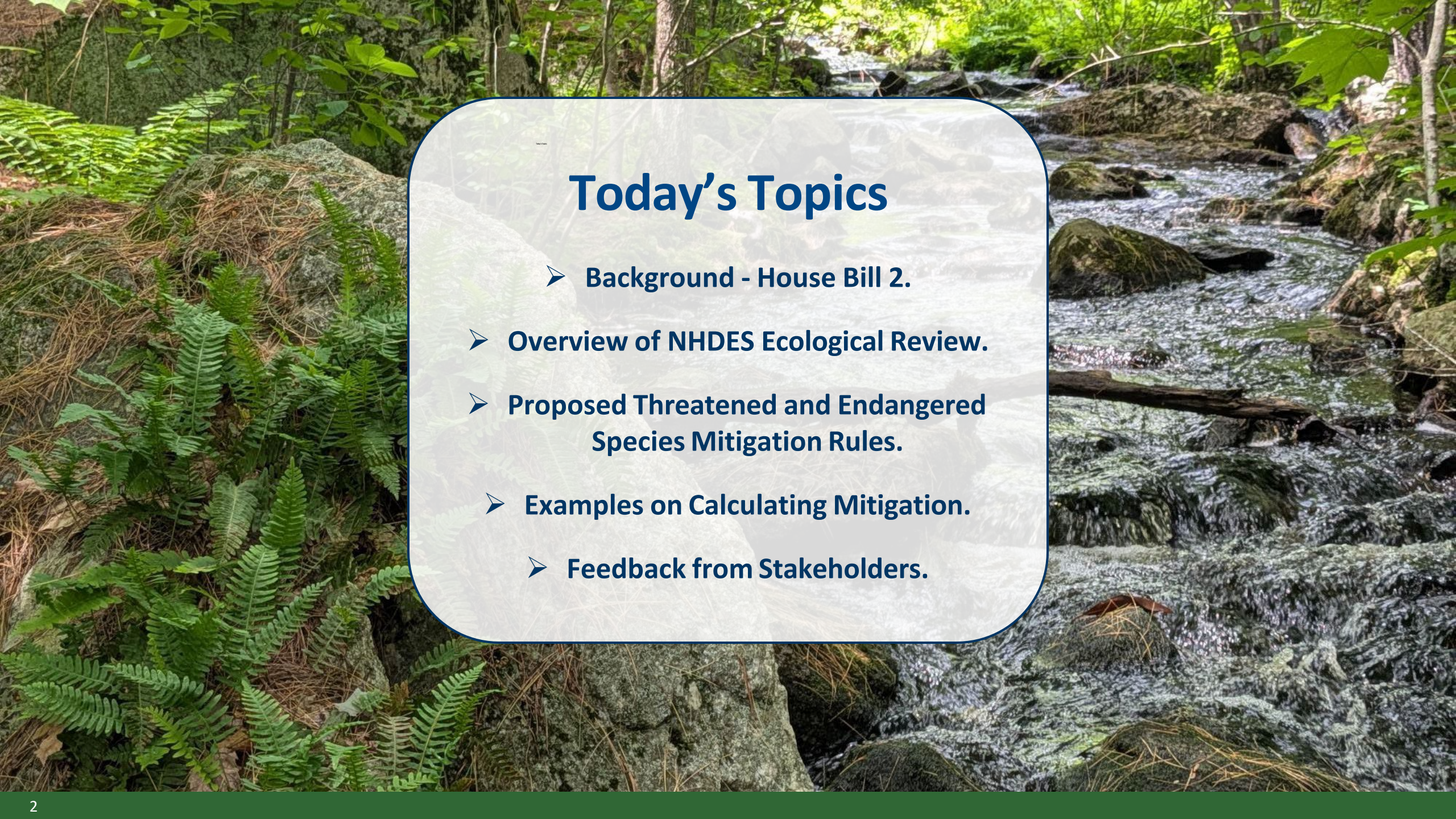




Threatened and Endangered Wildlife Mitigation Rules

Presenter: Brian Kirkpatrick,
Ecological Review Supervisor





Today's Topics

- Background - House Bill 2.
- Overview of NHDES Ecological Review.
- Proposed Threatened and Endangered Species Mitigation Rules.
- Examples on Calculating Mitigation.
- Feedback from Stakeholders.



Background



What Does NHDES Do: Guiding Landowners To Minimize Impacts To New Hampshire's Water Resources



**Process Permit
Applications:
~10,000 per year**



**Provide
Customer
Service:
~18,000 contacts
per year**

**Award Restoration
Funds:
~\$2 million
per year**

**Investigate
Complaints:
~250 per year**

New Hampshire House Bill 2



June 19, 2025
2025-2871-CofC
08/09

1 Committee of Conference Report on HB 2-FN-A-LOCAL, relative to state fees, funds, revenues, and
2 expenditures.

3
4 Recommendation:

5 That the House recede from its position of nonconcurrence with the Senate amendments, and
6 concur with the Senate amendments, and

7 That the Senate and House adopt the following new amendment to the bill as amended by the
8 Senate, and pass the bill as so amended:

9
10 Amend the bill by replacing all after the enacting clause with the following:

11
12 1 New Paragraphs; Fish and Game; Endangered Species Conservation Act; Definitions. Amend
13 RSA 212-A:2 by inserting after paragraph V the following new paragraphs:

14 VI. "Commissioner" means the commissioner of the department of environmental services.

15 VII. "Department" means the department of environmental services.

16 2 Fish and Game; Endangered Species Conservation Act; Conservation Program. Amend RSA
17 212-A:9 to read as follows:

18 212-A:9 Conservation Programs.

19 I. The executive director shall establish such programs, including acquisition of land or
20 aquatic habitat or interests therein, as are deemed necessary for the conservation of endangered or
21 threatened species. The executive director shall utilize all authority vested in the fish and game
22 department to carry out the purposes of this section.

23 II. In carrying out programs authorized by this section the executive director shall consult
24 with other states having a common interest in particular threatened or endangered species of
25 wildlife and may enter into agreements with federal agencies, other states, political subdivisions of
26 this state or private persons with respect to programs designed to conserve endangered or
27 threatened species of wildlife including, where appropriate, agreements for administration and
28 management if any are established under this section or utilized for conservation of endangered or
29 threatened species of wildlife.

30 III. All other state departments and agencies, to the extent possible, consistent with their
31 authorities and responsibilities, shall ~~assist and cooperate with the executive director in the~~
32 ~~furtherance of the purposes of this chapter for the conservation of endangered or threatened species.~~
33 ~~They shall~~ take such action as is reasonable and prudent to ~~insure~~ *ensure* that actions authorized,
34 funded, or carried out by them do not appreciably jeopardize the continued existence of such species

Committee of Conference Report on HB- 2-FN-A-LOCAL - Page 2 -

1 or result in the destruction or modification of habitat of such species which is determined by the
2 executive director to be critical, by requiring that all such action is designed to avoid ~~and~~,
3 minimize, *and mitigate* harm to such species and habitat designated as critical. *Other*
4 *departments and agencies may consult with the executive director or hire their own*
5 *internal wildlife biologists to carry out the requirements of this paragraph. The executive*
6 *director shall assist other departments and agencies in carrying out this paragraph.* For
7 the purpose of this statute, "appreciably jeopardize the continued existence of such species" shall be
8 defined in rules adopted by the executive director pursuant to RSA 541-A. The provisions of RSA
9 212-A or any rule promulgated under this chapter shall not be applicable to a state department or
10 agency when that state department or agency, in the process of undertaking an action, is required by
11 federal law or regulation to address the environmental impact on wildlife or wildlife habitat, of that
12 action.

13 *IV. To meet the requirements of paragraph III, the department of environmental*
14 *services shall complete the review for any permit, approval, or written authorization*
15 *required pursuant to RSA 482-A, RSA 485-A, and RSA 236. The department of*
16 *environmental services shall adopt rules under RSA 541-A to implement the review process*
17 *and establish a fee schedule for any requested reviews. Such rulemaking shall commence*
18 *within 90 days of the effective date of this paragraph. The revenue collected from this*
19 *section shall be deposited into the water resources fund established in RSA 482-A:3, III.*

20 *V. Any reviews conducted to fulfill the requirements of paragraph III for any*
21 *permit, approval, or written authorization shall be conducted as follows:*

22 *(a) Reviews shall not exceed 60 days from receipt of all information as required*
23 *by rules developed pursuant to paragraph IV;*

24 *(b) The time to complete the review may be extended with written authorization*
25 *from the applicant;*

26 *(c) If the agency or department requests additional information from the*
27 *applicant necessary to complete the review, the time it takes the applicant to respond shall*
28 *not count against the 60 day timeline in subparagraph (a); and*

29 *(d) If the review period is not completed within the required timelines, except as*
30 *provided for in subparagraph (c), then the permit, approval, or written authorization shall*
31 *be deemed to not appreciably jeopardize the continued existence of a threatened or*
32 *endangered species.*

33 3 Department of Environment Services; Position Established. There shall be an environmental
34 scientist position established within the department of environmental services, compensated under
35 SOC 19, Payband 8, for the purpose of administering the environmental species act conservation
36 program under RSA 212-A:9, III.

“The department of environmental services shall complete the [ecological] review for any permit, approval, or written authorization required pursuant to RSA 482-A, RSA 485-A, and RSA 236.”

“...requiring all such action be designed to avoid, minimize and mitigate harm...”

Section 212-A:16 of the Endangered Species Act



1. Created Threatened and Endangered Species Compensatory Mitigation Fund.
2. Required that the **Department of Environmental Services develop rules** under RSA 541-A regarding when mitigation payments to the fund are required for impacts to threatened and endangered species or the habitats of threatened and endangered species, pursuant to RSA 206:33-g, II, resulting from the issuance of a permit by the department of environmental services, and the calculation of those payments.
3. Established that Fish and Game may accept payment for deposit into the Fund.
4. Requires that Fund be used facilitate a **net conservation benefit** to threatened and endangered species.
5. Required that Fish and Game establish rules under RSA 541-A for the disbursement of the funds.
6. Rules will be incorporated into **Env-C 800**.

[NHDES Env-C 800 Administrative Rules](#)

A screenshot of the New Hampshire Department of Environmental Services (NHDES) website. The header includes the NHDES logo and navigation links for "Advisories", "Events", and "OneStop". Below the header is a blue navigation bar with links for "Home and Recreation", "Business and Community", and "Climate and Sustainability". The main content area features a large image of a forest with a large rock in the foreground. Below the image is a breadcrumb trail: "Home > Permits, Rules and Regulatory > Administrative Rules". The section title "Administrative Rules" is followed by a description: "A repository of all NHDES administrative rules, including proposed and adopted rules." Below this is a paragraph explaining that all NHDES administrative rules are housed in a searchable library and can be sorted by category or type of rule. At the bottom, there is a search filter section with three dropdown menus: "Filter by Keyword:" (with "envc800" entered), "Filter by Document Type:" (with "Please select..." selected), and "Filter by Subcategory:" (with "Cross-Program" selected). A blue button labeled "REFINE RESULTS >" is to the right of the filters.





Overview

Ecological Review Section



Meet Our Team



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Ecological Review

- DataCheck Tool (DCT) screens for potential T+E species. "No hit" ends the review at DCT.
- An ecological review is required for any permit, approval, or written authorization required pursuant to RSA 482-A, RSA 485-A, and RSA 236.
- Includes conservation measures for T&E species to minimize and avoid harm.
- If mitigation is required, ERS will include a description the mitigation requirement, typically in acres of habitat disturbed.
- Will request that the applicant submit a mitigation plan. Applicant selects the form of mitigation.
- Clock will typically be paused while applicant develops the mitigation plan.
- Selected mitigation option will be a conservation measure incorporated as a condition of approval.

White Mountain Fritillary, USFWS

Approval Standard for Wildlife Species

Prevent Violations of [RSA 212-A:9](#)

- Actions authorized, funded, or carried out by state agencies **do not appreciably jeopardize** the continued existence of such species or result in the destruction or modification of habitat of such species which is determined by the executive director to be critical, by requiring that all such action **is designed to avoid, minimize, and mitigate harm** to such species and habitat designated as critical.

Harm per [Env-C 802.12](#): “kills or injures individuals” or “interfering with breeding, hibernation, reproduction, feeding, sheltering, migration, or overwintering behaviors”



NH Endangered Species

Mammals	Scientific Name	Federal Status
Eastern small-footed bat	<i>Myotis leibii</i>	-
Little brown bat	<i>Myotis lucifugus</i>	-
Northern long-eared bat	<i>Myotis septentrionalis</i>	T
Tri-colored bat	<i>Perimyotis subflavus</i>	-
New England cottontail	<i>Sylvilagus transitionalis</i>	-
Canada lynx	<i>Lynx canadensis</i>	T
Eastern wolf	<i>Canis lupus</i>	E

Birds	Scientific Name	Federal Status
Northern harrier	<i>Circus cyaneus</i>	-
Common nighthawk	<i>Chordeiles minor</i>	-
Piping plover	<i>Charadrius melodus</i>	T
Upland sandpiper	<i>Bartramia longicauda</i>	-
Roseate tern	<i>Sterna dougallii</i>	E
Least tern	<i>Sterna antillarum</i>	E
Golden eagle	<i>Aquila chrysaetos</i>	-

Fish	Scientific Name	Federal Status
American brook lamprey	<i>Lethenteron appendix</i>	E
Shortnose sturgeon	<i>Acipenser brevirostrum</i>	E

Reptiles & Amphibians	Scientific Name	Federal Status
Marbled salamander	<i>Ambystoma opacum</i>	-
Blanding's turtle	<i>Emydoidea blandingii</i>	-
Eastern box turtle	<i>Terrapene carolina</i>	-
Eastern hognose snake	<i>Heterodon platirhinos</i>	-
Timber rattlesnake	<i>Crotalus horridus</i>	-

Invertebrates	Scientific Name	Federal Status
Dwarf wedgemussel	<i>Alasmodonta heterodon</i>	E
Brook floater mussel	<i>Alasmodonta varicosa</i>	E
Cobblestone tiger beetle	<i>Cicindela marginipennis</i>	E
Puritan tiger beetle	<i>Cicindela puritana</i>	T
Frosted elfin butterfly	<i>Callophrys irus</i>	-
Karner blue butterfly	<i>Lycaeides melissa samuelis</i>	E
White Mountain fritillary	<i>Boloria titania montinus</i>	-
Persius duskywing skipper	<i>Erynnis persius</i>	-
Rusty patched bumblebee	<i>Bombus affinis</i>	E

Birds	Scientific Name	Federal Status
Pied-billed grebe	<i>Podilymbus podiceps</i>	-
Common loon	<i>Gavia immer</i>	-
Peregrine falcon	<i>Falco peregrinus</i>	-
Common tern	<i>Sterna hirundo</i>	-
Red knot	<i>Calidris canutus</i>	T
Cliff swallow	<i>Petrochelidon pyrrhonota</i>	-
Purple martin	<i>Progne subis</i>	-
Cerulean warbler	<i>Setophaga cerulea</i>	-
Eastern meadowlark	<i>Sturnella magna</i>	-
Grasshopper sparrow	<i>Ammodramus savannarum</i>	-

Fish	Scientific Name	Federal Status
Bridle shiner	<i>Notropis bifrenatus</i>	-
Atlantic sturgeon	<i>Acipenser oxyrinchus</i>	T
Round whitefish	<i>Prosopium cylindraceum</i>	-

NH Threatened Species

Reptiles & Amphibians	Scientific Name	Federal Status
Fowler's toad	<i>Anaxyrus fowleri</i>	-
Spotted turtle	<i>Clemmys guttata</i>	-
Black racer	<i>Coluber constrictor</i>	-

Invertebrates	Scientific Name	Federal Status
Eastern pond mussel	<i>Ligumia nasuta</i>	-
Pine pinion moth	<i>Lithophane lepida lepida</i>	-
Ringed boghaunter	<i>Williamsonia lintneri</i>	-
White Mountain arctic	<i>Oeneis melissa semidea</i>	-
Hessel's hairstreak	<i>Callophrys hesseli</i>	-



Rule Making



Current Status of Mitigation Rules



- Incorporated ideas from December 2025 Listening Session.
- Drafted initial rules.
- Established methods for calculating impacts and amount of required mitigation.
- Created mitigation alternatives for the applicant.
- Established preliminary cost structure for In Lieu Fee option.



T&E Wildlife Mitigation Goals



Northern Black Racer, Brian Kirkpatrick

- Actions do not appreciably jeopardize the continued existence of threatened and endangered wildlife.
- Provide predictable standards for when mitigation is required and how much mitigation is required.
- Make the selection of the form of mitigation the applicant's choice.
- Connect State Wildlife Action Plan to impact evaluation and mitigation.
- Provide adequate funding to Fish and Game to implement actions that provide net conservation benefit to the species when applicant selects fee payment.
- Provide opportunity for larger scale mitigation activities conducted in advance of impacts.



New Hampshire Fish and Game Department

STATE WILDLIFE ACTION PLAN

2025
Revised Edition



What Mitigation Is Not

- Can not be used to authorize “take.”
- Not intended to replace avoidance and minimization (e.g., other conservation measures).



Salamander, NHFG

Ideas Still In Progress



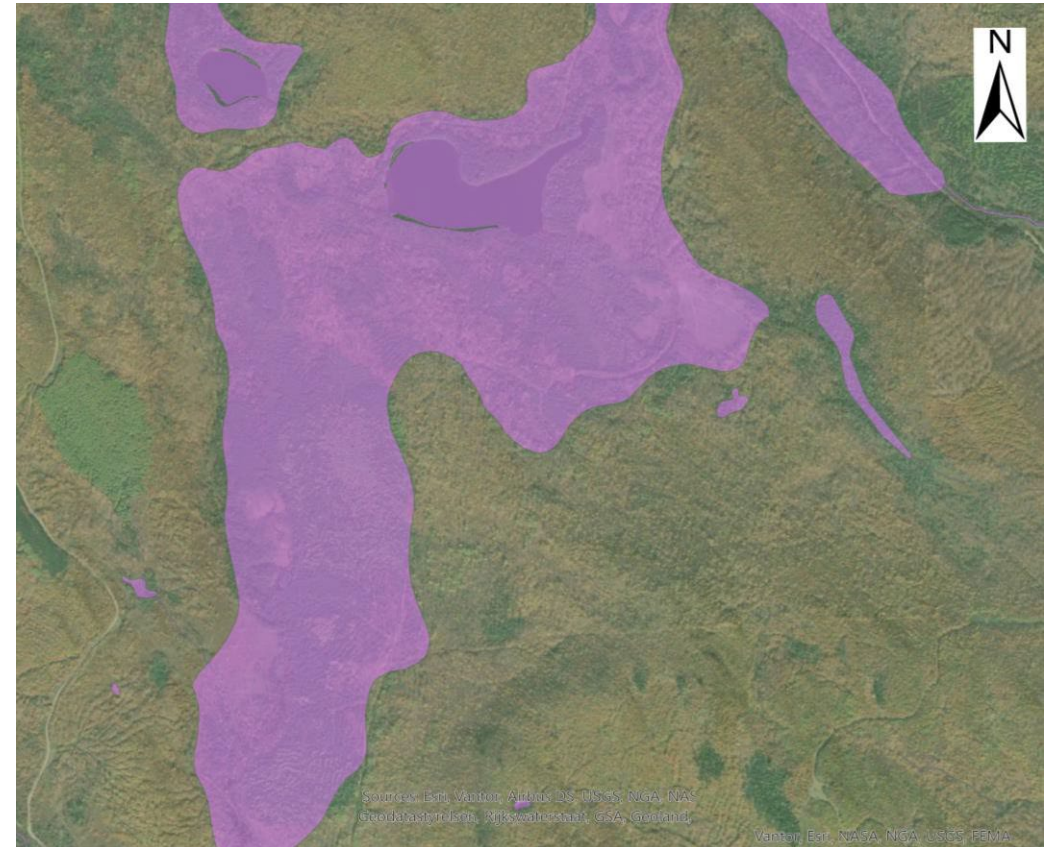
New England Cottontail, USFWS

- Small footprint mitigation with proportionally large species benefit such as wildlife crossings.
- Species mitigation banks and other forms of advance mitigation.
- Fine tuning ILF fees. Evaluating input from NHFG and commercial ecological restoration contractors.
- Public facing documented habitat maps.
- ILF fee and PRM calculators

Required Mitigation Thresholds



- Project requires an Ecological Review.
- Project impacts threatened or endangered wildlife listed at [RSA 212-A:9](#).
- The activity will appreciably jeopardize the continued existence of a threatened or endangered species after implementing all other conservation measures.
- The activity disturbs more than 10 percent of the **documented habitat** on the site or the project disturbs an **essential habitat element** (e.g., hibernaculum, nesting area) of an endangered or threatened wildlife species.



Conceptual Documented Habitat Polygon

NEW HAMPSHIRE
DEPARTMENT OF
**Environmental
Services**

Documented Habitat (**DH**) is the intersection of a ***verified*** threatened or endangered species element of occurrence (**EO**) and its associated suitable habitat (**SH**).





Blanding's Turtle, USFWS

Definition of Documented Habitat



Means a geographic area in New Hampshire within which a species listed as endangered or threatened has been determined by the Department to exhibit one or more essential behaviors. Once identified as documented habitat, the Department will continue to consider that area as documented habitat until the area no longer contains habitat suitable for that species or monitoring has indicated that reoccupation by that species is unlikely.

Documented habitat includes:

- A species-specific polygon based on a combination of recorded evidence of past use of a threatened or endangered species, species life history characteristics and habitat requirements and existing land cover. The area of the polygon shall generally be based on the average home range, territory size, or other appropriate life-history parameters as reported in peer-reviewed scientific literature or information gathered or approved by the Department. When reviewing scientific literature to assemble information to support the size, shape and location of the polygon efforts shall be made to select research conducted in habitats like those found in New Hampshire. Generally, existing land cover data can be used in combination with other information such as aerial imagery, habitat associations such as those listed in New Hampshire Wildlife Action Plans, soil maps and other relevant information.
- Areas where there is recorded evidence of past use by threatened or endangered species for growth, reproduction, resting or feeding and the Department makes the finding that the area remains suitable for use by the specific documented threatened or endangered species during the normal period(s) the species would utilize the habitat.

Recorded evidence of a threatened or endangered species may include, but not limited to, sightings of the species or of its sign or identification of its call.

Mitigation Timing Requirements

- **Temporary impacts:** mitigation must start within **14 days** of the completion of the disturbance and be completed within one year.
- **Permanent impacts:**
 - **Pemittee Responsible Mitigation** must start **prior to or concurrent to the start of the disturbance** and completed within one year.
 - **Payment** to T+E Fund must be received by NHFG **prior to the start of work.**
- **Advance mitigation:** Mitigation can be performed in **prior to disturbance** where the **applicant enters into an agreement** with NHDES outlining the anticipated impacts and proposed mitigation activities.



How to determine how much mitigation will be needed?



The amount of mitigation will be based area of documented habitat (DH) disturbed by the project.

Species specific habitat elements (e.g., hibernaculum) will require to replacement the feature in addition to area of habitat disturbed.

- Where Permittee Responsible (PRM) is proposed, the amount of mitigation will be based on the combination of the area of disturbance or number of habitat elements disturbed and the type of mitigation proposed.
- For In-lieu Fee (ILF) proposal the fee is based on the area of disturbance, type of habitat disturbed and location of the project.
- There are adjustment factors that increase or decrease the amount of mitigation required in consideration the number of species involved, location of the disturbance and mitigation area etc.



Eastern Box Turtle, USFWS

Mitigation Options

- **Permittee Responsible Mitigation** – permit holder is responsible for designing, implementing and monitoring mitigation for the project.
- **In-Lieu Fee Payment** – fee paid to Threatened and Endangered Species Fund in an amount sufficient for NHFG to provide net conservation benefit.
- **Programmatic Species Benefit Plan** – mitigation performed in advance of anticipated impacts or where an applicant's standard practices are modified to benefit T+E species. This option will typically be applicable to projects with predictable disturbances, of long duration or are repetitive in nature.
- **Other Department Approved Activities** – Typically, actions not associated with habitat management that benefit impacted species. Examples could include head starting for reptiles, captive breeding. Burden will be on applicant to demonstrate mitigation will provide greater benefit to the species than other forms of mitigation.



Piping Plover, USFWS



Permittee Responsible Mitigation (PRM) Option



Permittee Responsible Mitigation (PRM) Options



Common Loon, USFWS

- **Restoration** – Restoring habitat to pre-activity conditions within the footprint of the activity immediately after completion of a temporary disturbance.
- **Re-establishment** – Returning a wildlife habitat that once existed at a site but no longer exists.
- **Establishment** – Creating a habitat where one does not currently exist and did not exist in the past.
- **Enhancement** – Manipulating the characteristics of a habitat such that is of higher suitability for the species.
- **Preservation** – Protecting existing habitat from future disturbance and loss of habitat suitability.
- **Alternative forms of mitigation** - Other forms of mitigation where the benefit to the species is clearly documented.

Baseline Mitigation Ratios (mitigation:disturbance) for Permittee Responsible Mitigation Expressed in Acres or Habitat Element Units

Type of Mitigation	Baseline Mitigation Ratio
Restoration (temporary disturbances)	1:1
Re-establishment for disturbance of early succession habitats	1:1
Re-establishment for disturbance of all other habitats	2:1
Re-establishment for disturbance of all other habitats where productivity models demonstrate species benefit	1:1
Establishment for disturbance of early succession habitats	1:1
Establishment for disturbance of all other habitats	2:1
Establishment for disturbance of all other habitats where productivity models demonstrate species benefit	1:1
Enhancement for disturbance of early succession habitats	2:1
Enhancement for disturbance of all other habitats	3:1
Enhancement for disturbance of all other habitats where productivity models demonstrate species benefit	2:1
Preservation for disturbance of early succession habitats (where habitat stewardship is provided)	5:1
Preservation for disturbance of all other habitats	10:1
Reproducible habitat element (units)	4:1
- Early succession habitats include: open water, grassland, barren ground, shrubland. - Reproducible habitat elements include: Hibernaculum, tree containing nest cavity or roost, nesting structure, reptile nest site, vernal pool. Habitat element replacement is in addition to the of disturbed habitat. - Mitigation site must be at least as large as the area of disturbance, within the species range and within New Hampshire. - Species mitigation may be colocated with wetland mitigation provided minimum ratios are provided along with a minimum upland buffer. - All mitigation areas, other than areas of temporary disturbance restoration, shall be placed within a conservation easement to benefit protected species.	

PRM Base Ratios

Date & Time: Tue Oct 17 12:58:24 EDT 2023
 Location: 039° 50.03' N / 074° 57.84' W
 Elevation: 85ft
 Datum: WGS-84
 Azimuth/Bearing: 133° S41E 2471mils (Magnetic)
 Scale: 1X



PRM Adjustments



Baseline PRM Mitigation Adjustments (Baseline is onsite mitigation for a threatened species)

Baseline Mitigation Adjustment Factor	Multiply By
Endangered species	1.25
Additional threatened species	1.10
Off-site mitigation within species range and within same ecoregion more than 1 mile from disturbance	1.10
Off-site mitigation different ecoregion	2.00
Start disturbance prior to start of mitigation (per year of fraction thereof)	1.10
Complete mitigation activities more than 1 year after start of disturbance	1.10
Temporary disturbance 91-180 days (in addition to restoration)	1.25
Temporary disturbance 181-365 days	1.50
Temporary disturbance greater than 365 days	2.00
Disturbance in Exemplary Community	1.50
Disturbance in Prioritized Habitat Block	1.25
Disturbance in Potential Wildlife Corridor	1.10

Factors That Can Reduce Amount of Mitigation

Mitigation site located adjacent to existing conserved land	0.90
Mitigation site greater than 25 acres	0.95
Mitigation site greater than 50 acres	0.90
Mitigation site greater than 100 acres	0.85
Mitigation site in Prioritized Habitat Block or Potential Wildlife Corridor	0.90

1. Multiply baseline area by adjustment factor to establish required mitigation. Multipliers are calculated cumulatively.
2. The area of mitigation site may not be smaller than the area of disturbance.



Blanding's Turtle, USFWS



In-Lieu Fee (ILF) Option



In-Lieu Fee (ILF) Option – Base Fee

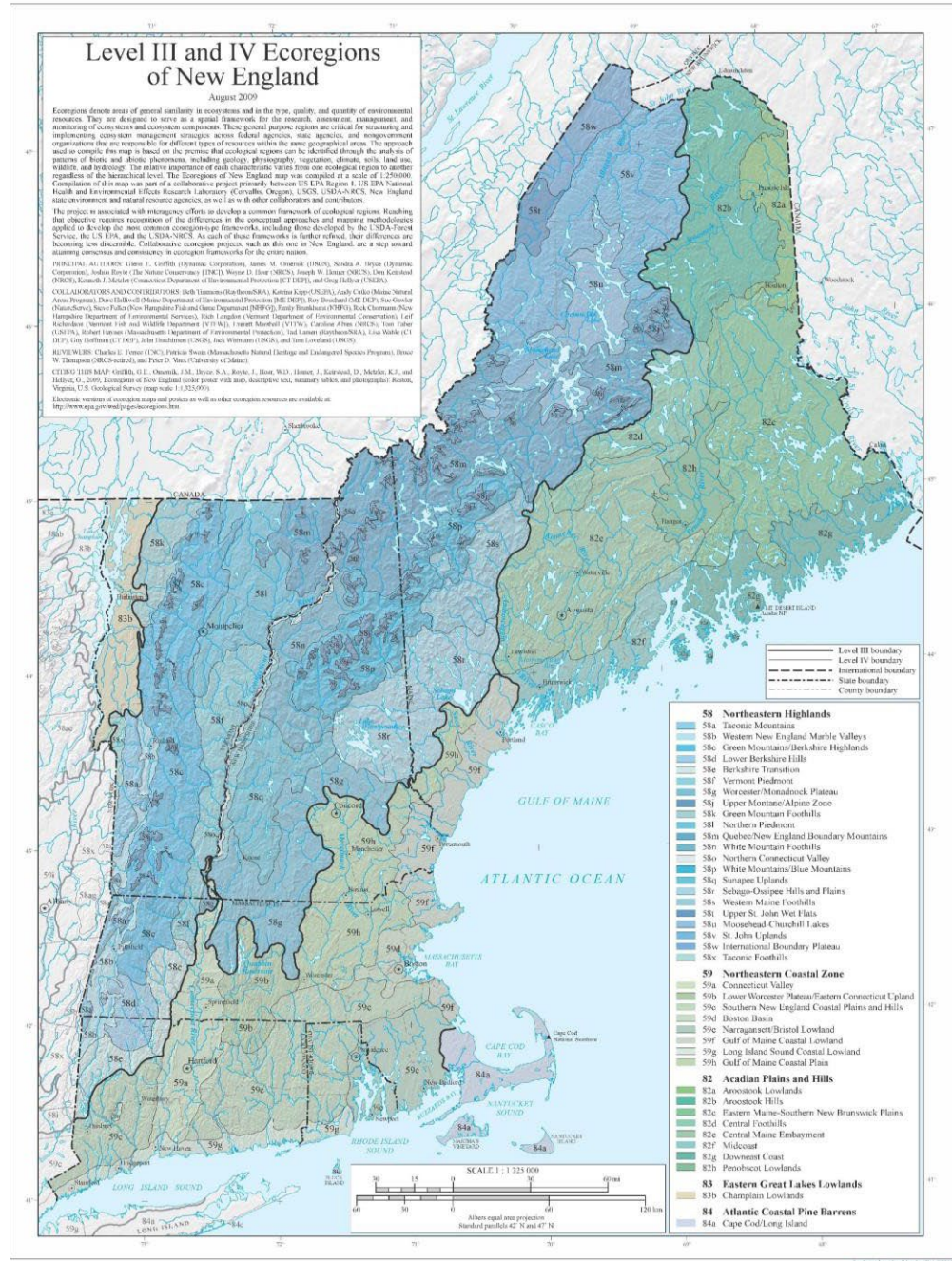


ILF is a payment to the Threatened and Endangered Species Fund administered by New Hampshire Fish and Game. The amount of payment is determined by NHDES and provided to NHFG for the purpose of funding projects that facilitate a **net conservation benefit** to threatened and endangered species, including, but not limited to critical habitat creation or restoration and the monitoring and maintenance of such areas.

ILF fees are based on:

- **Land costs** land costs will be based on the EcoRegion of the impact and calculated using methods similar to Aquatic Resource Mitigation (ARM) fund. Land cost may be waived if the applicant provides suitable land for mitigation.
- **Construction, maintenance and monitoring costs** fees will vary depending on the cost to establish and maintain habitat equivalent to the documented habitat disturbed.



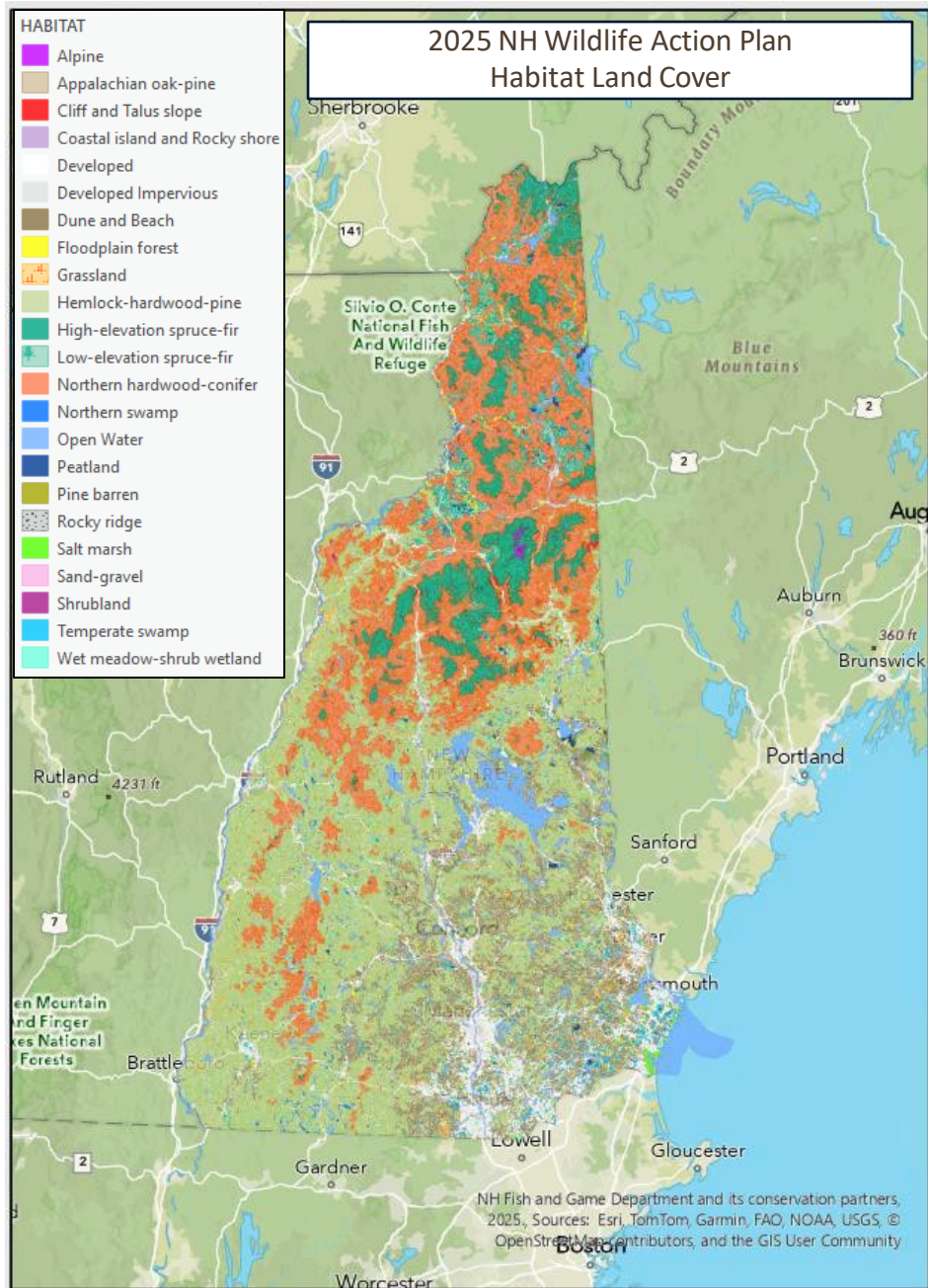


ILF Land Cost

Baseline Land Costs by Ecoregion to be Used to Calculate Land Acquisition Payment to Threatened and Endangered Species Mitigation Fund

USEPA Level IV Ecoregion of New England Name	USEPA Level IV Ecoregion of New England Number	Payment for land acquisition per acre disturbed
Quebec/New England Boundary Mountains	58m	\$1,434
White Mountains/Blue Mountains	58p	\$5,056
Upper Montane/Alpine Zone	58j	\$3,245
White Mountain Foothills	58n	\$9,334
Vermont Piedmont	58f	\$10,341
Northern Connecticut River Valley	58o	\$7,742
Connecticut Valley	59a	\$6,598
Sebago-Ossipee Hills and Plains	58p	\$30,461
Sunapee Uplands	58q	\$13,412
Worcester/Monadnock Plateau	58g	\$17,214
Gulf or Maine Coastal Plain	59h	\$36,989
Gulf of Maine Coastal Plain Lowland	59f	\$55,303

- As mapped Level IV Ecoregions of New England (<https://www.epa.gov/eco-research/ecoregion-download-files-state-region-1>) and generally described in the latest edition of Natural Communities of New Hampshire
- Payment expressed in NHDES Fiscal Year 2025 dollars. Payment for land acquisition will be adjusted annually.



ILF Habitat Management Cost

Baseline Habitat Management Costs by Wildlife Habitat Type to be Used to Calculate Payment to Threatened and Endangered Species Mitigation Fund

Wildlife Habitat Type	Cost Adjustment	Wildlife Habitat Type	Cost Adjustment
Appalachian Oak-Pine Forest	0.85	Floodplain	1.0
Hemlock Hardwood - Pine Forest	0.85	Marsh and Shrub	1.0
High Elevation Spruce-Fir Forest	1.5	Northern Swamps	1.0
Lowland Spruce-Fir Forest	1.0	Peatlands	3.0
Northern Hardwood – Conifer Forest	0.85	Temperate Swamps	1.0
Appalachian Oak-Pine Forest	0.85	Coldwater Rivers and Streams	1.5
Alpine	4.0	Lakes and Ponds with Coldwater Habitat	1.5
Caves and Mines	5.0	Large Warmwater Rivers and Streams	1.0
Rocky Ridge, Cliff and Talus	6.0	Warmwater Lakes and Ponds	0.75
Developed - non impervious	0.10	Warmwater Rivers and Streams	1.0
Developed – impervious	0.05	Coastal Islands and Rock Shores	10.0
Sand or Gravel Pit, Quarry	0.25	Beaches and Dunes	10.0
Grasslands	0.50	Estuarine Flats and Open Water	0.75
Shrublands	0.75	Estuarine Wetlands (salt marsh)	1.25
Pine Barrens (forest)	1.0	Marine open waters	0.75
Vernal Pools	1.0	1. General construction/maintenance cost \$65,000/acre (2025 dollars, adjusted annually).	

- Use the table to adjust the base construction and maintenance cost of **\$65,000** per acre (2025 dollars, to be adjusted annually).

ILF Payment Adjustments



Baseline ILF Fee Adjustments

Baseline Mitigation Adjustment Factor	Multiply By	Additional Information
Endangered species	1.25	Per species.
Additional threatened species	1.10	Per additional species
Payment delayed until after start of construction	1.10	Per year or fraction thereof.
Disturbance in exemplary community	1.50	
Disturbance in prioritized habitat block	1.25	
Disturbance in potential wildlife corridor	1.10	
Payment to ARM fund	0.50	Applies only to portion of disturbance located in wetland.
1. Multiply baseline ILF payment by each adjustment factor to establish required mitigation. Multipliers are calculated cumulatively. 2. Potential Wildlife Corridor and Prioritized habitat block as identified by NHFG State Wildlife Action Plan maps and Species of Greatest Conservation Need 3. Exemplary community as identified by New Hampshire Department of Natural and Cultural Resources.		



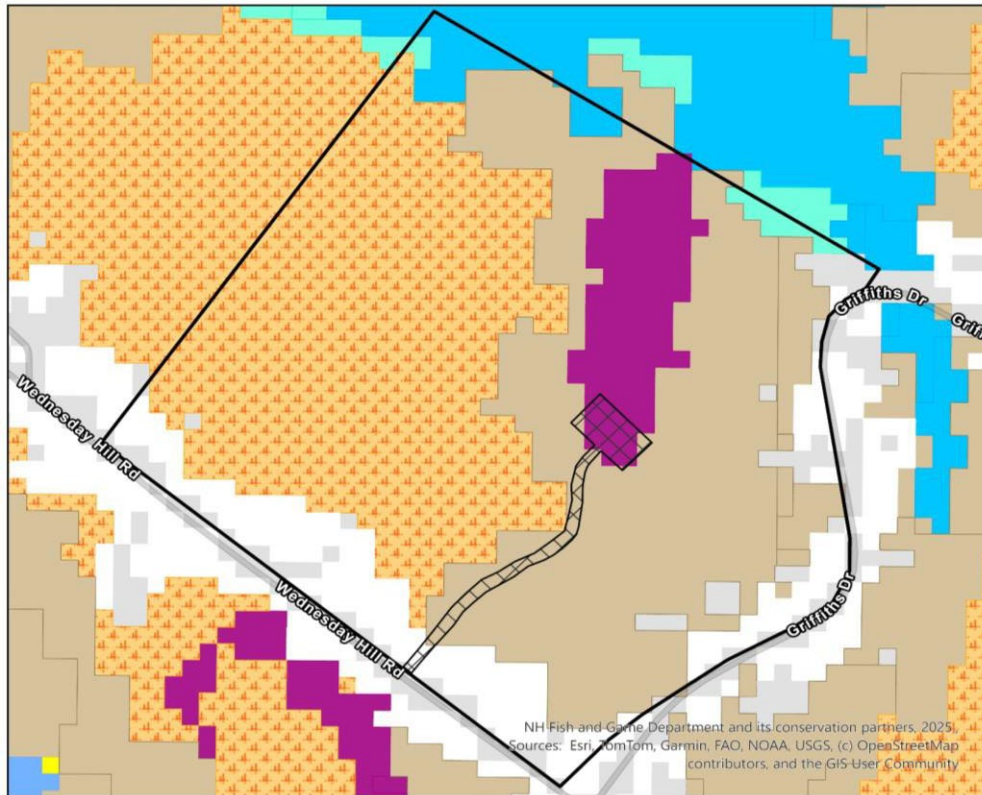
Bayonet Rush Emergent Marsh
Exemplary Natural Community, NH NHB



Example PRM Calculation



Demonstrating the PRM Calculation: Step 1



- Calculate the amount of PRM required for a proposed 1.5-acre development in the CT Valley illustrated at left where the documented habitat includes forest and shrubland
- Measure the amount of documented habitat that will be disturbed:

 0.5 acres forest habitat

 0.1 acres shrubland habitat

PRM Demonstration: Step 2

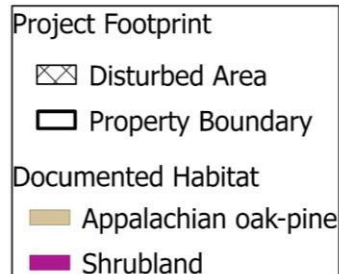
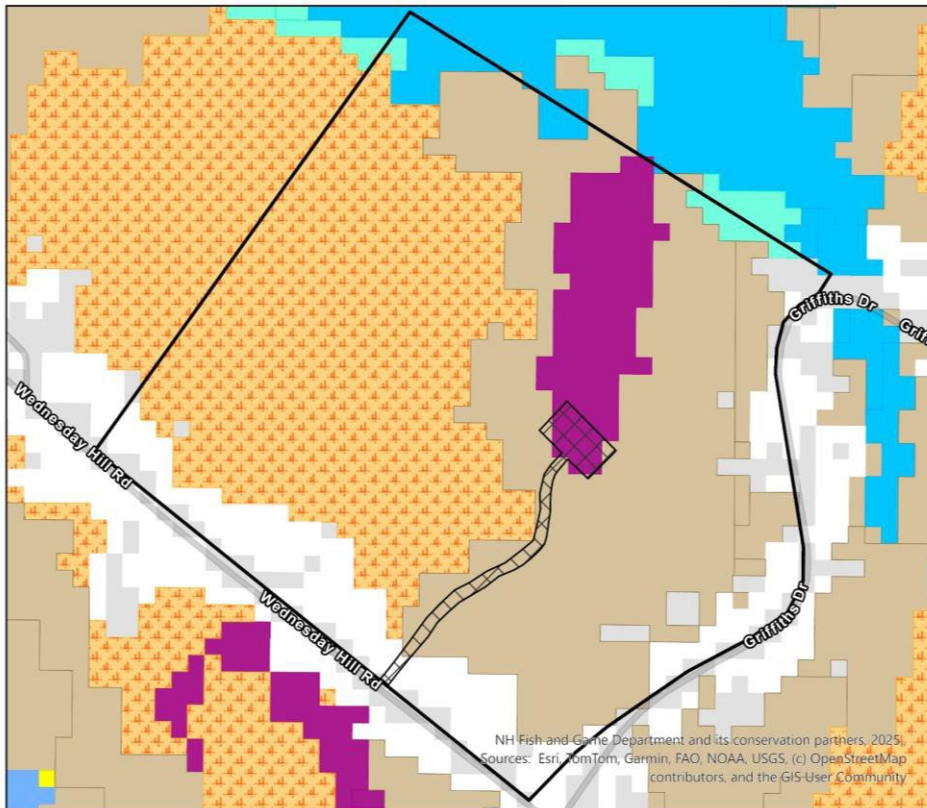


- Refer to the Baseline Mitigation Adjustments table to determine the minimum mitigation units (MUs) required.
- In this example, only one adjustment factor applies; one endangered species is known to use both habitats:

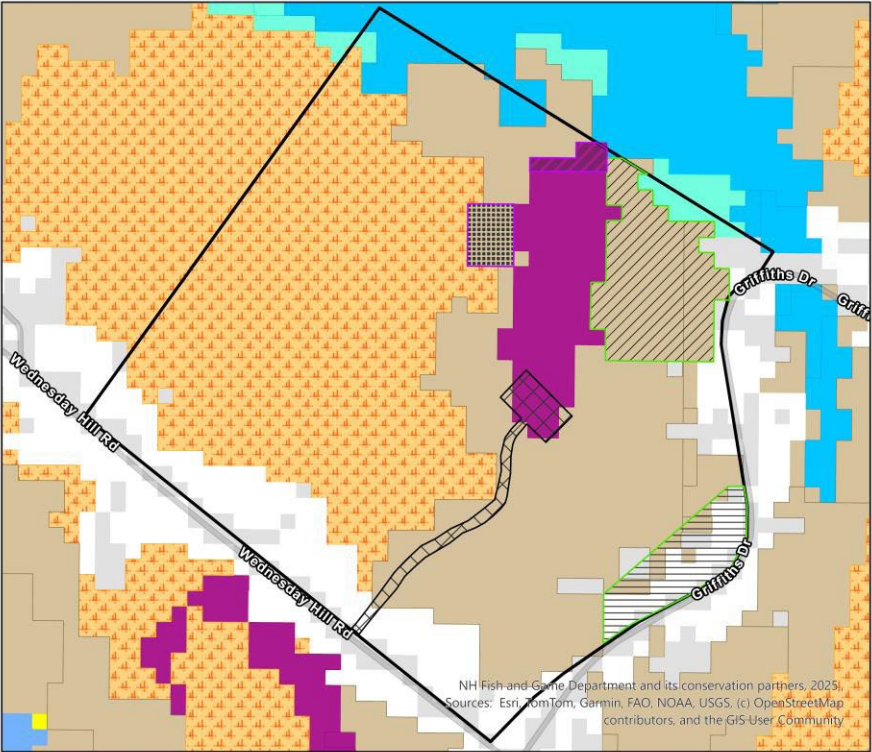
 0.5 ac. x 1.25 = 0.625 MU

 0.1 ac. x 1.25 = 0.125 MU

Total of 0.75 mitigation units needed.



PRM Demonstration: Step 3



Project Footprint	10:1 Preserved Forest
Disturbed Area	2:1 Established Forest in Project
Property Boundary	5:1 Preserved Shrubland
Documented Habitat	1:1 Established Shrubland in Project
Appalachian oak-pine	
Shrubland	

- Refer to the Baseline Mitigation Ratios (BMR) table to develop a proposal that meets the minimum mitigation required:

Onsite Mitigation Proposal	BMR	Mitigation Units	
1.5 ac. Forest preservation	10:1	0.150 MU	}
0.95 ac. Forest establishment	2:1	0.475 MU	
0.1 ac. Shrubland preservation	5:1	0.020 MU	}
0.105 ac. Shrubland establishment	1:1	0.105 MU	

0.625 MU
0.625 MU min.

0.125 MU
0.125 MU min.

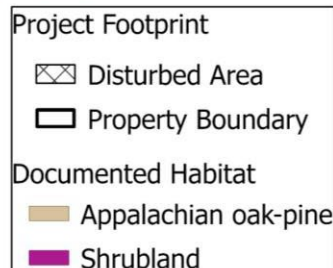
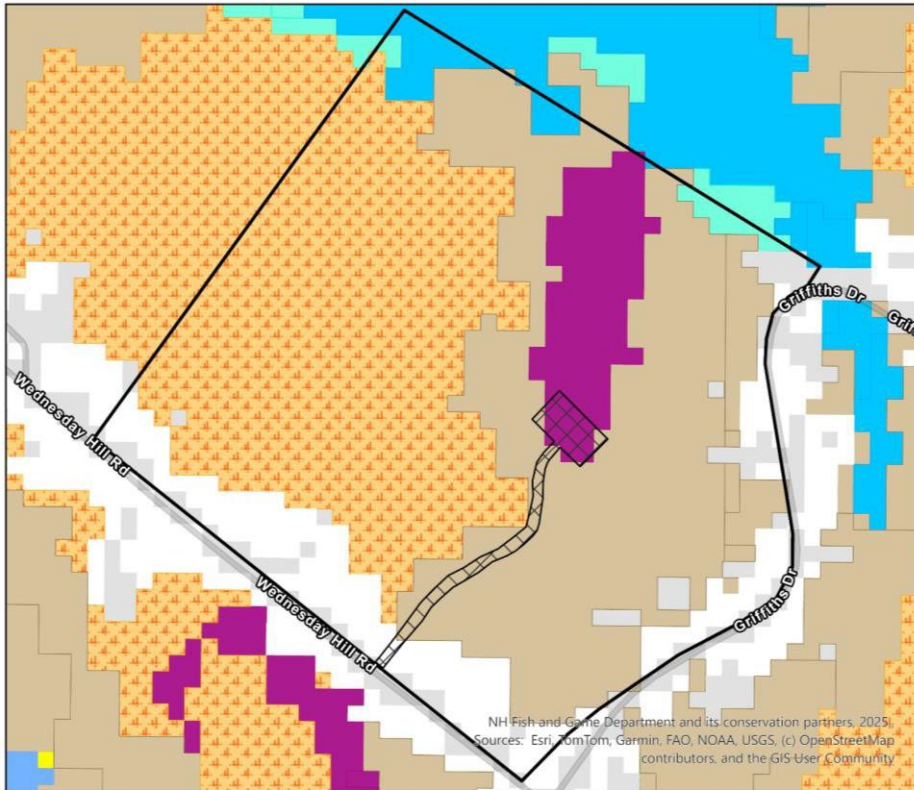
Creates a total of 0.75 MU needed.



Example In-Lieu Fee Calculation



Demonstrating the ILF Calculation: Step 1



- Calculate area of documented habitat disturbed by land cover category.
- Refer to the Baseline Land Costs table to find the per acre value of land in the CT Valley ecoregion:

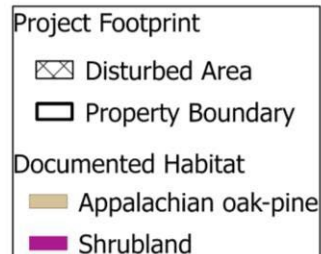
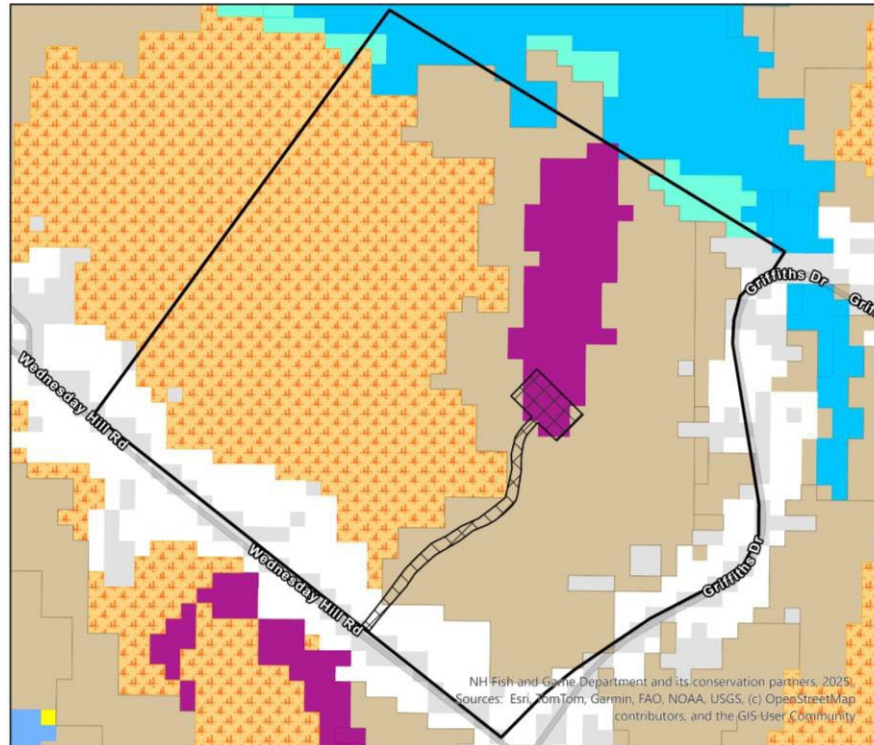


0.5 ac. x \$6,598 per ac. = **\$3,299 land cost**



0.1 ac. x \$6,598 per ac. = **\$659.80 land cost**

ILF Demonstration: Step 2

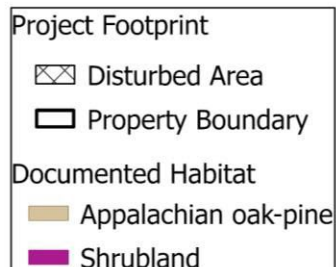
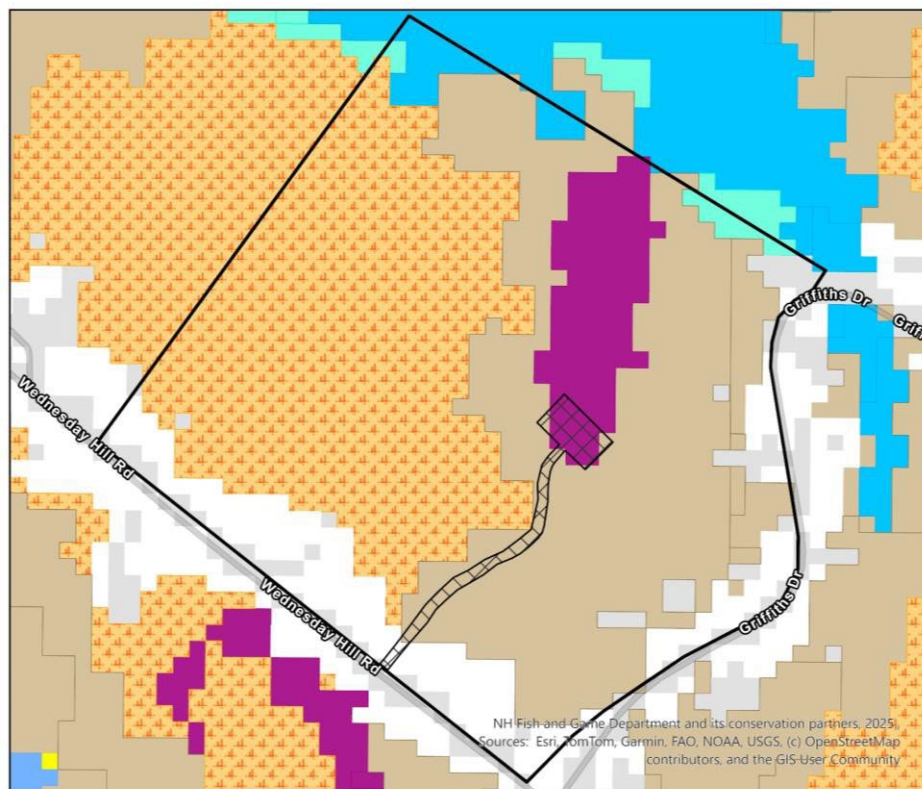


- Refer to the Habitat Management Costs table to determine baseline cost of habitat management for each type of documented habitat that will be disturbed:

 $\$65,000 \times 0.85 \times 0.5 \text{ ac.} = \$27,625 \text{ habitat mgmt}$

 $\$65,000 \times 0.75 \times 0.1 \text{ ac.} = \$4,875 \text{ habitat mgmt}$

ILF Demonstration: Step 3



- Refer to the Baseline Fee Adjustments table to find any other adjustment factors that apply.
- A multiplier of 1.25 for one endangered species applies to both habitat types:



\$3,299 land cost
+ \$27,625 habitat mgmt cost

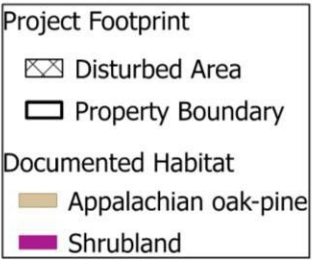
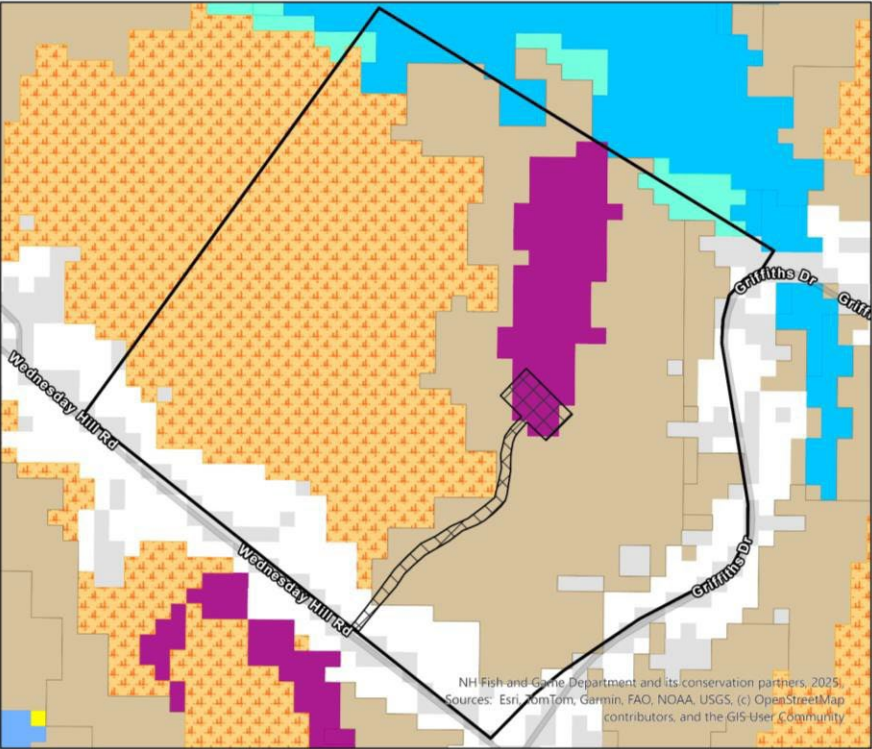
$\$30,924 \times 1.25 = \$38,655$ ILF payment



\$660 land cost
+ \$4,875 habitat mgmt cost

$\$5,535 \times 1.25 = \$6,919$ ILF payment

ILF Demonstration: Step 4



\$38,655 ILF Payment
+ \$6,919 ILF Payment

\$45,574 Grand Total

1 Find location

2 Define area

Draw the area where activities will occur

Select a drawing tool



SKETCH



POLYGON



LINE

Other options:

UPLOAD GEOMETRY

Selection by state or territory is no longer available



Federal Coordination

- NHDES and USFWS have differing regulatory responsibilities and authorities. Federally listed species are also State listed.
- IPaC and DCT along with federal consultation and state ecological review serve different purposes and use different data. In many situations, both are needed and may produce different results **for Federally listed species**.
- NHDES mitigation does not automatically constitute federal compliance and federal compliance does not automatically constitute state compliance (e.g., USFWS operates bat mitigation banks with a service area that includes NH. The mitigation site however is not located in NH and fees paid to the USFWS bank are not applicable to NH impacts).
- For projects authorized, funded, or carried out by a federal agency, an IPaC and Federal consultation is typically needed for Federally listed species.
 - Information for Planning and Construction (IPaC) with USFWS.



Questions or Feedback?





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