



Interim Forest Management Plan

Property Identifiers

Property Name: **Richard A. Hemp Fishery Area (Tomorrow River Fishery Area)**

Forestry Property Code: **5009 - Compartments 201, 202, 203, 204, 205, 206 and 207**

County: **Portage**

Townships: **New Hope, Sections 7, 17, 18, 19, 30, 31**
Sharon, Section 13
Stockton, Sections 24, 25
Amherst, Sections 5, 8, 9

Property Acreage: **1,322 Acres**

Master Plan Date: **1977**

Property Manager: **Tom Meronek**

Part 1: Property Assessment

General Property Description:

The Richard A. Hemp Fishery Area (Tomorrow River Fishery Area) is located in Northeast Portage County Townships of New Hope, Sharon, Stockton and Amherst. The area was initially identified by the Wisconsin Conservation Commission in 1958 as high priority watershed area and its project boundaries were identified. Since then properties within the project boundary were and continue to be obtained to protect the two main water bodies flowing through it in particular the Tomorrow River and its tributary, Poncho Creek along with the wetlands, spring ponds and minor tributaries associated with them. Both are considered prime, productive, naturally regenerating trout streams and have exceptional water quality. Since 1958 properties have been purchased or donated by/to DNR to meet the property management goals. Current DNR ownership is 1,322 acres.

The primary management goals for this property are to protect, perpetuate and enhance the watershed and the associated cover types, provide multiple use recreation by the public and timber management. Past and current management activities include the installation of in-stream habitat devices and vegetation management along the waterways to improve trout reproduction, to prevent excessive shading and to stabilize the banks with native grasses, timber harvesting and access improvement. Much of the stream improvement has been completed by local volunteers and conservation clubs.

The property lies in both the Central Sand Hills and Forest Transition Ecological Landscapes with the majority being in the Central Sand Hills Ecological Landscape. Further information on the Ecological Landscapes and Land Type Association of Wisconsin associated with this property can be found at the following website: <http://dnr.wi.gov/topic/landscapes/>.

The primary cover types include swamp hardwoods, oak, aspen, lowland and upland herbaceous vegetation and white pine with secondary types being white pine, red maple, hemlock, northern hardwoods, red pine, white spruce and tamarack.

The primary soil types are sandy loam and muck with other types being loamy sand and poorly drained mineral soils. These soils are capable of supporting a wide variety of timber types and herbaceous vegetation.



Interim Forest Management Plan

The sandy loam soil characteristics of this region allow for good infiltration of precipitation, storage and percolation of ground water. A relatively thin mantle of soil (+/- 100') covers the granite rocks below. The property is gently to steeply rolling.

The Tomorrow River and its main tributary, Poncho Creek, join in the upper one third of the property and together drain the Eastern Slope of the North-South terminal glacier moraine extending through Central Portage County. Groundwater, spring seepage, several small feeder streams and runoff from the watershed contribute to the base flow of the Tomorrow River.

Prior to State of Wisconsin ownership, the land use history includes agriculture, timber management, hunting, fishing and grazing.

Natural Heritage Inventory and Wildlife Action Plan: Endangered, Threatened, Special Concern Species or Species of Greatest Conservation Need (SGCN):

Natural Heritage Inventory screening is conducted before any land management activities are undertaken. The Natural Heritage Inventory identified one federally endangered and one state threatened species on or in the vicinity of the Richard A. Hemp Fishery Area. Additionally special concern plant species and uncommon / rare lichens are also known from the property.

Species of Greatest Conservation Need (SGCN):

The Wildlife Action Plan identifies several priority species/ natural community opportunities in both the Central Sand Hills and Forest Transition Ecological Landscapes. The following are *potential* species and natural communities that could be managed for at the Richard A. Hemp Fishery Area:

Forest Transition Ecological Landscape	Central Sand Hills Ecological Landscape
<ul style="list-style-type: none"> Red-shouldered hawk Northern Goshawk American Woodcock Black-billed Cuckoo Least Flycatcher Veery Wood Thrush Golden-winged Warbler Black-throated Blue Warbler Canada Warbler Solitary Sandpiper Louisiana Waterthrush Four-toed Salamander Mudpuppy Pickeral Frog Wood Turtle Eastern Red Bat Silver-haired Bat Northern Long-eared Bat Hoary Bat Northern Flying Squirrel Woodland Jumping Mouse Grey Wolf Northern Mesic Forest Northern Wet-Mesic forest Northern Wet Forest Coldwater Streams 	<p data-bbox="886 1150 1300 1178">Same as for Forest Transition plus:</p> <ul style="list-style-type: none"> Whip-poor-will Blue-winged Warbler Red-headed Woodpecker Central Sands Pine-Oak Forest



Interim Forest Management Plan

Archaeological and Historical Sites:

There are no known Archaeological or Historical sites on the Richard A. Hemp Fishery Area. Archeological and Historical resource checks are made prior to any property management and appropriate are taken to protect those resources.

Invasive Species:

Invasive species on the Richard A. Hemp Fishery Area are as follows:

- Spotted Knapweed
- Glossy and Common Buckthorn
- Autumn Olive
- Garlic Mustard
- Honeysuckle
- Japanese Barberry
- Black Locust
- Box Elder
- Prickly Ash

Overall invasive species are not a major problem on the Richard A. Hemp Fishery Area. Of the invasive species the most abundant are Prickly Ash, Box Elder, Spotted Knapweed, Autumn Olive and Garlic Mustard. There are isolated hotspots of some of these species. Management of the property will include measures to eliminate and or reduce the occurrence and spread of the above listed invasive species and any other invasive species that may be identified on the property.

Primary Public Uses:

- Hunting – white-tailed deer, bear, ruffed grouse, woodcock, turkey, waterfowl, squirrel, rabbit, fox, coyote
- Trapping
- Hiking
- Cross Country Skiing
- Wildlife Viewing
- Fishing
- Bird Watching
- Berry Picking
- Canoeing

Biotic Inventory Status:

A Rapid Ecological Assessment focusing on rare plants, rare animals, and high quality natural communities has not been completed for this state property. However, cursory work has identified an area of exceptional conservation value and proposed in 2011 for State Natural Area status. This area was identified based on its size, context, condition, and composition of the forested stands within it which offer excellent opportunities to begin to develop old forest with eventual old growth attributes.

Deferral/Consultation Area Designations:



Interim Forest Management Plan

Because there has been no Rapid Ecological Assessment completed for this property focusing on rare plants, rare animals, and high quality natural communities, there are no subsequent formal (MC 1750.15) deferral or consultation sites.

Property Context/Opportunity:

This property consists of approximately 1322 acres of which more than a quarter, or ~355 acres is 98 years old or older. This represents an opportunity to begin to develop old forest attributes primarily through active forest management as well as some passive management. Many parcels lie within a mostly forested context which contributes more ecological function to these embedded older forest blocks. These areas can provide habitat that is especially beneficial to species that utilize large trees, large cavity trees, large snags, and large downed coarse woody debris which is limited on a statewide basis and especially limited in Portage County. Additionally some parcels lie within a more fragmented context providing opportunity to develop younger forest for both game and non-game species.

The Richard Hemp Fishery Areas consists of 76% productive forest land and 24% non-forested acreage. The non-forest acreage consists of upland and lowland grass and brush. The following is a breakdown of the percentages of forested and non-forested timber types.

Current Forest Types, Size Classes and Successional Stages:

<u>Current Cover Types:</u>	<u># of Stands</u>	<u>Acres</u>	<u>% of Cover Type</u>
Swamp Hardwoods	16	331	24%
Oak	16	255	19%
Aspen	11	138	10%
Herbaceous Vegetation	3	118	09%
White Pine	10	90	07%
Lowland Brush – Alder/Willow	4	63	05%
True Grasses	5	72	05%
Red Maple	3	59	04%
Northern Hardwoods	3	43	04%
Hemlock	3	30	02%
Lowland Grass	3	32	02%
Red Pine	7	31	02%
Tamarack	2	24	02%
Lowland Herbaceous Veg.	1	9	01%
Right of Way	1	4	01%
Swamp Conifer	1	10	01%
Upland Brush	2	12	01%
White Spruce	1	1	01%
Totals		1322	100%

- The majority of the aspen is 17-32 years old with some being 53-62 years old.
- The majority of the oak is a mix of red, black and white oak and is 98-110 years old with some being 68-98 and 120 years old.
- The majority of the swamp hardwoods are 75- 98 years old with some being 20 and 108-145 years old.
- The majority of the white pine is 106-115 years old with some being 31- 60 years old.
- The majority of the red pine is 26-30 years old with some being 46-75 years old.
- The majority of the hemlock is 80 -110 years old.
- The majority of the red maple is 31-40 years old and 95 years old.
- The majority of the tamarack is 105 years old.



Interim Forest Management Plan

Part 2: IFMP Components:

Property Management Objectives:

The Richard A. Hemp Fishery Area is managed to protect, perpetuate and enhance the watershed it encompasses including the rivers, creeks, spring ponds and wetlands and the fishery and wildlife associated with the watershed. Management of the uplands associated with and adjacent to the wetlands will be done in a manner consistent with the above management objectives. Forest management objectives include maintaining existing forest types, conversion of some forest types and developing a diversity of age classes including both young and old forest areas for both game and non-game species. This will largely be accomplished through sustainable silvicultural systems that will increase the diversity and structural complexity of the wildlife habitat while at the same time minimize disturbance to seepage and riparian areas along the stream corridors and associated wetlands. Many of the wetter areas will be passively managed due to the sensitive nature of these areas as well as the lack of operability.

Management decisions regarding old or young forest development will largely be based on existing age, stand/compartments context, tree species composition, tree and site capability and local occurrence. Stands with good regeneration potential (such as aspen, red maple and oak) will generally have young forest development as an overall goal. Stands containing longer lived tree species and are on sites capable of growing trees on longer rotations (white pine, northern hardwoods) or stands on wet sites (swamp hardwood) and or that contain species that are more difficult to consistently regenerate (hemlock, tamarack, swamp conifer) will have an older forest development as the overall goal. This will primarily be accomplished in the "East Old Forest Corridor" that has additional prescriptions (beyond prescriptions by type) and mapped area identified below.

Property Prescriptions:

Swamp Hardwood – 24% or 331 Acres:

Swamp hardwoods is the most abundant forest type on the property much of which lies directly adjacent to the Tomorrow River and/or the Poncho Creek or is in some way associated with the wetlands. These areas may be managed for forest products however due to the sensitive nature of the watershed each stand will be carefully evaluated for harvest as it relates to the watershed. Some of these stands will be passively managed or managed on extended rotations due to the adverse effects to the watershed.

Swamp hardwoods stands that are inoperable or where harvesting will negatively impact the watershed will be passively managed. Swamp hardwood stands deemed operable will be managed using generally accepted silvicultural practices. Some of the stands will be managed on extended rotations to promote older forests which are important for many interior song birds (SGCN) identified in the Central Sand Hills and Forest transition Ecological Landscapes. The length of the extended rotations will be determined by each site and the level it can sustainably grow timber. Cavity trees, snags, and large downed coarse woody debris are an important habitat component of this forest type so some mortality is desired. This older forest will provide unique habitat, including compositional, structural, and functional attributes limited on the surrounding landscape. Stands containing more than 10% white or black ash will be managed in a way that promotes swamp hardwood species other than ash in anticipation of the arrival of the Emerald Ash Borer. Salvage sales may be applied in all operable stands if EAB (Emerald Ash Borer) is found in the immediate area.

Oak – 19% or 255 Acres:

Oak is the second most abundant forest type on the property and is mostly associated with the rolling uplands especially flatter areas or on slopes with a southerly aspect. Oak regenerates well on these sandy loam soils commonly associated with the property and because of current lower deer populations. These stands will be managed in a manner which perpetuates oak on the property using generally accepted silvicultural practices for this covertype. Oak stands that are converting heavily to more shade tolerant species will be evaluated for oak regeneration potential and will either be converted to species other than oak most likely northern hardwoods, red maple or white pine or treated in a manner that will assure oak regeneration. Management will depend on site specific conditions. Some oaks will be retained (not harvested) as legacy / old growth trees for wildlife, as cavity trees, for aesthetics, for green



Interim Forest Management Plan

tree retention and/or to maintain diversity in some of the oak stands. Rotation ages vary from 65 – 100+ years depending on oak species and site capability.

Aspen – 10% or 138 Acres:

The aspen cover type is the third most abundant forest type on the property and is mostly associated with upland sites. Due to the lower percentage of aspen on the property and its outstanding wildlife food and cover potential the aspen cover type will be maintained and expanded where applicable using even-aged management techniques in particular via coppice regeneration harvests. Rotation ages will range from 40 - 65 years depending on aspen species and site capabilities. Age-class diversity will be achieved by flexing rotation age within the compartment as well as across the landscape. Aspen will be managed to promote opportunities for early-successional wildlife species especially SGCN and others identified as inhabitants of the Central Sand Hills and Farm Forest Transition Ecological Landscapes and to maintain the aspen type on the landscape.

Red Maple – 4% or 59 Acres:

The red maple stands will be managed on an even aged basis using an array of silvicultural accepted practices to promote the red maple type and possibly promote a variety of age classes within the stands. Care will be taken to protect the watershed including spring ponds where red maple stands are found growing in the lower areas. Rotation ages will vary but will generally be 80 – 100 years depending on the soil type and site capabilities.

Northern Hardwoods – 3% or 43 Acres:

The northern hardwood stands will be managed using un-even aged management with all age selection harvests evaluated every 15 years to maintain vigorous growth, manipulate composition and structure, and produce high quality timber. Standard silvicultural systems will be used to grow relatively large and older trees. 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 as well as allow for the potential regeneration and growth of less shade tolerant trees such as yellow birch which has been identified as declining in this region.

Hemlock – 2% or 30 Acres:

The hemlock stands will be passively managed with the exception of very light thinnings and/or overtopping hardwood and other tree removal to accelerate the development of much larger hemlock. Another goal of this type of management would be the protection of the watershed and allowing it to develop into an old forest with some old growth forest characteristics. Cavity trees, snags, and large downed course woody debris are an important habitat component, some mortality is desired. This older forest will provide unique habitat, including compositional, structural, and functional attributes limited on the surrounding landscape. Exceptions pertain to portions of stands on more upland sites that offer potential for some regeneration. In these cases the type will be managed on an even-aged basis using generally accepted silvicultural practices.

Red and White Pine – 9% or 121 Acres:

There are both natural and planted red and white pine stands. The natural stands will be thinned to promote large diameter trees for both wildlife and aesthetics. Small groups or individuals may be retained as legacy trees or to develop into legacy trees and provide structural and compositional variability within stands dominated by other species. The plantations will be thinned using standard silvicultural systems suited for pine plantations. The order of removal will be followed to attain a more natural appearing forest of pines and to promote development of older pine trees. The upper age limit of the older pine or at the point one would consider rotation varies from 65 – 90+ years for red pine and 80 – 150+ years for white pine depending on soil type and site capabilities. Each stand will be monitored for longevity and stands may be rotated when trees show signs of decline due to age and /or insect or disease infestation. Most red pine stands will naturally convert to oak or white pine through continuous silvicultural thinnings. Eventually the pine will be a component of the newly established stand and may provide opportunity for big tree silviculture with some old growth characteristics. With this in mind, the pine stand may never be completely rotated.



Interim Forest Management Plan

Spruce/Fir/Tamarack/Swamp Conifers – 4% or 35 Acres:

Passively manage the few acres of this type unless opportunities arise to manage sustainably without adverse impact to the property including the watershed.

Grasslands/Agricultural:

Consider afforestation of some of these sites to provide greater forest connectivity.

East Old Forest Corridor (Comp. 201 – Stands 5- 7, 19 and 38, Comp. 202 - All, Comp. 203 – Stands 5-10.

A corridor on the east side of this property has been identified as a larger contiguous block of older forest to be managed in a manner which will promote and maintain these High Conservation Value Forest (HCVF) attributes and the Species of Greatest Conservation Need (SGCN) associated with it. The above prescriptions will be followed for each cover type in this corridor however listed below are additions for management to further promote the unique aspects of the corridor. They are as follows:

- Create a multi-layered canopy throughout the corridor via sound forest management. This will largely be accomplished via light to moderate thinnings from below and the creation of larger openings for oak, yellow birch, hemlock, and other favorable species regeneration.
- Large tree and/or legacy tree retention will be the focus in all stands.
- Oak/maple Stands: Oak stands where the maple presence is heavy and the chances for managing for oak are minimal will be managed to promote maple / northern hardwoods. Many of the oaks in these stands would be retained as "legacy or retention" trees and would never be harvested. These stands would eventually develop structural and compositional characteristics of extended rotation northern hardwood stands. This would provide habitat for SGCN that need mature upland forests such as those identified as occurring in the Central Sand Hills and Forest Transition Ecological Landscapes.
- Oak stands with or without a mix of northern hardwoods and pine that have good oak regeneration potential will be managed to regenerate oak. The Rosholt sandy loam soil associated with these site would be capable of carrying the most mature oak to around 120 years old. The goal here would be to manage the stands to regenerate oak as well as retain mature oak for an extended period of time using standard silvicultural practices for oak. This would provide habitat for SGCN that need mature / big trees of upland forests such as those identified as occurring in the Central Sand Hills and Forest Transition Ecological Landscapes as well as those that need dense new growth below the larger trees. Some of the oaks would be left as "legacy or retention" trees in these stands to develop into snags or coarse woody debris. The amount of big trees left would be determine on a stand by stand basis.
- Create feathered edges of approximately 100 yards wide or less where fields and forests come together to promote brushy young forest to improve wildlife habitat for species that utilize both edge and interior forests.

All stands:

- Utilize BMP's for Water Quality to protect streams and wetlands when conducting timber sales.
- Identify invasive plant species and implement control practices such as prescribed fire, hand pulling, chemical and mechanical control to eliminate or reduce negative impacts.
- Utilize BMP's for Invasive Species to help limit the introduction and spread of invasive species when conducting timber sales
- Retain reserve/legacy trees as groups or individuals throughout the property within harvested stands



Interim Forest Management Plan

- Follow DNR's Species Guidance Documents (<http://dnr.wi.gov/topic/EndangeredResources/guidance.asp>.) to protect rare species including both rare plants and animals. In cases where species guidance documents haven't yet been developed, avoidance to rare species will occur via practices such as time of year restrictions, modified harvest boundaries, and/or consultation with rare species experts.
- Identify and protect any Archeological or Historical sites prior to management activities and plan.

Approvals:

Armond O'Boyle 6/5/14
Regional Ecologist West Central Region Date

K. J. Lee 06/05/14
Forester Portage County Date

[Signature] 6/5/14
Property Manager for Richard A. Hemp Fishery Area Date

Shirley Bargander 6-5-14
Area/Team Supervisor Portage County Date