

## **Fish and Wildlife Habitat Plan Criteria Practice/Activity Code (142) (No.)**

### **1. Definition**

A fish and wildlife habitat plan is a site specific plan developed for a client who is ready to plan and implement decisions with consideration for fish and wildlife habitat and other biological resources.

A Fish and Wildlife Habitat Plan:

1. Meets Natural Resource Conservation Service (NRCS) quality criteria for fish and wildlife habitat and other identified resource concerns;
2. Complies with federal, state, tribal and local laws, regulations and permit requirements;
3. Addresses the client's objectives.

### **2. Fish and Wildlife Habitat Conservation Plan Criteria**

This section establishes the minimum criteria to be addressed in the development of a Fish and Wildlife Habitat Plan

#### **A. General Criteria**

1. A Fish and Wildlife Habitat Conservation Plan shall be developed by certified technical service providers. In accordance with Section 1240 (A), the Environmental Quality Incentive Program (EQIP) program provides funding support through contracts with eligible producers to obtain services of certified Technical Service Providers (TSPs) for development an Fish and Wildlife Habitat Conservation Plan. The specific criteria required for each type of certification for TSP is located on the TSP registry (TechReg) web site at:

<http://techreg.usda.gov/>

#### **B. Fish and Wildlife Plan Criteria**

1. A fish and wildlife activity conservation plan will address resource concerns and make recommendations to enhance or restore habitat for fish and wildlife.
2. The plan will comply with Federal, State, Tribal, and local laws, regulations, and permit requirements.
3. Document the participant's objectives and interest in installing various NH NRCS conservation practices.

#### **C. Background and Site Information**

1. Landowner information – name, address, operation, size
2. Location and plan map of parcel (topo map and current aerial photo)
3. Documentation of existing practices/history
4. Resource inventory (map showing habitat types)
5. Fish and wildlife resource concerns -document these in text and on maps the extent of various habitats needing treatment, and which NH NRCS conservation practices apply.

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#### **D. Client Objectives –Document Objectives and Decisions**

1. Manage working lands for fish and wildlife resources
2. Increase populations of selected species or groups
3. Maintain populations of selected species or groups
4. Improve habitat for aquatic, wetland, and terrestrial species

#### **E. Document Existing Conditions**

1. Conservation plan map – boundaries, fields, scale, streams, surface waters, wetlands, fences, land uses, etc.
2. Soils map – legend, interpretations for fish and wildlife resources
3. Client’s decisions – conservation practices needed to achieve objectives
4. Habitat assessment, evaluations, or Habitat Suitability Index (HSI) models
5. Current management activities
6. Carrying capacity for selected species/resources

#### **F. Desired Future Conditions/Goals**

1. Fish and wildlife population levels
2. Restoration of fish and wildlife species or habitat types

#### **G. Assessing/Monitoring of Fish and Wildlife Populations**

#### **H. Conservation Practices and/or Activities and Support Documents**

1. Fish and wildlife-related Conservation Practice Standards and NH NRCS specific practice scenarios.
2. Requirement from State-specific Field Office Technical Guide-

All NH 142 Cap Plans will include a review from NH Natural Heritage Bureau to document if rare plants, wildlife, or natural communities are present, and this information will be incorporated into the plan where appropriate.

## **I. Deliverables**

### **A. Deliverable for the Client – a hardcopy of the plan that includes:**

1. Cover page – name, address, phone of client and TSP; Total Acres of the Plan, signature blocks for the TSP, producer, and a signature block for the NRCS acceptance.
2. Soils map, Topo Map, Habitat Types Map (refer to NH Wildlife Action Plan, NH Natural Communities)
3. Resource assessment results (habitat assessment, etc.)
4. For management practices. The planned practices and the site specific specifications on how each practice will be applied; when the practice will be applied, and the extent (acres or number) that will be applied.

### **B. Deliverables for NRCS Field Office:**

1. Complete Hardcopy and Electronic copy of the client's plan (MsWord copy). **Optional**: If a Conservation Plug-in version is provided to NRCS a Hardcopy of the plan, conservation plan map and soils map is not required.
2. Digital Conservation Plan Map with fields, features, and structural practices located.
3. Digital Soils Map.

## **J. References**

- NH Wildlife Action Plan ([http://www.wildlife.state.nh.us/Wildlife/wildlife\\_plan.htm](http://www.wildlife.state.nh.us/Wildlife/wildlife_plan.htm))
- Good Forestry in the Granite State (<http://extension.unh.edu/goodforestry/index.htm>)
- Natural Communities of NH ([http://www.nhdfl.org/library/pdf/Natural\\_Communities2ndweb.pdf](http://www.nhdfl.org/library/pdf/Natural_Communities2ndweb.pdf))
- Technical Guide to Forest Wildlife Management in New England
- National Planning Procedures Handbook
- Field Office Technical Guide
- National Biology Handbook
- National Biology Manual
- National Forestry Manual
- National Forestry Handbook
- National Environmental Compliance Handbook
- TechReg Technical Service Provider Registry

## NH NRCS Practice Scenarios for 2011

<b>Access control- hibernacula gate</b>
Custom heavy metal gate used to restrict human access to hibernacula and reduce the spread of White Nose Syndrome (WNS) for infected or non-infected caves.
<b>Access control- gate</b>
Used to restrict access during wet seasons or to protect sensitive wildlife habitat by installing a sturdy 16 foot tubular steel gate hung on welded steel or 6 x 6 x 12 pressure treated posts, set in concrete.
<b>Brush Management -Brush Saw/ Brush Hog/Chain Saw</b>
Using a brush saw and/or chainsaw to clear woody vegetation on pasture or wildlife openings that is 1 to 3" or less in diameter on ground with poor access and/or that is too steep or rocky for rotary mowing. Typical rate 1 acre per day.
<b>Brush Management- Rotary Mowing</b>
Rotary mowing at a rate of 2 hours per acre to maintain successional habitats, control invasive plants and facilitate grazing. Vegetation is mostly herbeaceous with scattered woody stems less than 2 inches in diameter.
<b>Brush Management -Difficult Site Brontosaurus</b>
Mowing dense stands of woody invasive or undesired plant communities with a brontosaurus at an average rate of 3/4 acre per day with poor access and difficult ground conditions. Average stem diameter is 3-6 inches.
<b>Brush Management- Average Site Brontosaurus</b>
Mowing stands of woody invasive plants or undesired plant communities with a brontosaurus at an average rate of 2 acres per day. Average stem diameter is 1-3 inches.
<b>Brush Management- Chemical Variable Density</b>
Chemical control of woody invasive species or other undesired vegetation. Typically done with a backpack sprayer at a rate of 3 acres per day.
<b>Brush Management- Chemical Lite Density</b>
Chemical control of woody invasive species or other undesired vegetation. Typically done with a backpack sprayer at a rate of 5 acres per day.
<b>Brush Management-Weed Wrench/Hand Pulling</b>
Invasives species are controlled by pulling seedlings out by hand or with a weed wrench and dug out with shovels. Typically done in the forest understory and on field edges on woody species that are up to 1 inch in diameter.
<b>Conservation Cover-Pollinator Low Management</b>
Frost seeding or direct seeding of red mammoth and New Zealand clovers, alfalfa, and other low cost crops to improve heath of managed honey bees and increase numbers of native bumble bees in the landscape.
<b>Conservation Cover-Pollinator Intensive Management</b>
Frost seeding or late summer seeding of native perennial flowering plants with especially high quality pollen and nectar. Increased cost is due to expensive seed and additional site preparation and weed control the first year after seeding.
<b>Early Successional Habitat Develop/Mgmt- Brush Saw</b>

Using a brush saw and/or chainsaw to clear woody vegetation on pasture or wildlife openings that is 1 to 3" or less in diameter on ground with poor access and/or that is too steep or rocky for rotary mowing. Typical rate 1 acre per day.

**Early Successional Habitat Develop/Mgmt- Brontosaurus Ave Sites**

Regeneration cutting to promote early successional habitat and species composition, typically done with a brontosaurus at an average rate of 2 acres per day, average diameter is generally less than 3 inches.

**Early Successional Habitat Develop/Mgmt- Brontosaurus Moderate Sites**

Regeneration cutting to promote early successional habitat and species composition, typically done with a brontosaurus at an average rate of 1 acres per day, average diameter generally 3-6 inches.

**Early Successional Habitat Develop/Mgmt- Difficult Site**

Regeneration cutting of forest stands which are not economically viable as a result of past high grades. Typically done with a feller buncher and whole tree chipper where the average diameter is larger than 6 inches at an average rate of 1 acre per day. Includes forgone income for lost fire wood.

**Early Successional Habitat Develop/Mgmt- Delayed Mow**

Typically done in old agricultural fields to maintain them as open grassland for ground-nesting birds. Mowing must be completed after the ground-nesting birds have fledged, usually after August 1, but before snow fall for maximum vegetation management benefit. Typical size is 10 acres.

**Forest Site Preparation- Backpack Leaf Blower**

600 cc backpack leaf blower used to blow leaves into piles in the forest understory in late summer, seed wildlife shrubs and then blow leaf piles back over the seed. Done in late summer when leaves are dry and well decomposed.

**Forest Site Preparation- Medium Disk**

Running a Medium weight disk on rough ground to establish seed to soil contact, encourage natural succession, or exhaust the seed bank of invasive plants.

**Forest Site Preparation- Aspen/Pine**

Forest litter is mechanically disturbed to expose mineral soil and encourage Eastern white pine after harvest during a good seed year.

**Forest Stand Improvement- Dense Softwood: Typical Implementation Scenario**

Releasing crop trees, developing uneven aged stands, and developing canopy gaps for wildlife in dense stands of softwoods by cutting and girdling unwanted trees with a chainsaw.

**Forest Stand Improvement- Hardwood-Softwood: Typical Implementation Scenario**

Used to release stands of pole to sapling size hardwoods and softwoods, frequently in mixed wood stands, to favor the crop tree. This practice is intended for pre-commercial weeding and thinning with a chainsaw to girdle or remove unwanted trees.

<b>Forest Stand Improvement- Difficult Site: Typical Implementation Scenario</b>
Heavy cutting of hemlock and beech forests on soils with high site index to promote regeneration of desired species. Typically performed on past high-graded sites with steep bouldery slopes, and often requires chainsaw work and some softwood trees to be cabled out to improve regeneration of desired species and reduce fuel loads.
<b>Forest Trails and Landings -Forest Trail Repair</b>
Installing and repairing various Best Management Practices such as water bars, broad-based dips, geofabric, crushed stone, pole fords, check dams, liming, fertilizing, and seeding, to reduce erosion and improve access on existing forest trails and landings
<b>Forest Trails &amp; Landings- Average Site: Typical Implementation Scenario</b>
Constructing new forest trails to facilitate forest management and wildlife work, on sandy, well drained, level to moderately sloping (0-5%) terrain lacking boulders and other obstructions. Includes installation of erosion control best management practices such as water bars, liming, fertilizing, and seeding.
<b>Forest Trails &amp; Landings- Moderately Difficult: Typical Implementation Scenario</b>
Constructing new forest trails to facilitate forest management and wildlife work, on moderately sloping terrain (5-15%) with additional time needed for surface stone removal, installation of additional waterbars and broad based dips. Also includes, liming, fertilizing, and seeding.
<b>Forest Trails &amp; Landings- Difficult Site: Typical Implementation Scenario</b>
Constructing new forest trails to facilitate forest management and wildlife work, on steep terrain (10-15%+) with additional time needed for boulder removal and installation of additional waterbars and broad based dips. Includes installation of geofabric and crushed stone in limited locations and liming, fertilizing, and seeding.
<b>Forest Trails &amp; Landings- Landing: Typical Implementation Scenario</b>
Typical natural resource setting and land use situation: Constructing or repairing suitable landing area based on topography, soils, and hydrology . Includes installation of diversions and water bars for erosion control and rough grading.
<b>Herbaceous Weed Management -Phragmites Cutting/Removal</b>
Hand cutting Phragmites with a chainsaw including biomass removal from the site. Typical size is 1/3 acre.
<b>Herbaceous Weed Management -Low Density</b>
Herbicide application to control state listed herbaceous plants with a backpack sprayer at 5 acres per day.
<b>Herbaceous Weed Management -Average Site</b>
Herbicide application to control state listed herbaceous plants with a backpack sprayer at 3 acres per day.
<b>Herbaceous Weed Management -Difficult Site</b>
Herbicide application to control small areas of Phragmites, Knotweed, Reed Canary Grass, and Purple Loosestrife, or other state listed plants with a backpack sprayer. Typical size is 1/3 acre.
<b>Obstruction Removal- Debris: Typical Implementation Scenario</b>
Removal of Trees and boulders which interfere with ecological restoration or other conservation work. Often requires "cabling" trees from wetlands. Typically small area 1/2 acre.

<b>Restoration and Management of Declining Habitats-Chainsaw Clearing</b>
Includes chainsaw work for heavy understory and overstory thinning to mimic fire and natural disturbances such as hurricanes.
<b>Restoration and Management of Declining Habitats-Declining Forest</b>
Includes site preparation, seeding trees and shrubs shrubs, and cutting overstory vegetation, to restore floristic biodiversity to rich or semi-rich forest types.
<b>Restoration and Management of Declining Habitats- Oyster Shell</b>
Enhancing oyster beds by placing recycled shell in the correct bathymetric positions and on suitable substrate adjacent to existing oyster reefs.
<b>Restoration and Management of Declining Habitats- Spat on Shell</b>
Enhancing oyster beds by adding spat on shell to existing or created reefs.
<b>Riparian Buffer Zone 1&amp;2</b>
Install a riparian buffer on eroding cropland, with 450 1 gallon containers per acre which include compost and wood chips.
<b>Stream Habitat Improvement and Management-Wood Additions</b>
Felling trees and adding logs to rural stream segments to reduce flood velocities, engage floodplains, accumulate channel sediments, and develop pools, riffles, glides and cascades for native brook trout.
<b>Tree and Shrub Establishment- Live Stakes</b>
Establishment of dormant live stakes to reduce erosion or enhance wildlife habitat.
<b>Tree and Shrub Establishment- Bare Root</b>
Establish bare root seedlings to reduce erosion or enhance wildlife habitat
<b>Tree and Shrub Establishment- Seed Wildlife Shrubs</b>
Establishment of trees and shrubs with native shrub species. Requires fall seeding and site preparation to create seed to soil contact. Used to benefit New England Cottontail and shrubland bird species in areas where seed bank is dominated by invasive plants and/or past agriculture has removed seed bed.
<b>Tree and Shrub Establishment- 1 Gal Container w/ Deer Protection</b>
Planting 1 gallon container stock with wood chips, compost and biodegradable deer protection tubes or netting.
<b>Tree and Shrub Establishment- 1 Gal Container</b>
Planting 1 gallon container stock with wood chips and compost.
<b>Tree Pruning</b>
Pruning apple trees to stimulate increased fruit production for wildlife food.
<b>Upland Wildlife Habitat Management-Bird Boxes-small</b>
Add bird boxes to improve nesting habitat near grasslands as appropriate. Add 2 boxes approximately every 300 feet.
<b>Upland Wildlife Habitat Management-Duck Boxes</b>

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Add bird boxes to wetlands to improve nesting habitat as appropriate. Add 1 box approximately every 300 feet.
<b>Upland Wildlife Habitat Management-Mast Tree Release</b>
Release Hardwood trees for mast, by reducing stocking and cutting undesirable competing species. Typically 1 acre in size.
<b>Upland Wildlife Habitat Management-Mast Tree Release/Apple Tree Release-Each</b>
Releasing individual Hardwood/Apple trees for mast, by reducing stocking and cutting undesirable competing species.
<b>Upland Wildlife Habitat Management-Softwood Retention</b>
Developing and enhancing areas of dense softwood in upland landscapes to provide winter cover for wildlife.
<b>Wetland Enhancement-Broadcast Native Vegetation</b>
Establish wetland vegetation by broadcasting 18 lbs per acre of native wetland plant mixture and adding 1 ton of mulch hay to reduce erosion.
<b>Wetland Enhancement-Native Plugs</b>
Establish native wetland vegetation with plugs, typically to enhance pollinator habitat, and increase floristic biodiversity.
<b>Wetland Restoration- Salt marsh</b>
Removal of fill from a salt marsh to restore historic salt water flooding regimes.

## **Attachment 1 -Typical Conservation Practices/Fish and Wildlife Resources**