGov, a public email distribution system. An additional 60 known stakeholders were contacted including individual citizens, local and tribal governments and organizations. The Draft Master Plan Amendment and a Public Involvement Plan were posted for review on the BRSF web site. Information about the amendment was also shared during BRSF's

annual meeting held in November in Brule, Wisconsin. The public was encouraged to respond during the comment period by email, phone or in writing.

Twenty-two individuals participated in the public meeting. During the comment period 15 responses were gathered from the public, all received by email. Public comment included input from individual citizens, Great Lakes Indian Fish and Wildlife Commission (GLIFWC), two business, and two non-government organizations.

Summary of Public Comments

Among the comments received there was wide support for the amendment. Many respondents favored the proposal in order to meet management objectives outlined in the master plan to accommodate newly acquired acreage, and to address a timber harvest backlog, to meet desired forest cover types. The proposed allowable harvest was described as modest and sound management to produce high quality forest to benefit both the public and the economy. There was support to continue timber harvests to maintain health and vigor of the forest and the integrity of the Brule River system. Comments described sustainable forest management as beneficial to watershed protection and to stabilized stream flows. Protection from wildfire was discussed as an additional benefit. Others favor sustainable forest management to promote quality wildlife habitat for hunting. Several commenters opposed the master plan amendment. They prefer less "forest industry" management on public lands or no timber harvest at all, in order to promote dense, old growth vegetation for aesthetics, wildlife and recreation. Respondents advocated for increased protection of scenic trails, and wider buffer areas to separate timber management from streams. There was concern that expanded harvest levels reduce ecosystem diversity and cautioned that logging activity encourages or introduces invasive species.

BRULE RIVER STATE FOREST FOREST RESOURCES ASSESSMENT

LANDS ACQUIRED SINCE 2002
ANALYSIS OF FOREST MANAGEMENT BACKLOG



OCTOBER 2014
WISCONSIN DEPARTMENT OF NATURAL RESOURCES
DIVISION OF FORESTRY

PURPOSE

This assessment will serve as the basis for a potential modification to the Brule River State Forest master plan. The first purpose of this assessment is to summarize the forest resources on 6,505 acres of land acquired by the Brule River State Forest (BRSF) since 2002. Second, the assessment will review the backlog of almost 2,000 acres that currently exists on the property due to updated forest inventory data and the annual allowable harvest (AAH) level that was set in the 2002 master plan. Third, the assessment will review the AAH in order to take into account the newly acquired lands as well as the current backlog.

NEW ACQUISITION

Since 2002, 6,505 acres were acquired by the BRSF. The majority of the newly acquired lands are designated as part of the Area 1 Land Management Classification described within the 2002 BRSF master plan. Area 1 is a native community management area: Lake Superior Clay Plain (Map 1). Currently, much of the new acquisition area is composed of aspen, a portion of which is reaching or is past its biological maturity (Figure 1 and Table 1). Stands easily reached from the road were most recently managed by the previous landowner. Older stands were not managed due to lack of accessibility. These mature stands are best described as “patchy” with large trees clustered in areas of 2 to 10 or more acres in size with younger aspen and lowland patches of black ash and tag alder separating the patches.

Other areas of the new acquisition, especially those closer to Lake Superior, are composed of a mix of white birch and aspen. Currently, stands containing mature white birch are beginning to decline with trees showing signs of top die-back and a portion beginning to fall over.

Although the species composition of the new acquisition is similar to that of the previously owned stands within Area 1, there are some differences. Similar to the stands that made up Area 1 prior to this new acquisition, the forest is composed primarily of aspen with spruce and balsam fir as secondary species. Common associates in these stands include white birch, black ash, white pine, red pine, and tag alder.

Unlike Area 1 as it was prior to the new acquisition, lands in the new acquisition are not within the river valley making them much easier to access and manage. The new area is intersected with small drainages but is primarily flat. Although conifers do make up a portion of the mid and understory, in the new acquisition area conifers are present at a much lower concentration than in the previous areas of Area 1 where they have been managed to increase their presence.

The new acquisition lands have a history of much more intensive disturbances. Evidence of fires can be found scattered through the forest. This, in combination with industrial forestry practices that usually did not retain conifer species, has pushed species such as white spruce and balsam fir into the drainages. Currently white spruce is the primary conifer found in these drainages and is slowly seeding into stands and scattered seedlings can be found in the understory. Some stands within the new acquisition area contain similar compositions as those listed above; however, they are lacking the conifer component found in other areas.

In the next five years (2013-2018) 564 acres are scheduled for management evaluation within four compartments in the new acquisition area: 74, 75, 76, and 77 (Figure 2 and Map 2). Of the 564 acres, the aspen covertype is 514 acres, white birch is 41 acres, and white spruce is 9 acres. Averaged out over the next five years, 112 acres per year is scheduled to be evaluated for harvest: 102 acres of aspen per year, 8 acres of white birch per year, and 2 acres of white spruce per year.

FOREST MANAGEMENT BACKLOG

Currently there is a backlog of 1,953 acres of forested lands that has reached its thinning cycle or desired rotation age. During the master planning process, best available forest inventory data was used to determine an annual harvest levels needed to meet land management objectives determine by management classification and area objectives. Forest inventory data for the Brule River State Forest is now much more accurate and up to date. Since 2009, 37,504 acres, (out of a total of 47,112 acres) have been inventoried and stand data updated, accounting for over 79% of the total forest. All of the forest inventory data for the Brule has been updated in the last 15 years. By using this data, a much more accurate harvest level can be calculated.

The Brule River State Forest is a unique property with a prominent river valley, deep drainages, and other landforms that make land management inappropriate for various reasons including aesthetics, erosion control, threatened and endangered species habitat, and numerous others. Stands that fall into these areas such as the Brule River Valley are omitted from any management. During the extensive RECON collection over the past 15 years, stands where active management is not desired or needed to reach management goals are removed from the total acres that are used to calculate the AAH on the property (See Maps 3-4 and Figure 3).

ANNUAL ALLOWABLE HARVEST ANALYSIS

The 2002 Master Plan set forth the annual average harvest acreage of 600 acres. This is outlined in Chapter 2:

Land Management:

- 300 acres of thinning to manage pine plantations.
- 15 acres final regeneration harvest in red pine for regeneration of this covertime.
- 75 acres of jack pine harvest for regenerations for this forestry type.
- 150 acres of aspen/birch harvest for regeneration of these species or as part of a shift to conifers in specific areas.
- 25 acres of scrub oak harvest to maintain this community type.
- 15 acres of fir-spruce harvest for regeneration or to facilitate planting of additional species.
- 20 acres of northern hardwood/red oak harvest for regeneration of specific species in this community type.

The Annual Allowable Harvest is an acreage amount of the forest that is scheduled to be managed to meet management objectives. The background data to support the AAH comes from forest inventory or RECON data collected for each stand within the state forest. AAH is calculated by thinning cycles or desired rotation ages for specific covertypes and management objectives. For example, to maintain a healthy aspen forest on the Brule the average stand is typically regenerated through a harvest at 55 years old. On the Brule River State Forest there are 21,645 acres of the aspen covertime within managed areas, 6,603 of which are or will be 55 years old in the next 15 years. This would average out to about 440 acres of aspen regeneration harvests per year over the next 15 years. When similar calculations are applied to all forest types on the property the total annual allowable harvest can be determined. Using the updated forest inventory (RECON) data the 15-year average AAH is calculated to be 1,099 acres. (Summary, WisFirs

Report #201).

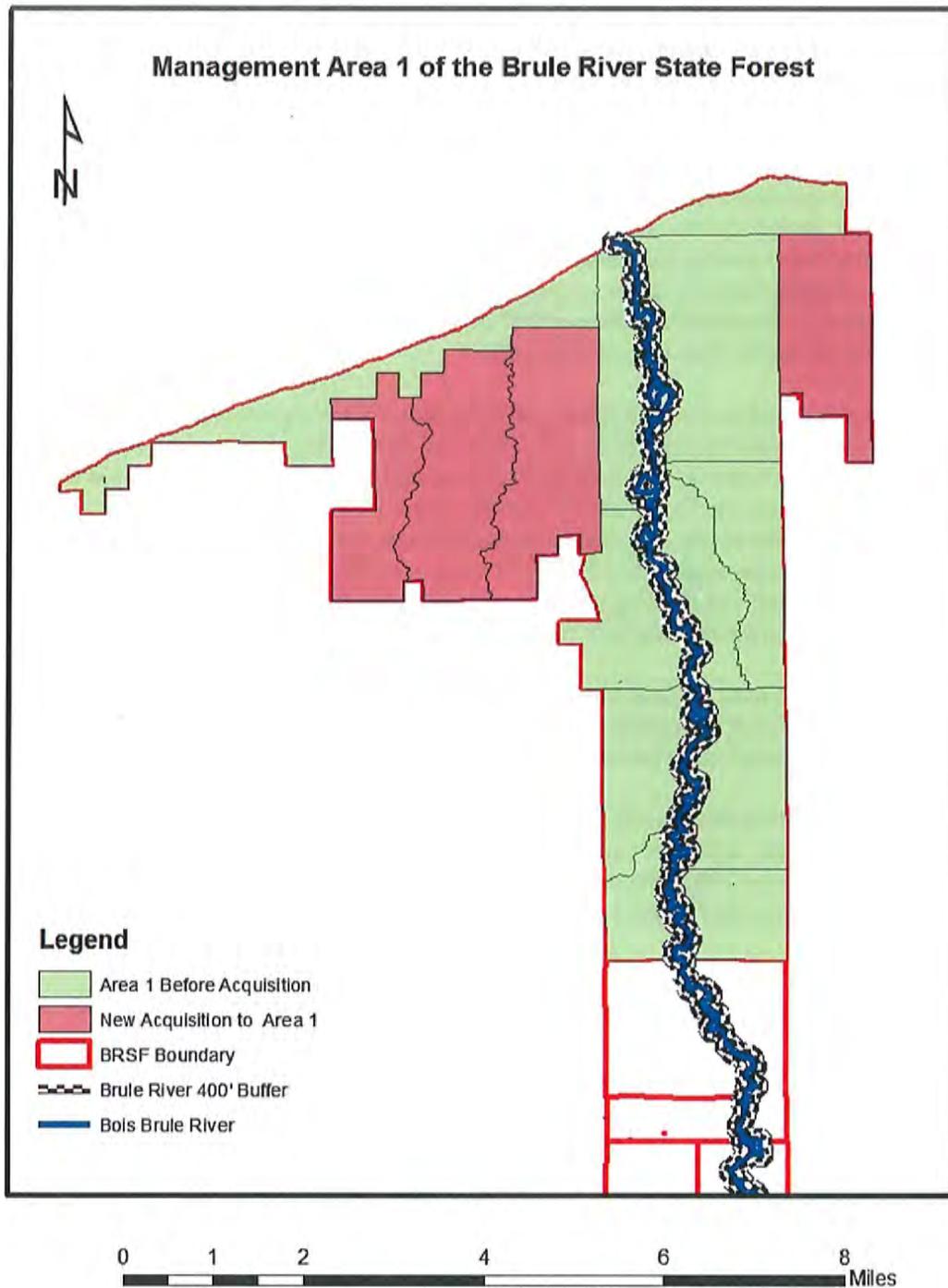
CONCLUSIONS AND RECOMMENDATIONS

Based on a change in conditions, including the acquisition of 6,505 acres of newly acquired lands, and updated forest inventory data identifying 1,953 acres of backlog forest management practices, it is recommended that a master plan modification is needed to modify the annual allowable harvest to meet existing land management objectives identified in the 2002 master plan. It is proposed an annual harvest level not be specified in the 2002 plan, and more specifically, the 600 acre harvest limit set in the 2002 plan be removed.

The modification is based on updated forest inventory data and newly acquired lands with an estimated long-term annual harvest levels at 1,099 acres, 499 additional acres that are allowed in the 2002 master plan. If there was no backlog, the estimated annual harvest level would be 969 acres per year, a 369 acres increase from the current master plan level. Approximately 102 acres of the 369 acres are in the newly acquired lands and 267 acres are based on updated inventory. An additional 130 acres per year reflect the 1,953 acres of backlog practices which are spread-out over a 15 year period. The backlog practices could be expedited in a shorter time frame, increasing the short term harvest levels to reach the projected long term level of 969 acres.

As in other State Forest master plans, harvest levels are estimated are not a prescribed level, given forest inventory is continuously updated, forest stands are not “exact acres” and backlog could be addressed over a number of years based on staffing and resources.

Adjusting the annual allowable harvest level will allow the land management objectives outlined in the current master plan to be met. Land management classifications or areas, and associated objectives identified in the 2002 plan are not being proposed for any changes. The harvest level adjustment simply allows the objectives to be met using forest management practices as prescribed.



Map 1. Management Area 1 of the Brule River State Forest

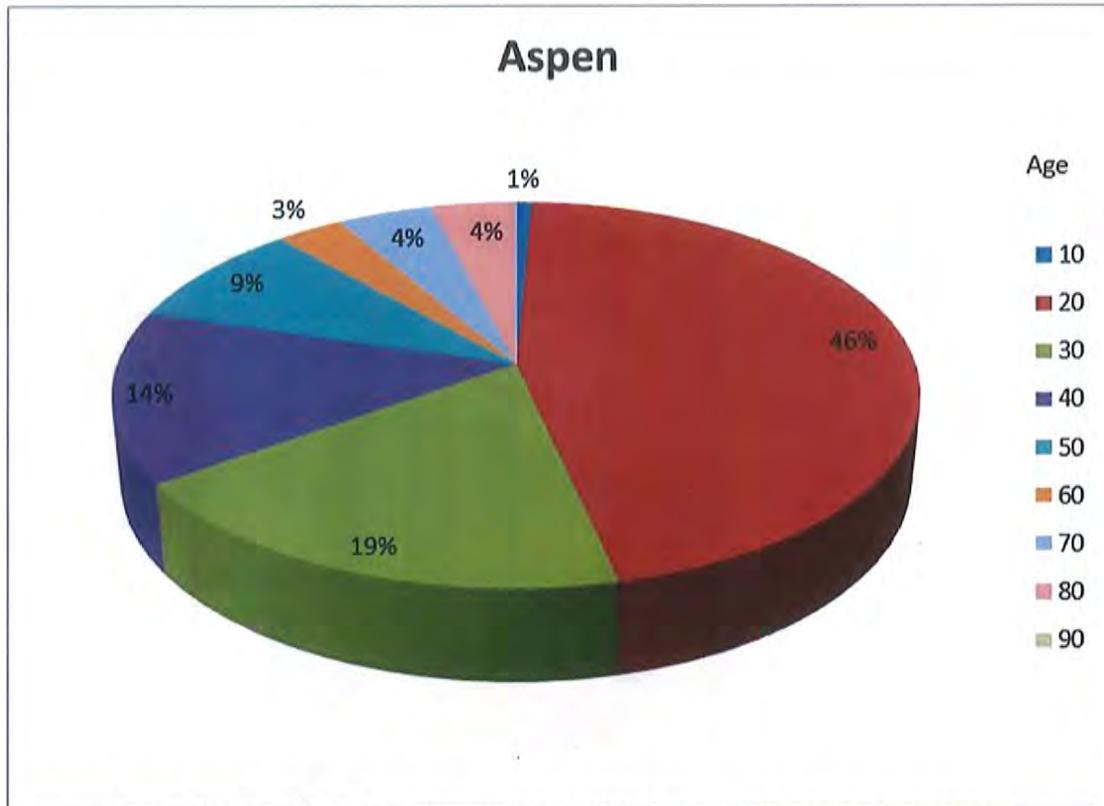
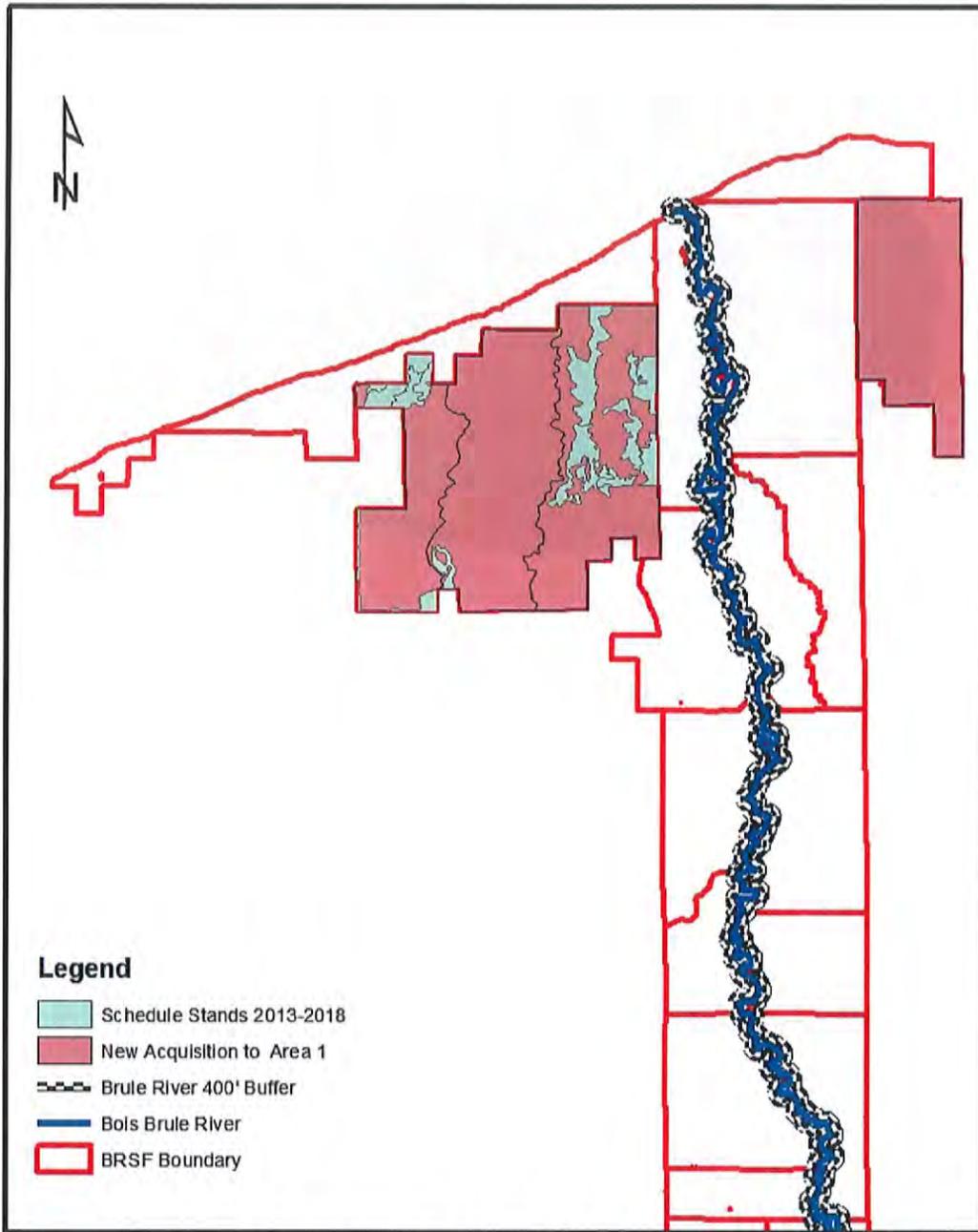


Figure 1. Age distribution of aspen in new acquisition area of the Brule River State Forest.

Table 1. Summary of age distribution by species in the new acquisition area for stands on the harvest schedule.

Rounded Age	Species			Acres
	Aspen	Swamp Hardwoods	White Spruce	
10	32			32
20	1996	37	19	2052
30	815			815
40	632			632
50	385			385
60	135		4	139
70	194	246	9	449
80	174			174
90		27		27
Acres	4363	310	32	4705



Location of stands on the harvest schedule between 2013-2018. Stands scheduled for harvest total 564 acres, or about 112 acres per year.

Map 2. Locations of stands on the harvest schedule between 2013-2018.

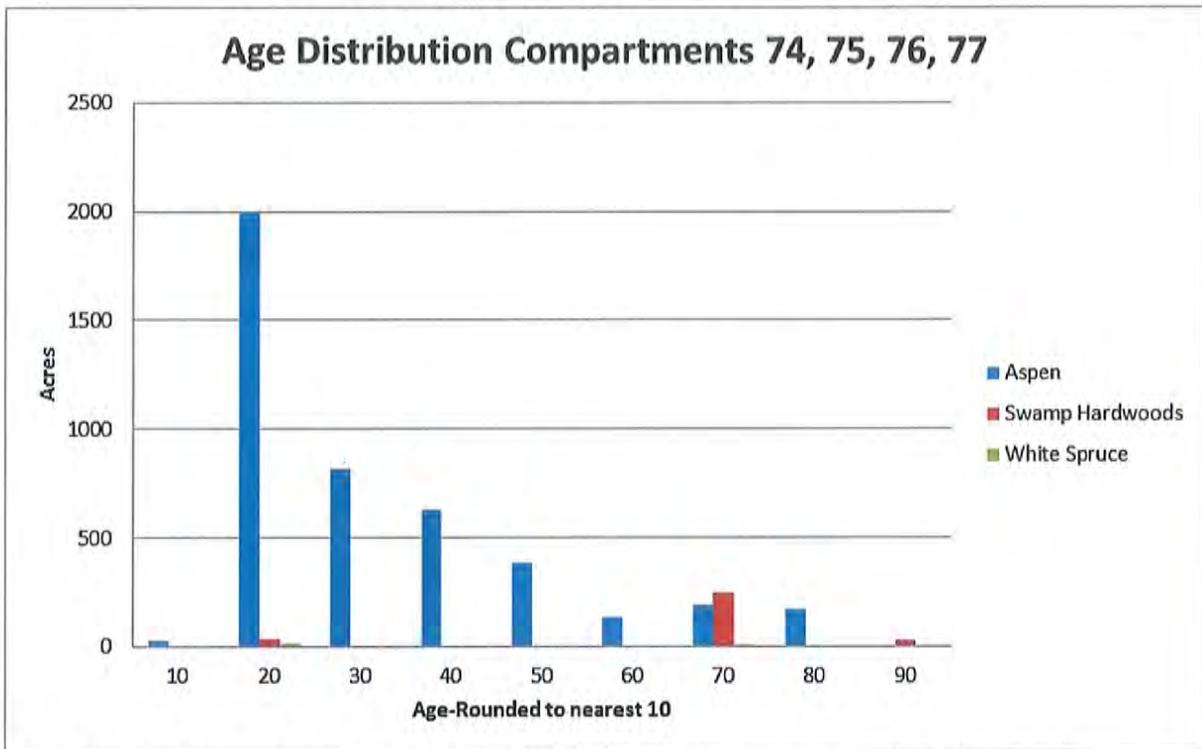
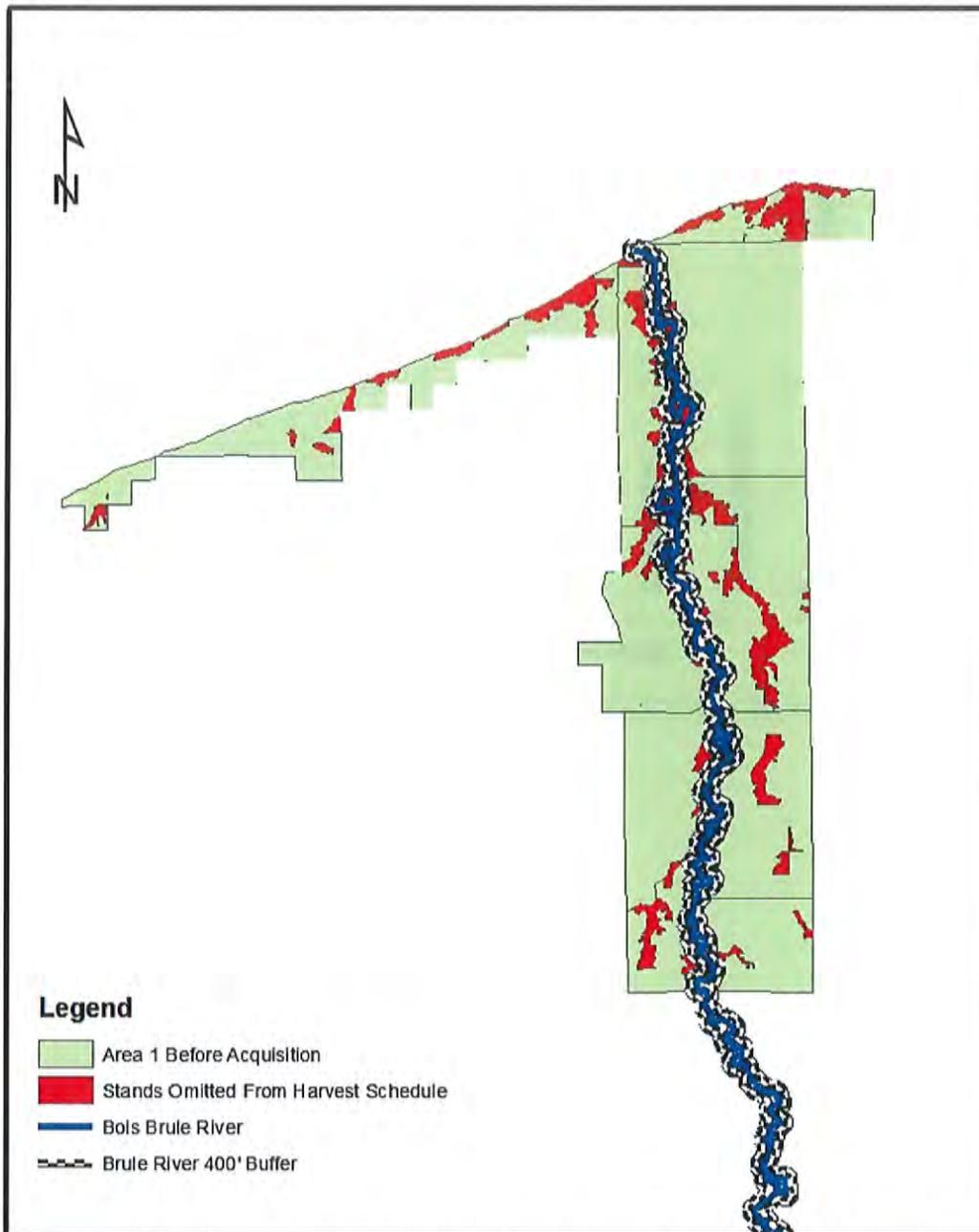
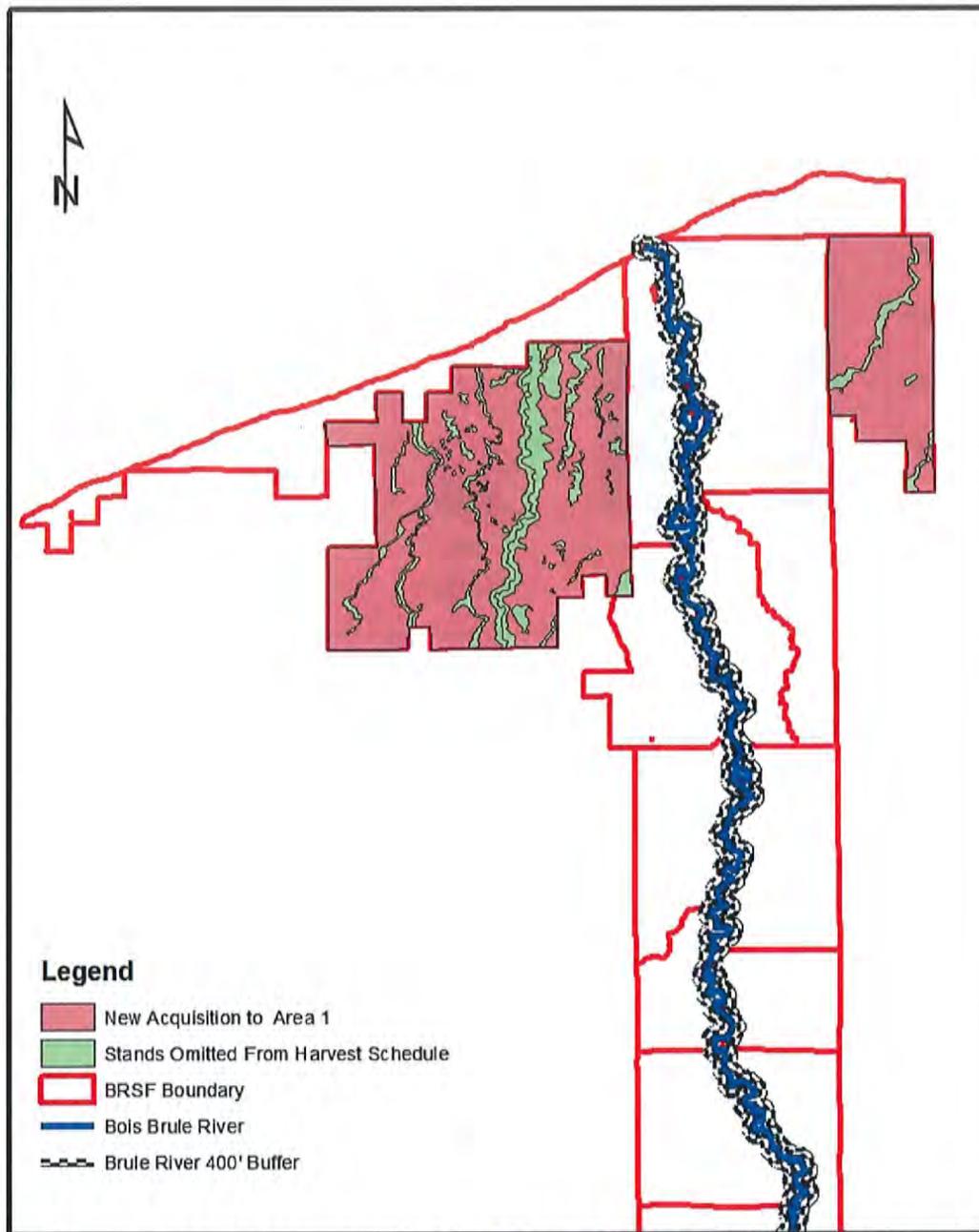


Figure 2. Age distribution by species for compartments in new acquisition area on the Brule River State Forest.



Stands omitted from harvest schedule in Management Area 1 before the new acquisition. Stands omitted from harvest schedule total 2,051 acres. These omitted stands are found primarily in the Brule River valley and along tributaries feeding the Brule River.

Map 3. Stands omitted from harvest schedule in Management Area 1 before the new acquisition



Stands omitted from the harvest schedule in the new acquisition of Area 1. The omitted stands total 901 acres, about 15% of the total area of the purchased land.

Map 4. Stands omitted from the harvest schedule in the new acquisition of Area 1.

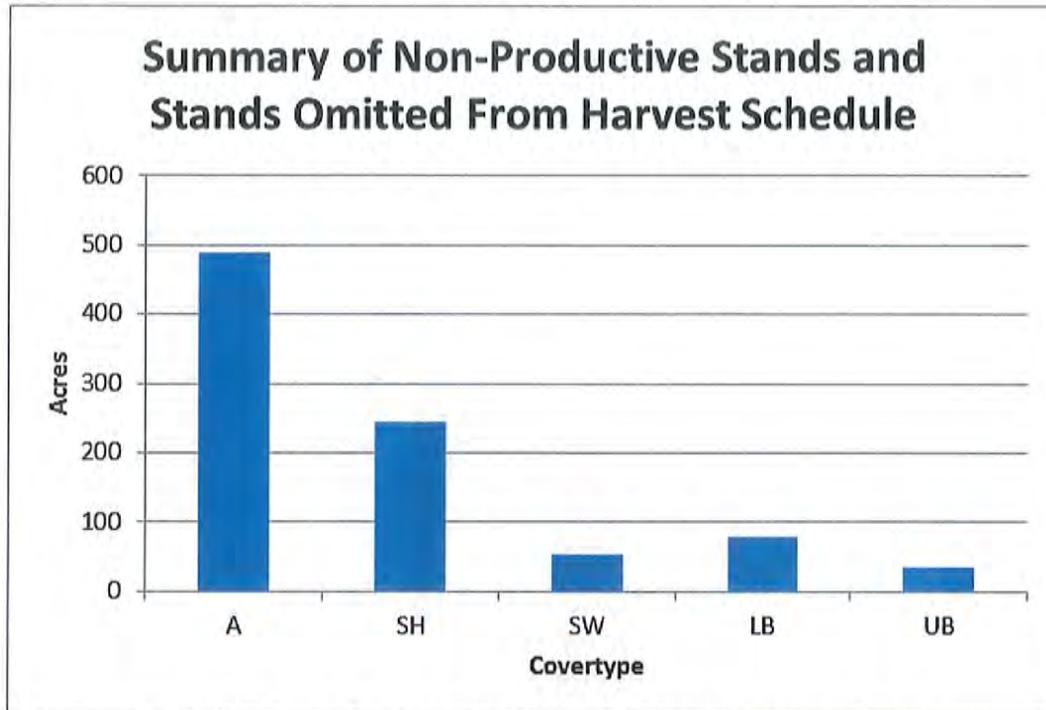


Figure 3: Summary of acreage and species that are classified as non-productive or omitted from the harvest schedule in the new acquisition area.

