



Plover River Fishery Area & Statewide Spring Ponds Interim Forest Management Plan

Property Identifiers

Property Name and Designation: Plover River Fishery Area & Statewide Spring Ponds

County: Marathon

Property Acreage: Plover River Fishery Area - 1443 acres
Statewide Spring Ponds - 352 acres

Forestry Property Codes: 3705 Plover River Fishery Area
3702 Statewide Spring Ponds

Master Plan Date: 1981

PROPERTY ASSESSMENT

(This interim forest management is primarily a plan to discuss future forest management activities. It expands on the current 14 page master plan that was developed in 1981 and approved by the Natural Resources Board)

General Property Description

- Landscape and regional context

The Plover River Fishery Area is located in northeastern Marathon County. It is mainly a parcel of land about $\frac{1}{4}$ - $\frac{1}{2}$ mile wide on each side of the Plover River. The Plover River is the largest and most popular trout stream in Marathon County. Fed by numerous springs and spring ponds, the water quality is exceptional. With this high quality water and with naturally reproducing trout, the Plover River is given a class I rating.

Statewide Spring Ponds are also in the northeastern part of the county. The property is 352 acres consisting of four separate blocks of land. These small parcels of stateland are mainly acquisitions that protect naturally occurring spring ponds, with one block protecting a portion of the Plover River.

Both the Plover River Fishery Area and Statewide Spring Ponds are located in the Forest Transition Ecological Landscape. Within this landscape the Plover River Fishery Area lies in Landtype Association 212Ta04 (Upper Plover River Plains) and most of the Statewide Spring Ponds lie in Landtype Association 212Ta07 (Birnamwood-Rosholt Plains). Background on Ecological Landscapes and Landtype Associations of Wisconsin can be found at: <http://dnr.wi.gov/topic/Landscapes/>

- History of land use and past management

Historical records show that the first parcels of land acquired were in 1951, with the purpose of protecting a spring pond north of Hwy 52 which is the major water source for the Plover River. Additional parcels were purchased and in 1958 the Plover River Fishery Area was designated. The main goal for the fishery area is to protect the headwaters and the river for trout production, as well as to provide compatible outdoor recreational and educational opportunities and to make land available for public use. Statewide Spring Ponds share the same goal also of protecting important trout habitat and providing land for the public to use. Timber sales have occurred in the



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past on both properties but at a much smaller scale than currently undertaken. Since 2006 very active forest management has been conducted to try and regenerate 70-80 year old aspen stands and to harvest overstocked northern hardwood stands. Both practices to date have been very successful.

Plover River Fishery Area

Current forest types, size classes and successional stages:

The Plover River Fishery Area consists of 83% productive forest land and 17% non-forested acres consisting of grass, tag alder and the river. The productive areas consist of 35% northern hardwoods, 23% aspen, 18% white cedar, 5% hemlock, with small amounts of balsam fir, tamarack, swamp hardwoods, red maple and oak.

The northern hardwood stands occupy 420 acres. 94% of this acreage is in the sawtimber size class. The majority of the northern hardwood type is sugar maple. Associate hardwood species are red maple, basswood, black cherry and white ash. These hardwood stands are very productive and are naturally regenerating mostly to sugar maple.

The aspen areas consist of 275 acres. There are 125 acres in the 0-5 age class, this is due to the active forest management that has occurred since 2006 on this property. 94 acres are in the 20-35 age class. The remaining 51 acres are 70-80 years old. Some of this 75+ old aspen was established for harvest in the mid-1980's but was never cut. These stands are still in the aspen type and have potential to regenerate back into aspen if timber sales are established within the next 0-5 years.

White cedar stands total 208 acres. All of this acreage is in the 85-100 age class. These stands are at the age where regeneration harvests need to be evaluated. Five acres of white cedar was strip thinned instead of regenerated to evaluate the potential of thinning these stands and maintaining them instead of doing wide strip clearcuts to regenerate them. Ongoing evaluation will continue.

The remaining productive acreage is a mix of hemlock, balsam fir, tamarack, swamp hardwoods, red maple and red oak. These stands will all be evaluated for future timber sales when adjacent hardwood and aspen stands are established.

The non-forest acreage totals 247 acres. 123 acres is grass, 72 acres is tag alder and 52 acres is typed as river.

Statewide Spring Ponds

Current forest types, size classes and successional stages:

Statewide Spring Ponds consist of 42% productive land and 58% non-forested land. The upland areas contain 48% white cedar, 13% northern hardwoods, 9% aspen, 7% red pine plantation, and a mix of balsam fir, black spruce, swamp hardwoods and tamarack.

The white cedar stands total 72 acres. All of these acres are greater than 100 years old. Most of the stands are scheduled for harvest. Some of these stands will be evaluated for regeneration harvests, while some of the smaller stands will be left off of the harvest schedule due to the small size and potential for adverse water quality damage.



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Northern hardwood stands occupy 19 acres of land. All of these acres are on the harvest schedule and will be evaluated for future timber sales.

The aspen areas consist of only 13 acres. Over half of this acreage is greater than 80 years old. These old stands will be evaluated for harvest when adjacent stands are cut since they are too small to effectively sell and harvest on their own.

The red pine areas consist of 10 acres. This whole area is a red pine plantation that was planted in 1987 and is scheduled for harvest and will be set up in 2013.

The remaining productive acreage is a mix of balsam fir, black spruce, swamp hardwoods and tamarack. These stands will all be evaluated for future timber sales when adjacent hardwood, aspen and the red pine plantation are established for harvest.

The non-forest acreage totals 203 acres. 154 acres is grass, 32 acres is lowland willow and tag alder, and 17 acres is minor lakes and streams.

State Natural Area designations:

Plover River Woods <http://dnr.wi.gov/topic/Lands/naturalareas/index.asp?SNA=574>
This natural area was designated in 2008. It is 284 acres and was created due to lack of natural areas in the northern wet mesic and northern mesic forest in the Forest Transition Ecological Landscape. This area contains high quality natural communities and diverse concentrations of uncommon plants found anywhere in the state. The long term goal of the area is for managed old-growth. Forest management will occur but more in a limited scope compared to traditional northern hardwood silviculture. Management that will occur is thinning of a small red pine plantation and manipulation of dense single tree species patches. The goal of this manipulation is to accelerate old-growth characteristics such as diversifying canopy structure and species composition, and to promote large diameter trees, snags, and coarse woody debris.

High Value Conservation Forests (HCVF) or other resources/natural community types limited in the landscape:

Currently the Plover River Woods State Natural Area is the only identified HCVF on the Plover River Fishery Area. The High Conservation Value Forest identification primarily comes from exceptional understory species richness and management direction toward managed old-growth forest.

Biotic Inventory Status:

A Rapid Ecological Assessment focusing on rare plants, rare animals, and high quality natural communities has not been completed for these two state properties.

Deferral/Consultation Area Designations:

Because there has been no Rapid Ecological Assessment completed for these two properties focusing on rare plants, rare animals, and high quality natural communities, there are no subsequent formal (MC 1750.15) deferral or consultation sites on either property. However, cursory work has identified an area now designated as the Plover River Woods State Natural



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Area which constitutes an informal “consultation” site as an interdisciplinary team from fisheries, forestry, wildlife and endangered resources shall be consulted before any on ground management occurs.

Rare Species:

Natural Heritage Inventory screening is conducted before any land management activities are undertaken. Currently there have not been any threatened or endangered species documented on the two state properties.

Wildlife Action Plan/Species of Greatest Conservation Need

The Plover River is identified in the Wildlife Action Plan’s Implementation document for the Forest Transition Ecological Landscape as a Conservation Opportunity Area (COA) of State Significance for “Diverse Aquatic Communities”. “Diverse Aquatic Community” COA’s are identified in this plan because the amount and quality of these water resources are rare on a global scale and protecting them is a statewide priority. Specifically this COA features the priorities of coldwater/coolwater “stream” and streamside communities of Northern Wet-Mesic Forest and Alder Thicket. Species of Greatest Conservation Need associated with these natural communities but not yet identified within the Plover River Fishery Area are Redside Dace, Four-toed Salamander, Pickerel Frog, Wood Turtle, Osprey, Eastern Red Bat, Hoary Bat, Northern Long-eared Bat, Water Shrew, Lancet Clubtail and Sand Snaketail. Additionally, the Wildlife Action Plan identifies Northern Mesic Forest (aka “Northern Hardwoods”) as a High Priority natural community for this Ecological Landscape.

Invasive Species:

Garlic mustard was identified on the Plover River Fishery Area. It was found just north of Hatchery Road along the trail heading due north. This road was used to access parts of the fishery area for logging in 2010 and 2011. The county wildlife biologist pulled as many plants as she found and is currently monitoring this area. Scattered honeysuckle has also been noticed on the property.

Soils:

Both properties are located in an area of glacial moraines and outwash plains formed by various stages of glaciation. The characteristic landform pattern is nearly level outwash plain and stream terraces. Soils are predominately well drained sandy loams to silt loams on the uplands. The low ground which is predominately cedar and black ash are Cathro muck soils.

Cultural and Archaeological Considerations (including tribal sites):

Marathon County Archaeological and Cultural Resource maps do not identify sites within the property boundaries of the Plover River Fishery Area or Statewide Spring Ponds.

Recreational Uses:

Both properties are used primarily for trout fishing. The Plover River is the largest trout stream in the county and sees a lot of use. There are seven developed parking areas on state land to access the Plover River and Statewide Spring Ponds for fishing, hunting or other recreational pursuits. Both properties are open to public hunting and receive hunting



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pressure mostly in the fall of the year. A portion of the Ice Age National Scenic Trail was recently constructed through a large portion of the Plover River Fishery Area.

PROPERTY MANAGEMENT OBJECTIVES:

These properties are managed primarily to restore habitat conditions within the stream corridor, protect water quality, and to provide quality wildlife habitat. Forest management objectives include maintaining existing forest types and developing a diversity of age classes including both young and old forest areas for both game and non-game species dependent on these types. This will largely be accomplished through sustainable silvicultural systems that will increase the diversity and structural complexity of wildlife habitat while at the same time avoiding disturbance to riparian areas along the stream corridor and wetland areas that may negatively impact spring ponds.

PROPERTY PRESCRIPTIONS: (Identify specific and pertinent prescriptions by area or forest type, including passive management areas, extended rotation, and other information that will help achieve the objectives):

Northern Hardwoods

Uneven-aged management with all-aged selection harvests evaluated every 15 years by stand. These harvests will improve stand quality by removing high risk, low vigor trees and by releasing crop trees. Canopy gaps will be created during each harvest to regenerate these stands back into northern hardwoods, while trying to encourage more mid tolerant species. These hardwood stands are dominated by sugar maple, consequently larger gaps will be needed in order to regenerate species other than sugar maple. Promoting mid tolerant species will increase the resilience of the northern hardwood type to future climate change impacts.

Comp 201, stand 26. This ~80 acre stand offers an excellent opportunity based on size class and context to be managed as an extended rotation forest. Standard silvicultural systems will be adapted to grow relatively larger and older trees, develop and maintain reserve trees, develop and maintain large standing and downed coarse woody debris, and encourage compositional and structural diversity. Additionally, this system will produce high quality timber. Management will largely mirror that of the Plover River State Natural Area except with a goal of old forest rather than old growth.

Aspen

Even-aged management will occur on most of the aspen stands through coppice regeneration harvests. The rotation age can vary by site but is generally 50 years in age. Extended rotation up to 80 years can occur on these two properties due to the high quality sites. This is evidenced by the 75+ year old stands still viable, albeit declining in health. Most snags and oaks, the majority of conifers and associated green tree retention islands will be left in perpetuity.

White Cedar

All cedar stands are over 85 years old. The site index over most of the cedar acreage is 45 with a corresponding rotation age of 95-100. With these stands being right at rotation age, even-aged regeneration harvests need to be evaluated. Smaller cedar stands and stands with spring ponds will not be harvested due to potential adverse water quality impacts. Five acres of cedar was strip thinned in 2010 with the goal of trying to salvage the mature tamarack, balsam fir and aspen, and to extend the rotation age of the cedar. These strips are not intended for regeneration, but were needed for equipment access. Ongoing monitoring will occur to see if intended results were



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achieved. If this area was deemed a success, future strip thinnings will occur on portions of the cedar acreage. Additionally, some of the larger stands in sensitive areas will be evaluated for passive management to develop into old growth forest.

Red Pine

Even-aged management will occur on the red pine plantation. The stand is currently due for a first thinning. This first thinning will be set up in the summer of 2013. Every fifth row will be removed for equipment access with trees individually marked in the remaining rows. This planation will be thinned every 10 years. The rotation age for the stand is 100 years old.

Miscellaneous forest types

The remaining acreages are a mix of balsam fir, swamp hardwoods, hemlock, black spruce, tamarack, red maple and red oak. With the exception of the hemlock, most of these miscellaneous types are rather small. Timber sales on these stands will only occur if adjacent hardwood and aspen stands are being harvested. These small stands will be evaluated for harvest, and if feasible due to easy access or the mature nature of the stands, they will be treated. Hemlock will be passively managed with the goal of allowing it to develop into old-growth forest and protecting the watershed. Exceptions pertain to the edges of stands on upland sites that offer potential for some regeneration.

All stands

Protect the stream corridor and spring ponds by maintaining proper BMP buffers.
Identify invasive species and implement practices to eliminate/minimize impact to property.

Plover River Woods Natural Area Prescriptions

As stated in this plan, the natural area was designated for its unique natural communities and understory plant composition. The area will be used as an ecological reference area and future management is for old-growth characteristics. An interdisciplinary team from fisheries, forestry, wildlife and endangered resources shall be consulted before any on ground management occurs. In stream fishery work is not affected by the natural area designation.

The northern hardwood stands have a managed old-growth classification. Although the stands currently are not considered old growth by definition, in the future they will transition from old forest to old-growth forest. They will be managed with the long term goal of the development and maintenance of old-growth attributes where limited management practices and product extraction are allowed. Harvesting will be applied to enhance and accelerate old-growth compositional, functional, and structural attributes. Traditional single-tree selection stocking guides will not be applied regularly to the management of these stands since these guidelines typically have an upper end maximum diameter limit and are usually entered every 10-15 years. Timber sales that occur in the natural area will have a 20 year re-entry period and a concerted effort will be in place to develop larger diameter trees sooner. Currently there is one large timber sale marked and ready for advertisement and harvest. An interdisciplinary team has met a few times in the field and all parties have approved the sale. In the short term future, the hardwood stands east of the Plover River will be set up for harvest next.

The wet mesic stands, mainly cedar, swamp hardwoods and hemlock will not be actively managed. These stands are primarily adjacent to the Plover River and will be left to develop naturally into an old-growth forest.

Additional Resources and Links:



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State of Wisconsin Department of Natural Resources Interim Forest Management and Planning Directive

<http://intranet.dnr.state.wi.us/int/land/div/InterimPlanning/>

State of Wisconsin Department of Natural Resources Old-growth and Old Forests Handbook

<http://intranet.dnr.state.wi.us/int/mb/handbooks/24805/>

Approvals:

Regional Ecologist Date

Forester Date

Property Manager Date

Area/Team Supervisor Date