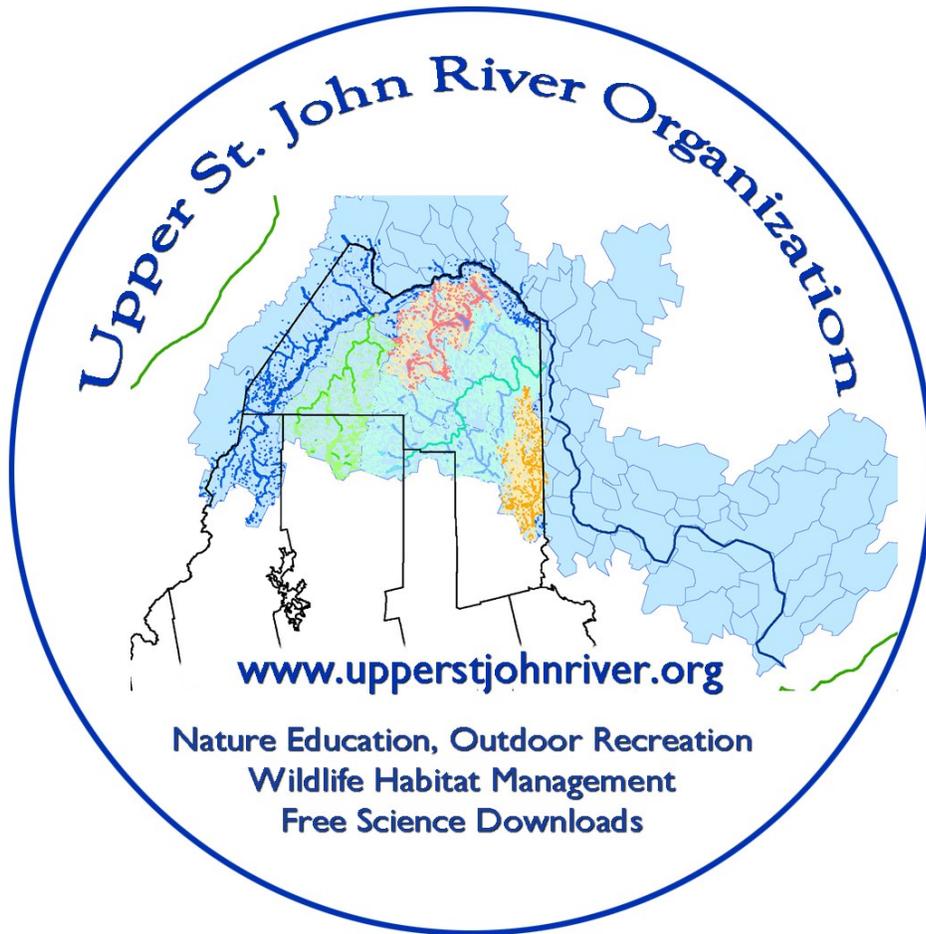


Appendix A: Standards for Wildlife Habitat & Biodiversity Assessments and Management



**Standards for Wildlife Habitat & Biodiversity
Assessments and Management**

Assembled by Steve Young, Certified Wildlife Biologist

January 29, 2019

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1 Introduction – the 5W’s

The Upper St. John River Organization (USJRO) has compiled and adopted these Standards and Guidelines for wildlife habitat assessments and management, and as a foundation for nature education.

We have partnered with Federal and State Natural Resource Agencies to meet common goals including the US Fish & Wildlife Service (Partner’s Program), the USDA Natural Resources Conservation Service (NRCS), Soil and Water Conservation Districts, the Maine Department of Inland Fisheries and Wildlife (MDIFW).

These **Standards and Guidelines** were assembled from the best available natural science information, including State and Federal habitat definitions and assessments. Many of the guidelines are related to forest habitats since most of Maine is forested if it is not farmed or developed.

Many of the reference documents are available for free download from the USJRO website (www.upperstjohnriver.org).

1.1 Who – the USJRO

The Upper St. John River Organization (USJRO) has partnered with the Aroostook County Conservation Association (ACCA), local communities, and others on wildlife habitat restoration and management projects for over a decade. CedarWorks, a Maine company that makes their products with Northern White Cedar, donates thousands of Northern White Cedar seedlings to the USJRO and ACCA annually which we distribute for free locally. More information on our organizations is available from our website www.upperstjohnriver.org.

1.2 What - Biodiversity and Habitat Conservation, Restoration, and Management

The USJRO is interested in acquiring properties and in holding conservation easements for biodiversity and Wildlife Habitat Conservation, Restoration, and Management.

The USJRO is concerned about increased clearcut type forest harvesting, decline in forest habitats, and conversion of natural forest habitat types with mono-culture plantations. There is a lack of clear definitions of “habitat” and habitat “management”, and most current plans are short term and non-binding.

The USJRO is interested in owning land and holding conservation easements for the purpose of providing wildlife habitat and biodiversity, and conserving soil and protecting water quality into the future. The USJRO is pursuing this 501c3status for this purpose.

We will use latest tools available for habitat assessments and management such as geographic information system (GIS) ecosystem maps, and have adopted several well respected documents as part of our Standards; many which are available for free download through our website.

Forest parcels will be managed to maintain forest stand types and long-lived tree types, and provide general forest habitat, winter shelter habitat, and biodiversity.

1.3 Where – The St. John River Drainage

The USJRO may acquire properties or hold conservation easements in various locations in northern Maine and in the St. John River Drainage are in Quebec and New Brunswick as opportunities arise.

The USJRO supports and encourages farming. Many habitats associated with farmland are important to wildlife. We will focus habitat management activities in farm areas on maintaining alder and other vegetation in field edges, delayed mowing to benefit grassland birds, and establishment of trees and shrubs along streams and between fields for wildlife habitat, soil conservation, and water quality protection.

Many of our native wildlife in Maine and the Maritimes of Canada can be supported by habitats of an acre in size or less; however, other species have habitat requirements of up to 1,000 acres or more.

1.4 When – for Now and Into The Future

Management activities are intended to be long-term. Many of our longer lived tree types associated with mature forests live for centuries, and grow very slowly. Forested areas that are clearcut take 30-35 years to provide General Forest Habitat. Long-lived and valuable trees such as Northern White Cedar can take a century or more to grow back even if retained in future harvests. Habitat objectives included in this document were developed to allow stable levels of habitat and biodiversity on each parcel, regardless of size.

The USJRO is interested in owning land and holding conservation easements for the purpose of providing wildlife habitat and protecting water quality into the future.

1.5 Why – We See the Need, and Feel That It Is Our Responsibility to Do What We Can

The USJRO believes that clear standards and long-term commitments are essential for a land trust to improve and sustain habitat

Lord Kelvin said, “If you don’t measure it, you can’t manage it. Aldo Leopold, the father of wildlife conservation said “the first rule of intelligent tinkering is to keep all the parts”. We feel that we have to have specific Standards for measurement and management of our ecosystems.

Clearcut type harvests reset forest development stage to zero. After clearcut, properties are sometimes converted to monoculture black spruce (or other) plantations. Plantations have low value to habitat and biodiversity. When left to regenerate naturally, direct sun causes clearcut sites to become overstocked with competing regenerating vegetation including shrubs, and sprouts from roots from harvested trees. Thinning of regenerating vegetation while retaining slower growing long-lived trees is helpful to restore mature forest biodiversity.

We need areas with certain areas with clear management goals to maintain and enhance our long-lived trees such as Northern White Cedar, Eastern Hemlock, Sugar Maple, Yellow Birch, Beech (healthy), and White Pine. We will call these areas **Habitat Management Areas**, where wildlife habitat, biodiversity, and soil and water conservation are the primary goals, following the Standards contained in this document.

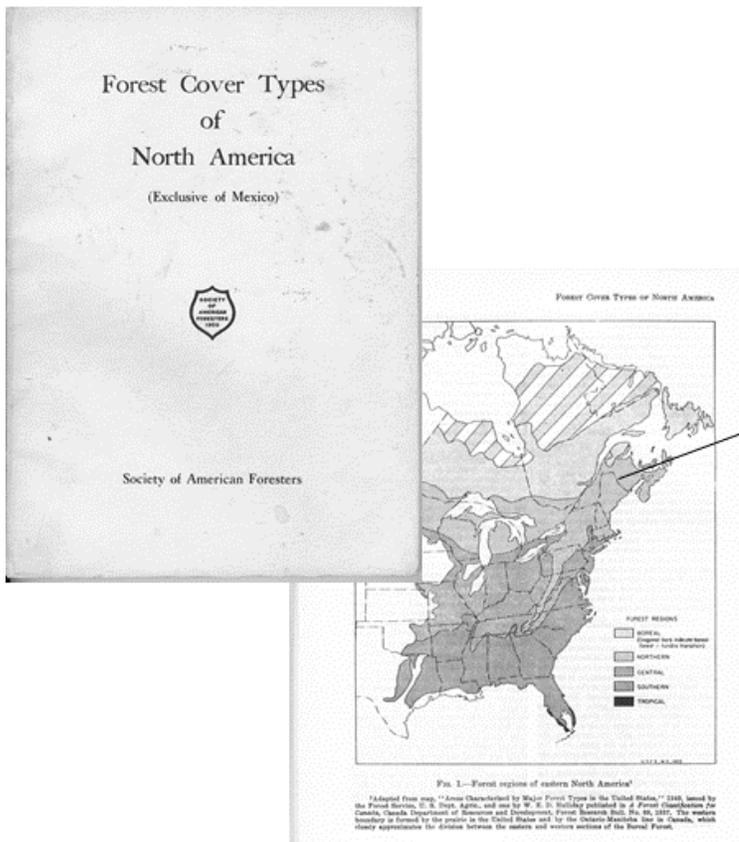
2 Standards for Wildlife Habitat and Biodiversity Assessments

The USRO adopts these standards for wildlife habitat definitions and assessments

2.1 Society of American Foresters (SAF) Forest Cover Types of North America

This publication of the SAF from 1969 and 1970 describes **forest cover types** and associated vegetation in common terms. This system describes 25 forest types in the Northern Forest Ecoregion (or Acadian Forest Ecoregion), which contains Maine and the Maritimes of Canada.

A new ecosystem mapping in Maine is equivalent to this forest typing with different names. This new ecosystem mapping is described in the next section.



Forest Cover Types of Eastern North America

TABLE 1.—LIST OF THE FOREST COVER TYPES OF EASTERN NORTH AMERICA SHOWING ARRANGEMENT BY FOREST REGIONS AND MOISTURE RELATIONSHIPS

Type number	Cover type	Type groups	
		S.A.F.	U. S. Forest Survey
GENERAL FOREST REGION			
Dry	1 Jack pine		Coniferous
	2 Black spruce—white spruce		Coniferous
	3 Jack pine—paper birch		Mixedwood
Fresh to moist	4 White spruce—balsam fr		Coniferous
	5 Balsam fr		Coniferous
	6 Jack pine—black spruce		Coniferous
	7 Black spruce—balsam fr		Coniferous
	8 Jack pine—aspens		Mixedwood
	9 White spruce—balsam fr—aspens		Mixedwood
	10 Black spruce—aspens		Mixedwood
	11 Aspen—paper birch		Hardwood
Wet	12 Black spruce		Coniferous
	13 Black spruce—tamarack		Coniferous
NORTHERN FOREST REGION			
Dry	14 Red pine		Coniferous 11
	15 Northern pine oak		Coniferous 11
	16 Red pine		Hardwood ² 18
	17 Star oak		
Fresh to moist	18 Aspen		Hardwood 20
	19 Pin cherry		Hardwood 20
	20 Paper birch		Hardwood 20
	21 Gray birch—red maple		Hardwood 20
	22 White pine—northern red oak—white ash		Mixedwood 11
	23 White pine		Coniferous 11
	24 White pine—hemlock		Coniferous 11
	25 Hemlock		Coniferous 12 or 19
	26 Hemlock—yellow birch		Mixedwood 19
	27 Sugar maple—beech—yellow birch		Northern Hardwood 19
	28 Sugar maple—basewood		Hardwood 19
	29 Black cherry—sugar maple		Hardwood 19
	30 Black cherry		Hardwood ² 19
	31 Red spruce—yellow birch		Mixedwood 12
	32 Red spruce—sugar maple—beech		Northern Hardwood 19
	33 Red spruce		Coniferous 12
	34 Red spruce—balsam fr		Coniferous 12
	35 Red spruce—Fraser fr		Coniferous 12
	36 Paper birch—red spruce—balsam fr		Mixedwood 12 or 20
	37 White spruce—balsam fr—paper birch		Mixedwood 12
	38 Balsam fr		Coniferous 12
Wet	39 Black spruce		Northern Coniferous 12
	40 Northern white cedar		swamp Coniferous 12
	41 Tamarack		swamp Hardwood 12
	42 Black ash—American elm—red maple		Hardwood 12
CENTRAL FOREST REGION			
Dry	43 Post oak—black oak		Oak—Hardwood ² 16
	44 Scarlet oak		Hickory 16
	45 Bar oak		Hardwood ² 16
	46 Bear oak		Pitch 16
	47 Chestnut oak		pitch—oak 16
	48 Pitch pine		11 or 14

2.2 Northeastern Terrestrial Wildlife Habitat Classification (NETWHC) System

A GIS map layer of all ecosystems in Maine was created during the NETWHC project (also called NETHC). These ecosystems are equivalent to the Society of American Foresters (SAF) forest community types discussed in the previous section.

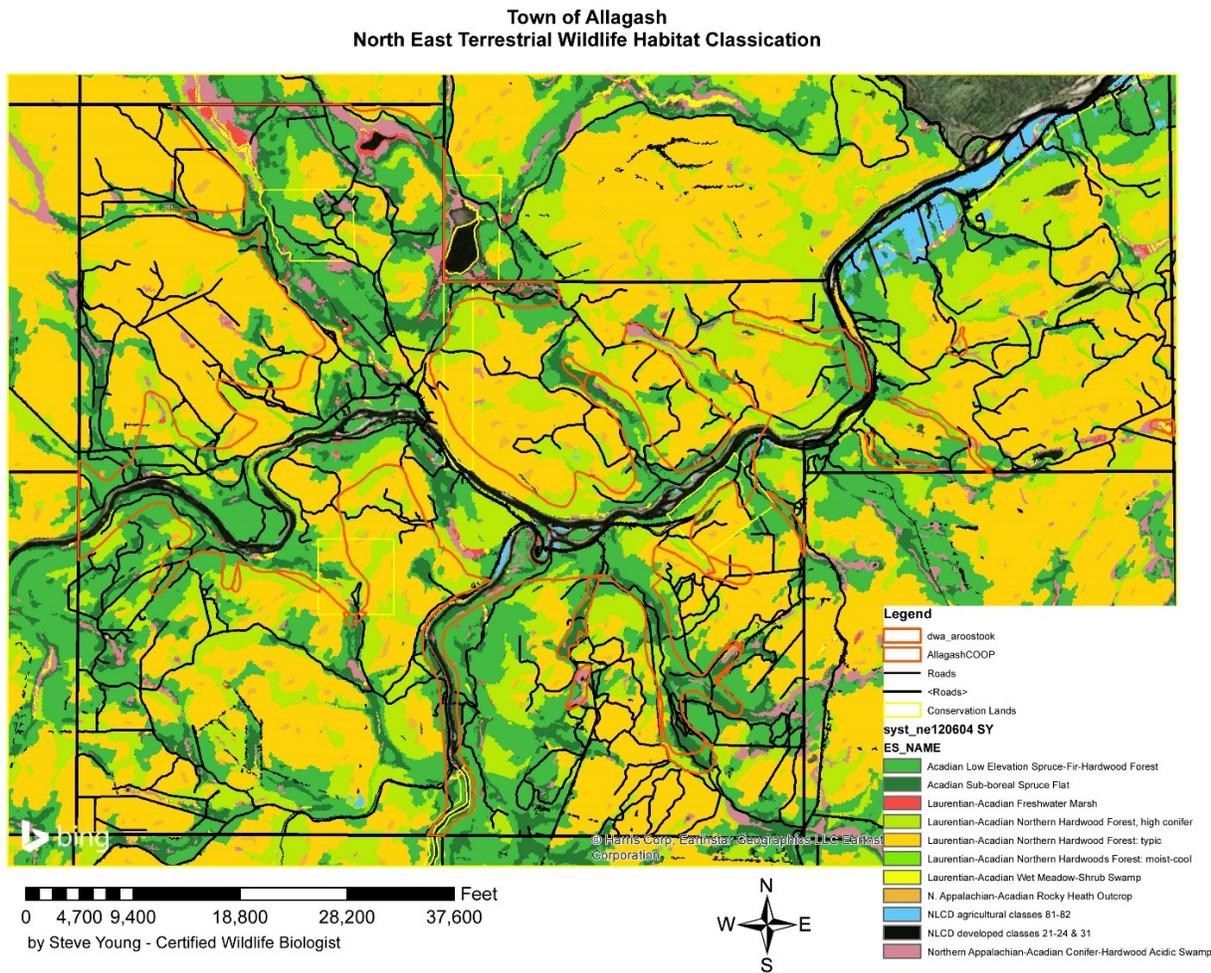


Figure 1. NETWHC Ecosystem Habitat Maps are useful for Habitat and Biodiversity Monitoring and Management

Maps of ecosystems are not currently available for New Brunswick and Quebec Canada sections of the Upper St. John River drainage. In those areas, available information such as ortho-photography or other aerial photography, and maps and inventories will be used to assign ecosystem habitat types.

2.2.1 Habitat Condition Assessments

Ecosystem habitat condition will be assessed following the NETWHC “structural modifiers” and naming system per the NE Terrestrial Wildlife Habitat Classification Final Report AND User Guide by Susan Gawler (excerpt below).

Because most habitat systems can incorporate substantial variation in vegetative species dominance, successional stage, and other characteristics that are relevant to wildlife use, the classification superimposes a set of **structural modifiers** that can be applied to any particular area on the landscape to better characterize its habitat values. Structural modifiers (detailed in the accompanying Excel sheet) are outlined in Table 6.

Table 6. Structural modifiers for habitat systems.

Forest Modifiers	Canopy cover (stocking) Evergreen:Deciduous Single vs Multi-story canopy Stand development stage Extent of shrub layer Recently burned
Shrubland Modifiers	% Shrub cover Shrub height Evergreen:Deciduous
Grassland and Herbaceous Modifiers	Closed/open/sparse cover Grass/forb height Scattered small trees
Additional modifiers for wetlands	Salt marsh: low marsh vs high marsh Presence of open water
Other special modifiers	Karst habitats

Wildlife habitat in the NETHCS can thus be characterized by (1) habitat system (or macrogroup), or (2) structural characteristics, or (3) by a combination of the two approaches (Fig. 4).

Following is the NETWHC naming system for assessments of forest habitat conditions.

Condition of Forest Ecosystems						
North Eastern Terrestrial Wildlife Habitat Classification (NETWHC) Structural Modifiers						
<i>gross cover type</i>		<i>evergreen:deciduous (as %</i>		<i>modifier values</i>		
Forest (>10% tree cover of >5m)	F	canopy cover	C	open	10-39%	1
				partial	40-69%	2
				closed	70%+	3
		evergreen:deciduous (as % evergreen)	E	<30%		1
				30-70%		2
				>70%		3
		number of canopy layers	L	single-story		1
				multi-story		2
		recently burned (detectable)	B	low-intensity		1
				high-intensity		2
		stand development	D	sapling		1
				pole		2
				mature		3
				transitional/old-growth		4
understory shrub/herb layer	U	<10%		1		
		10-40%		2		
		40-70%		3		
		>70%		4		

2.3 Natural Resources Conservation Service - Habitat Assessment Scoring

The USJRO will utilize the following USDA Natural Resources Conservation Service score sheet for forest habitat assessments. Our objective will be to maintain or enhance habitat scores.

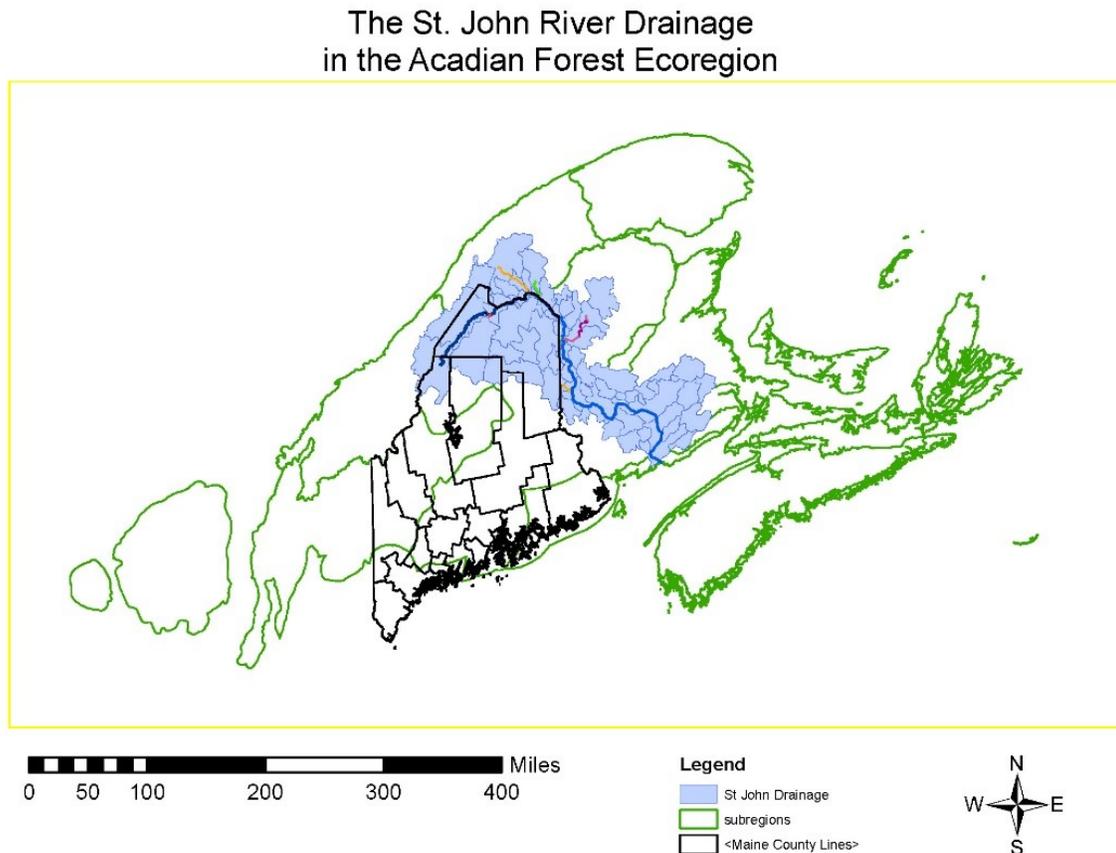
NRCS Forest Habitat Categories	Score
Overstory Diversity	
More than 5 native tree species are <i>predominant</i> in the overstory, including mast producers; the presence of an obvious, abundant and well distributed subcanopy layer.	10
2-4 native tree species are <i>predominant</i> in the overstory, including mast producers; a subcanopy is discernable, but is not widely distributed	7
2-4 native tree species are <i>present</i> in the overstory with few mast producers; subcanopy layer is generally lacking	3
Monoculture (1-2 species) dominated by a single size class	1
Understory and Groundcover Composition	
>40% cover of native shrubs, trees, vines, herbaceous or bryoid species, at least 3 <i>predominant</i> species including mast producers; invasive exotics less than 5%	10
20-40% cover of native shrubs, trees, vines, herbaceous plants or bryoid species, total of at least 3 <i>predominant</i> species including mast producers; invasive exotics less than 5%	7
<20% cover of native shrubs, trees, vines, herbaceous or bryoid species, less than 3 <i>predominant</i> species; invasive exotics 5-10%	3
Overstory shading uniformly prevents understory/groundstory development; invasive exotics greater than 10%	1
Overstory Size Class Distrition (Development Stage)	
5-15% regeneration, 30-40% sapling-pole, 35-55% in sawtimber	10
Regeneration, sapling-pole and sawtimber represented, but not within the ranges described above	7
2 size classes predominant (the dominant class comprises < 80%)	4
A single size class predominant (comprises ≥ 80%)	2
Animal and/Human Disturbance	
No or minimal disturbance: understory, ground cover and downed woody material is in excellent condition (≥ 5 10" dbh, 20 ft long logs/ac. with some bark and limbs attached)	5
Moderate disturbance is evident: understory, ground cover, and down woody material is in good condition (3 logs/ac. as described above)	3
Heavy disturbance is evident: <75% ground cover, evident browse line, down woody material is excessive or lacking, negative impacts to sensitive areas (e.g., wetland and aquatic habitat)	1
Snags or Cavity Trees	
At least 1/ac. > 20" and 2 or more/ac. > 10" dbh	5
2 or more/ac. > 10" dbh and at least 2 or more/ac. > 6" dbh	3
At least 2/ac. > 6" dbh	1
Enhancement Points - Wildlife Openings	
1 to 3% of the forested area is comprised of herbaceous openings with >80% herbaceous cover that are in the form of fully vegetated trails or access roads that are at least 30 feet wide and/or landings or other openings of 3 or fewer acres.	3

2.4 Reference Standard: Biodiversity in the Forests of Maine: Guidelines for Forest Management

This University of Maine Publication was a product of the Maine Forest Biodiversity Project and is the best single source on Maine Forest Biodiversity from the stand to landscape level. This document is available for free download through the USJRO website.

2.6 Ecoregion, Ecosystem, and Watershed GIS Map Layers and Supporting Documents

Ecoregion, sub-ecoregion, and stand-level ecosystem, and watershed (stream, lake, river) GIS layers along with supporting documents and databases describing ecology of the region have been attained and will be used in habitat management and assessments.



Details of the unique nature of sub-ecoregions is available in the Bioregion Descriptions – Appendix document (downloadable from USJRO website).

2.7 Definition of General Forest Habitat

We will consider forested areas to provide **General Forest Habitat** when there is adequate stocking of healthy trees of at least pole stage (>30ft tall) to provide ≥70% summer canopy cover. The NETWHC uses this ≥70% canopy cover standard, and we will use their naming system.

The State of Maine Standard is ≥75% canopy cover (see except from the 2005 Maine Wildlife Action Plan below), but we will use 70% to match the NETWHC standard for assessment of forest habitat condition.

UPLAND Habitat	Description
Deciduous and Mixed Forest	Forests with >75% canopy closure composed of deciduous or mixed coniferous and deciduous trees.
Coniferous Forest	Forest with >75% canopy closure composed of at least 75% coniferous trees.
Dry Woodlands and Barrens	Pitch pine / scrub oak woodlands and barrens
Mountaintop Forest (including krummholz)	Forested areas above 3,000 ft g.
Alpine	Mountain zones between the treeline.
Shrub / Early Successional and Regenerating Forest	Areas dominated by woody shrubs and/or harvested before 1991 with seedling to sapling-sized trees; forestland where >50% of the overstory has been removed.
Grassland, Agricultural, Old Field	Abandoned agricultural fields, blueberry barrens, crop fields, bare ground, grasslands (hay fields, pastures, lawns, golf courses).
Urban / Suburban	Areas where percent cover by buildings, roads, and other impervious surfaces is greater than vegetative cover.
Cliff Face and Rocky Outcrops (including talus)	Exposed bedrock, talus, bare mountain tops, gravel pits.
Caves and Mines	Documented bat hibernacula.

Figure 2. State of Maine Definitions of Habitat from the 2005 Maine Wildlife Action Plan

2.8 Habitat Definitions for Deer and other Wildlife

- Year-round resident birds such as barred owls, nuthatches, chickadees, and woodpeckers require mature forest conditions, including trees for shelter and other dead and dying trees for nesting and feeding.
- Cedar and Hemlock provide the highest quality shelter and food to wintering deer, and are very long-lived and stable, and should not be harvested in areas managed for habitat or soil and water quality conservation.
- Low-lying areas with forest cover, such as along streams or low runs between fields, are very valuable for wildlife shelter and travel corridors.
- White-tailed deer are an important symbol of the “Woods” of northern Maine. Quality habitat is critical for survival in this northernmost part of its range where they are restricted by deep snow conditions and stressed by cold and lack of quality food during long winters.
- Critical Winter Shelter Habitat is provided by a softwood canopy cover of mature trees is >70%. Forest sections with a softwood volume of >23 cords/acre of healthy trees or a softwood basal area of 150 t²/acre will be considered to provide this habitat.
- Secondary Winter Habitat provides 50-70% softwood canopy cover of mature healthy softwood trees. A softwood volume of 16-23 cords/acre of healthy trees will be considered to provide this habitat, with a basal area of 80-150ft² / acre. This habitat is often preferred by deer where southern aspect allows them bed in the Sun. Mono-culture Black Spruce plantations will not be considered to provide winter deer habitats.
- Solar aspect is important to wildlife, with southern aspect sites selected more in winter.

- Litterfall is composed of twigs, leaves, and lichens falling from the tops of mature trees in winter. This material has high nutritional value food value to deer and other wildlife.

3 Strategic Management Standards for Habitat and Biodiversity

The USJRO will use and promote the following habitat management strategies. Management of special habitats will vary.

3.1 Land Use Activities

Intended land use activities will be determined on a case-by-case basis, respecting the wishes of the landowner who gives ownership or conservation easements to the USJRO.

Some important land use issues that will be agreed upon with stakeholders are:

- Are Hunting, Fishing, Trapping, and/or Collecting allowed? If so, what restrictions?
 - Baiting, hunting with dogs, hunting from blinds?
 - Special restrictions for fishing?
- Is collection of non-timber forest products such as balsam fir tips, or other plants allowed?
 - If so, what restrictions?
- Is the public allowed? If so, what restrictions?
 - Are recreational trails allowed, if so, what types and what restrictions?
 - ✓ Walking, Biking, ATV, Snowmobile?
 - ✓ Avoid snowmobile trails through deer wintering habitats
 - ✓ Avoid wet ground with ATVs and limit trails
 - ✓ Limit use of wetland and waterside sections to prevent soil erosion and other disturbance.
- Are Timber Harvest operations allowed?
 - Habitat should be the priority.
 - The landowner or lessor must commit to Habitat Management Standards.

3.2 Forest Habitat and Biodiversity Management

- Separate sections of each habitat area should be mapped with GIS based on the map of NETWHC ecosystems, aerial imagery, soils, contours, habitat types and development stages, and other information available (see next two figures). NETWHC ecosystems can also be related to more common Society of American Foresters (SAF) forest types.

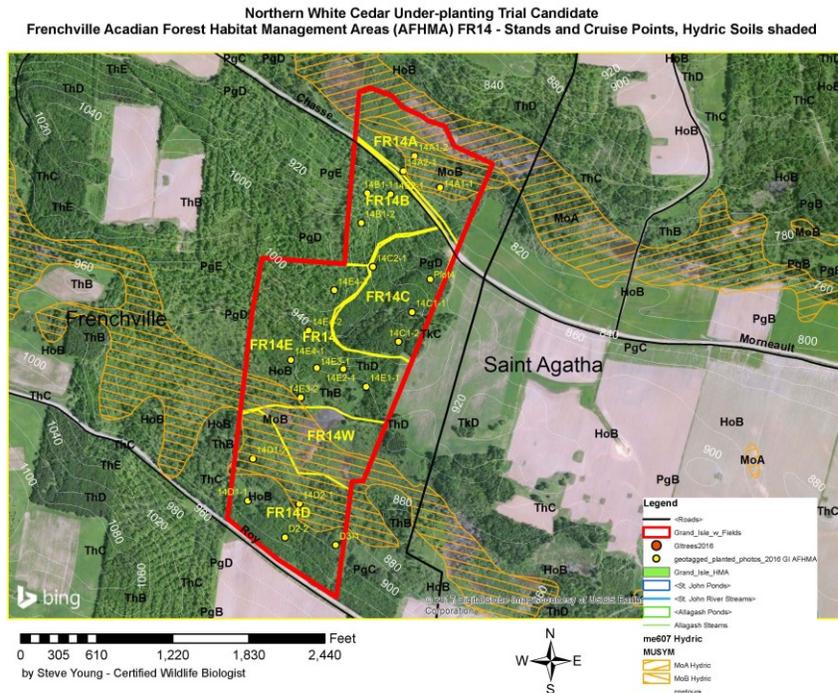


Figure 3. Photography, Contours, Soils, and other GIS layers are used to map separate sections of each parcel

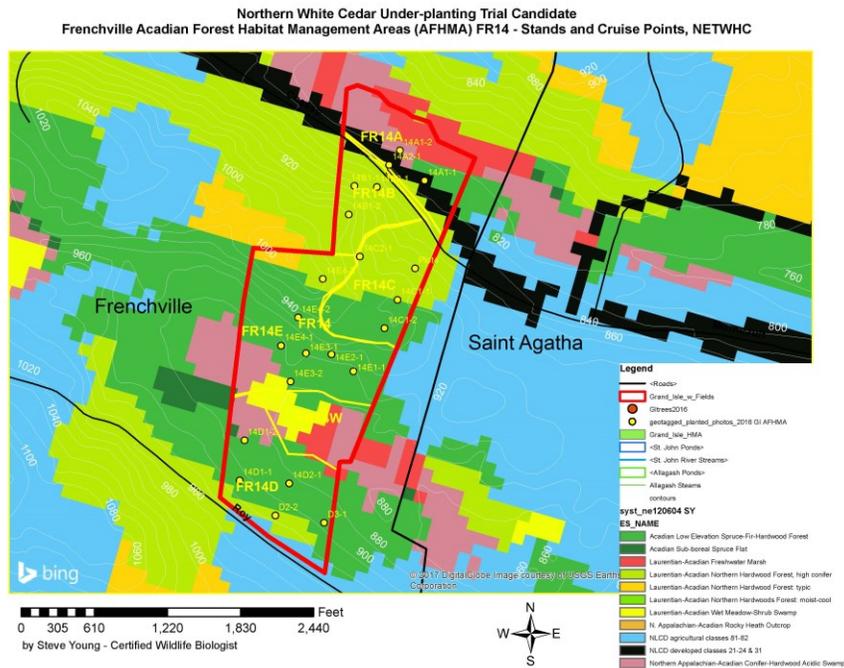
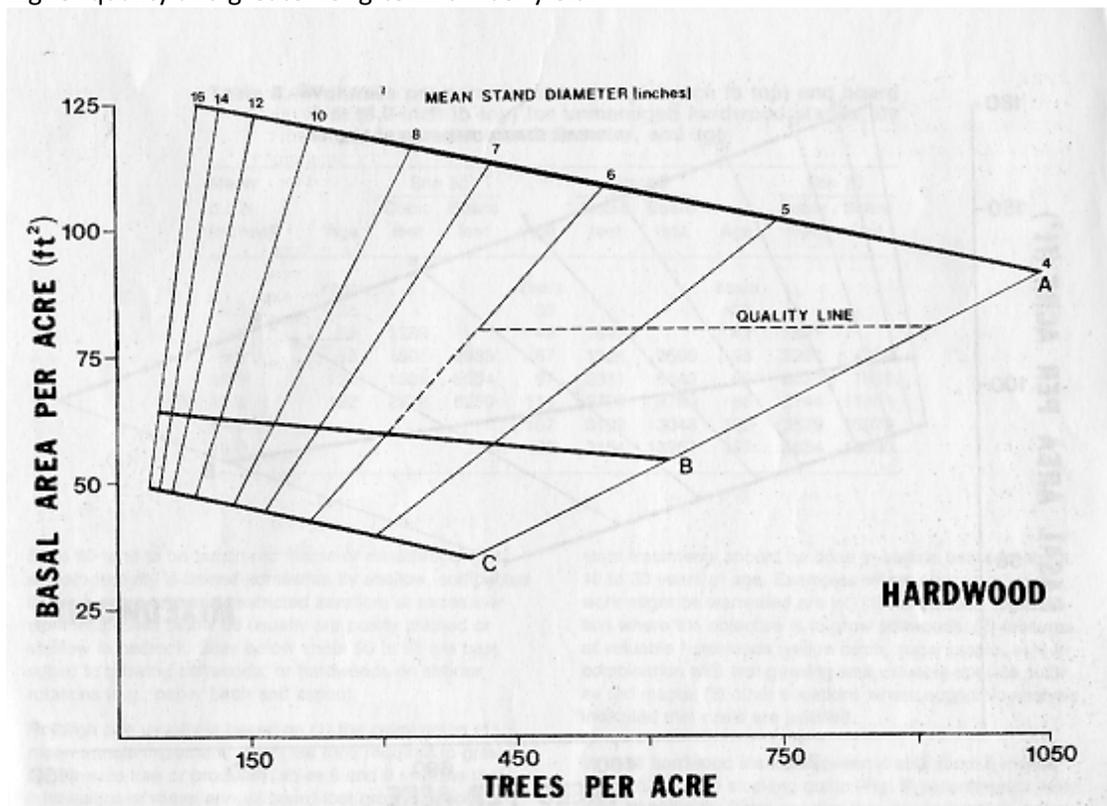


Figure 4. The NETWHC Ecosystem GIS layer is useful to map property sections

- The condition of each mapped section should be assessed using the NETWHC system and NRCS habitat scoring system described earlier. These ecosystems can also be related to more common Society of American Foresters (SAF) forest types.

3.3 Management Objectives

- Maintain General Forest Habitat that provides 70% summer canopy cover from \geq pole-stage trees (>30 ft. in height) in $\geq 75\%$ of the forested areas of the parcel at all times.
- Maintain or enhance the component of Northern White Cedar, and Eastern Hemlock.
- Maintain or enhance other long-lived native trees such as white pine, sugar maple, and yellow birch.
- Maintain or enhance the of native tree species diversity. The Acadia Forest region, which includes Maine and the Maritimes of Canada, is a mixed-wood forest zone.
- Enhance and maintain softwood shelter habitat, which begins at pole stage with at least >80 ft² softwood stocking.
- Maintain a component of dead and dying trees for habitat and biodiversity unless in conflict with safety.
- Encourage oaks for hard mast food to help offset the catastrophic decline of American Beech due to the *Necria* fungus carried by a scale insect. Maintain healthy Beech trees.
- Avoid clearcut type harvests unless intentionally wishing to maintain trembling aspen, balsam fir, or other early successional forest conditions, or in spruce or fir stand in decline where regeneration stocking is adequate for an overstory release.
- Manage tolerant (of shade) hardwood stands comprised of Sugar Maple, Yellow birch, and Beech at ≥ 80 ft²/acre quality line stocking standard to provide “general” forest habitat and for higher quality and greater long-term timber yield.



- Keep roads and road right-of-ways to a minimum and avoid sensitive or important habitats to prevent habitat loss and fragmentation, and disturbance to wildlife.

- Use small machinery or horses with maximum distance between harvest trails to minimize site disturbance and damage to non-target trees during harvest.
- When conducting harvest operations, target sprouts from old stumps, as they will not develop into long-lived quality trees, and will re-sprout and provide browse to hare, deer, moose, and mice, while reducing competition for nearby seedlings.
- Encourage use of the management areas for public education and recreation, utilizing restrictions in sensitive sections as needed, and using designated trails and interpretation as appropriate.
- Promote Silver Maple for riverside and other waterside parcels for water quality protection and wildlife habitat. Silver Maple is the dominant floodplain tree along the St. John River.

3.4 Management of Non-Forested Habitats

- Conduct delayed mowing of field areas until after August 15 to allow fledging of grassland-nesting birds (considering nutritional value of harvested field if intended for livestock feed).
- Encourage flowering plants to benefit pollinating insects through thinning of competing vegetation, tree / shrub maintenance, and plantings.
- Encourage fruit-bearing shrubs and trees through thinning of competing vegetation, tree / shrub maintenance, and plantings to benefit local wildlife.
- Maintain alder to benefit American Woodcock and other associated species.
- Support continued use of farm fields for agriculture and promote soil and water conservation and wildlife habitat corridors through maintenance or establishment of trees and other vegetation in drainage areas.

4 Areas of Special Focus

4.1 The St. John River and Furbish's Lousewort Plant

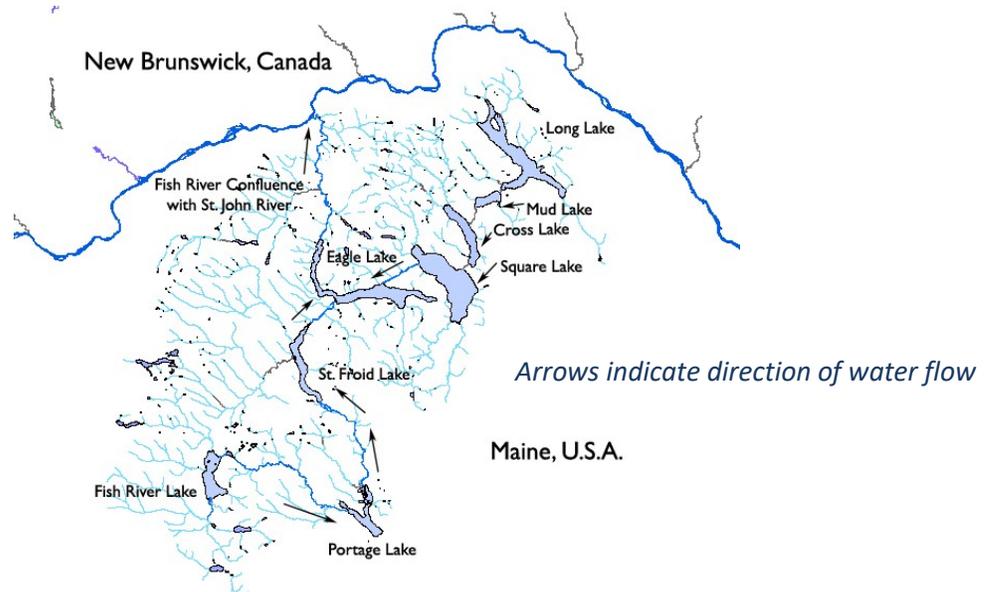
- Furbish's Lousewort is a U.S. Federally Endangered Plant that only grows along the ice-scoured banks of the St. John River.
- The US Fish & Wildlife Service has a goal of 50% of its habitat in Maine to be conserved. The USJRO will pursue land ownership and conservation easements along the St. John River in order to conserve and restore habitat areas.
- Plant diversity along the upper stretches of the river is among the highest in Maine, but this is a sensitive habitat where we should discourage vehicle traffic.
- Japanese Knotweed is an invasive plant that has been found at the St. Francis, Maine boat landing. The Town of St. Francis has expressed interest in partnering with the USJRO for management of tax acquired St. John Riverside properties, and the USJRO has already planted Silver Maple trees for restoration on some of that property.
- Seepages along North facing riverbanks are of particular importance and sensitivity. A wide forested buffer should be maintained or restored if possible to maintain shade and water for ideal habitat.

4.2 **Conservation and Restoration of Northern White Cedar**

- Maintain and enhance Northern White Cedar, our longest-lived tree of high value to wildlife and water quality, which grows best in the St. John River Valley.
- This tree has great historical significance. In the winter of 1536, Jacques Cartier and his crew were in Quebec, sick from scurvy that had killed 25 of the 110 man crew until they were saved by local First Nations people with tea made from Northern White Cedar. Jacques Cartier brought live cedars back for propagation in France, the first New World tree brought back to Europe for propagation, when the King, in recognition of what it had done for Cartier and his crew, dubbed it “Arbre de Vie”, which is French for Tree of Life. To this day, it is also called Arborvitae.
- Northern White Cedar provides highest quality and longest lasting waterside habitats and soil and water quality protection. Cedar foliage is of highest food value to wintering deer.

4.3 **The Fish River Chain of Lakes**

The USJRO arose from the Fish River Lakes Water Quality Association, and these lakes will be a special focus area of our activities.



4.4 **Reference Standard: The Stars by H.A. Rey**

This well-respected reference for basic astronomy explains the seasons and our climates, helps identify stars and constellations and much more. While this might not seem like this belongs here, astronomy is a great foundation for understanding the seasons, climate, and nature. The USJRO established a dark sky observatory on a community Frenchville community Habitat Management Area in 2018, and we will pursue observatories and events on other community-owned properties.

4.5 Community-owned Forest Parcels

The Towns of Frenchville, Grand Isle, Stockholm and others participated in the St. John Valley Community Forest Project where a detailed forest inventory and forecasts were completed. Communities agreed in writing that these parcels would be retained for habitat, education, and recreation, and Frenchville has re-named their parcels as Acadian Forest Habitat Management Areas (AFHMA).

Tree planting trials have been carried out on these parcels, and interpretive trails are planned.

The USJRO has joined the St. John Valley Chamber of commerce and is interested in pursuing more binding agreements for sustainable management of these and other St. John Valley area community-owned parcels.

4.6 Marketing of Harvested Forest Products to Local Markets

Forest management activities will include harvest operations following the Standards detailed in this document. We will promote marketing of harvested wood from parcels that we manage to finished product markets within the St. John Valley and Aroostook County.

For example, managing northern hardwoods properly will sustain forest habitat while providing a secure source of energy to local residents. Local craftspeople would benefit from local wood for hand-made products.