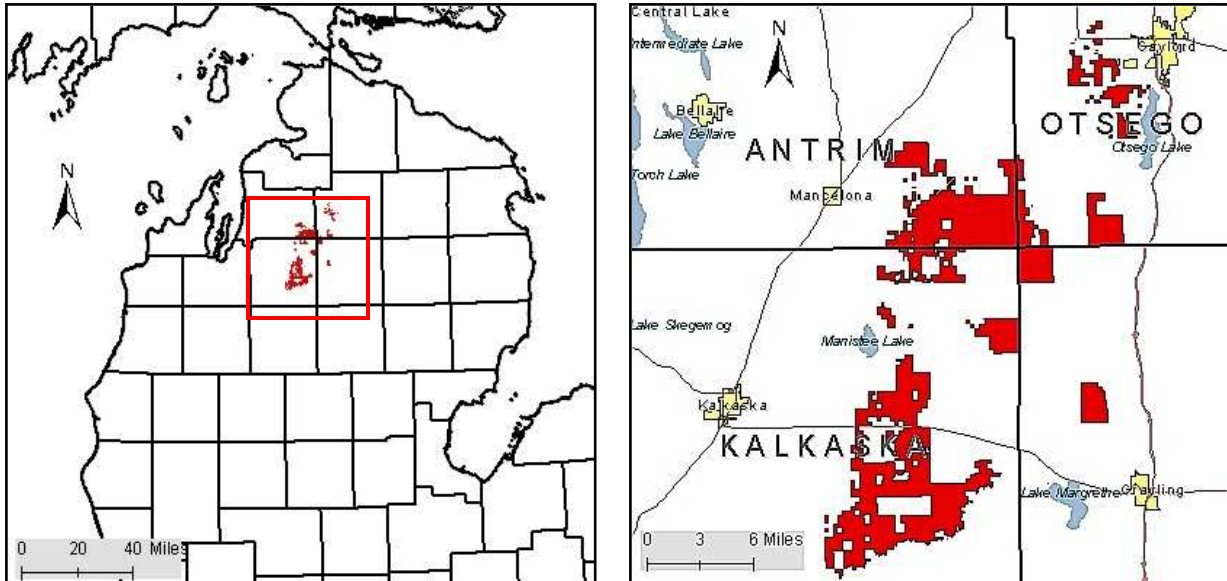


Grayling Outwash Management Area



Attributes

The Grayling Outwash Management is located in the high plains of Otsego, Antrim, Crawford and Kalkaska Counties and has approximately 65,000 acres of State Forest land. The primary attributes which were important in identifying this MA include:

- **Ecological Classification** - The MA falls within the Grayling Outwash Plain sub-region of the NLP Ecoregion as classified by Albert (1994).
- **Cover Types** – Historically, fires were very frequent in this MA and were important in determining species composition. Jack pine and northern pin oak dominated the outwash, while vegetation varied on the ridges – some dominated by northern hardwoods and others dominated by red oak, hemlock and white pine. Currently, areas of aspen, red pine and upland hardwoods with isolated pockets of lowland types cover the majority of the state forest land. In the past, a significant number of harvests and plantings were done in a checkerboard pattern; now there is interest in consolidating types and reducing cover type fragmentation.
- **Landforms** – This MA lies at the northwestern edge of the Grayling Outwash Plain sub-region where there are two narrow end-moraine ridges, separated by an outwash channel which is eight miles wide, at its widest point. The Manistee River which is a dedicated Natural River runs through this MA.
- **Cultural** – The Deward Tract dedicated management area is located in this MA.
- **Social and Economic** - Antrim gas development is extensive. There is extensive ORV and snowmobile recreation use in this area, along with hiking on the North Country Trail. The Wetzel Lake lease to Antrim County (for recreation use) is located in this MA.
- **Ownership size and connectivity** - The state land in this MA is scattered.

Major Cover Types

- Aspen – Approximately 18,000 acres is covered by aspen of which 14,000 acres falls in the 0-59 year age classes. This amount and age distribution of aspen is indicative of intensive management. About 30% of the aspen falls into the merchantable 40–49 year age class.
- Red Pine - Most (9,500 acres) of the 12,000 acres of red pine is in the 40-59 year age classes, some of which is was Consumers Power Corporation leased land. Although the state leased the land, Consumers Power retained the timber rights. The timber rights are now reverting to the state and the red pine is now receiving its first thinning. There has been very little regeneration of red pine for the past 30 years.
- Northern hardwoods/Upland Hardwoods – About 16% of the MA (approximately 11,000 acres) is covered by upland hardwoods. Three quarters of these acres are becoming uneven aged due to recent selective harvesting. The remaining acres are even aged stands on poorer quality sites.
- Mixed Swamp Conifers, Swamp Hardwoods, and Cedar – Virtually all of the 6,700 acres of swamp types originated after the early 20th century harvests, and as a result, most cedar is greater than 70 years old.
- Jack Pine – About 1,000 acres of the almost 2,100 acres are in the 50–59 age class, with most of the remainder fairly well balanced over the 10–50 age classes. Some acres occur in strip plantings with red pine.
- Oak – Oak which covers 1,100 is mostly black and pin oak and most areas are older than 70 years of age. Mortality is increasing or the trees are in decline due to the species characteristics, age, environmental stress, insects or diseases.
- Upland Brush/Grass – Grass and upland brush totals 7,100 acres which is a relatively high amount. This is a result of the past management practices or natural processes of fire, frost or other disturbances which create openings in the forest canopy along with maintenance treatments to keep areas open.

Grayling Outwash			Age Class (Years)											Uneven Aged
Cover Type	Acres	%	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100+	
Aspen	17,975	28%	1,166	3,028	2,921	4,013	3,198	2,332	882	371	32	8	0	24
Red Pine	11,770	18%	40	389	265	553	6,358	3,167	304	176	116	319	5	78
Upland Hardwoods	10,618	16%	60	110	45	77	142	196	477	634	712	25	8	8,121
Mixed Swamp Conifers	3,128	5%	0	0	0	0	37	453	169	939	1,031	206	164	112
Jack Pine	2,112	3%	378	162	141	35	200	1,052	49	12	9	0	0	74
White Pine	2,074	3%	38	40	24	54	290	725	101	285	124	210	95	88
Swamp Hardwoods	1,891	3%	0	36	0	183	55	275	729	213	122	112	37	111
Cedar	1,676	3%	0	0	0	0	4	5	0	166	381	333	724	63
Oak	1,137	2%	15	0	4	0	29	112	70	127	543	223	14	0
Upland Brush	5,327	8%												
Lowland Brush	2,494	4%												
Grass	1,874	3%												
Water	660	1%												
Other Types	2,445	4%												

65,181

Other Types include: Spruce-Fir, Marsh, Black Spruce, Lowland Poplar, Bog, Tamarack, White Birch, and Hemlock.

Concepts of Management

- Aspen (28% of the MA) – Focus management on balancing the 0-59 year age classes, with an emphasis on the current 40–49 year age class. Where accessible and practicable, harvest aspen in the age classes above 70 years of age. In the flats area promote young aspen through management to benefit woodcock and grouse.
- Red Pine (18% of the MA) – Follow the Red Pine Management Guidelines to balance the age class distribution by aggressively harvesting in the age classes between 40-59 years and regenerating red pine. Allow selected areas of managed red pine to reach biological maturity. Following the Within Stand Retention Guidelines allow selected individual red pines in other cover types to become super canopy specimens. The acreage of red pine may potentially increase due to planting of current upland brush areas.
- Northern Hardwoods/Upland Hardwoods (16% of the MA) – Continue selective harvesting to encourage development of uneven age classes on suitable high quality hardwood sites. Utilize even-aged management on outwash plain sites that are of poorer quality. Where oak is present as a component of upland hardwoods, follow Within Stand Retention Guidelines to maintain an oak for mast and diversity.
- Upland Brush/Grass (11% of the MA) – Determine the level of upland brush required to meet wildlife needs. If current upland brush acres are more than needed, convert excess brush areas to red pine through planting.
- Mixed Swamp Conifers, Swamp Hardwoods, and Cedar (11% of the MA) - Harvest selected areas to promote under represented younger age classes through regeneration. On selected sites conduct habitat cuttings of small hardwood inclusions in a manner that will not adversely impact wetland soils or encourage deer browse issues.
- Jack Pine (3% of the MA) – Manage jack pine to balance age distributions while concentrating on minimizing health problems due to jack pine budworm by removing older age classes, with a special emphasis on the 50-59 year age class. Due to the characteristic mortality of older jack pine and forest pests it is expected that the acreage of jack pine will decrease.
- Oak (2% of the MA) – Utilize harvest methods to promote oak regeneration, and if needed, plant white or red pine to facilitate oak regeneration and growth.