

State Listed Species and the Natural Diversity Data Base (NDDDB)



Hottonia inflata,

Federal Endangered Species Act, 1973

**Responsibility of US Fish and Wildlife Service and the
National Marine Fisheries Service**

**No federal mandate for states to create endangered species
regulations.**

Connecticut Endangered Species Act, 1989

Administered by the Dept. of Environmental Protection

Since you have been learning about regulations both federal and state, we thought we would open with something about the Federal Act established in 1973. There was no mandate to state, but many states have adopted state regulations. Money in the form of grants is provided to states and individuals for the conservation of threatened and endangered species. All 50 states have regulatory protection for T/E animals, but only some have protection for plants (like CT).

Federal Endangered Species Act

<http://www.fws.gov/endangered/>



Delisted 2007

- Protect and restore imperiled species and their habitats
- Applicable to federal agency actions and federally authorized or funded projects
- Rarity defined on a national scale – species in danger of extinction throughout/significant portion of the species range

Compare state/fed.

State Endangered Species Act

Connecticut General Statutes

Title 26, Chapter 495, Section 26-303 to Section 26-315

- Applicable to state agencies and any actions authorized, funded or performed by state agencies
- Rarity defined on a statewide scale
- Prohibits the taking, selling
- Includes option to designate essential habitat

**Connecticut's
Endangered, Threatened
and
Special Concern Species
2004**



State of Connecticut
Department of Environmental Protection
2004

- Updated every five years
- Taxonomic Advisory Committees
- Currently waiting for final approval of the most recent proposed changes

Endangered Species List

Examples of proposed changes include:

- Yellow lampmussel upgraded to Endangered status
- Adding Smooth green snake as Special Concern
- Adding Bridled shiners as Special Concern
- Delisting 4 species of mayflies
- Delisting Virginia river snail
- Delisting False hop sedge
- Taxonomy changes for both plants and animals (e.g. Wood turtle changed from *Clemmys insculpta* to *Glyptemys insculpta*)



Many taxonomy changes this time around.

Examples of State Listed Freshwater Wetland Species

Northern leopard frog

Indicator of high quality wetlands. Restricted to open, grassy habitats either along floodplain of a large stream or river, in wetlands around the margins of large lakes, or in meadows adjoining tidal wetlands (both fresh and brackish water).



Photo by Peter Picone

Image by Peter Picone.



Jefferson salamander

Vernal pool obligate, breeds in wetlands and transition to upland. Need to maintain natural buffer of vegetation around vernal pools with canopy cover, snags, etc.



Rails and bitterns

secretive wetland birds,
easily disturbed during
nesting season.

Vulnerable to habitat
loss – loss of cover,
changes in water level,
and contaminants.

King rail.

Natural Diversity Data Base



Species



Population Size



Locations



Threats



Health

Data Sources

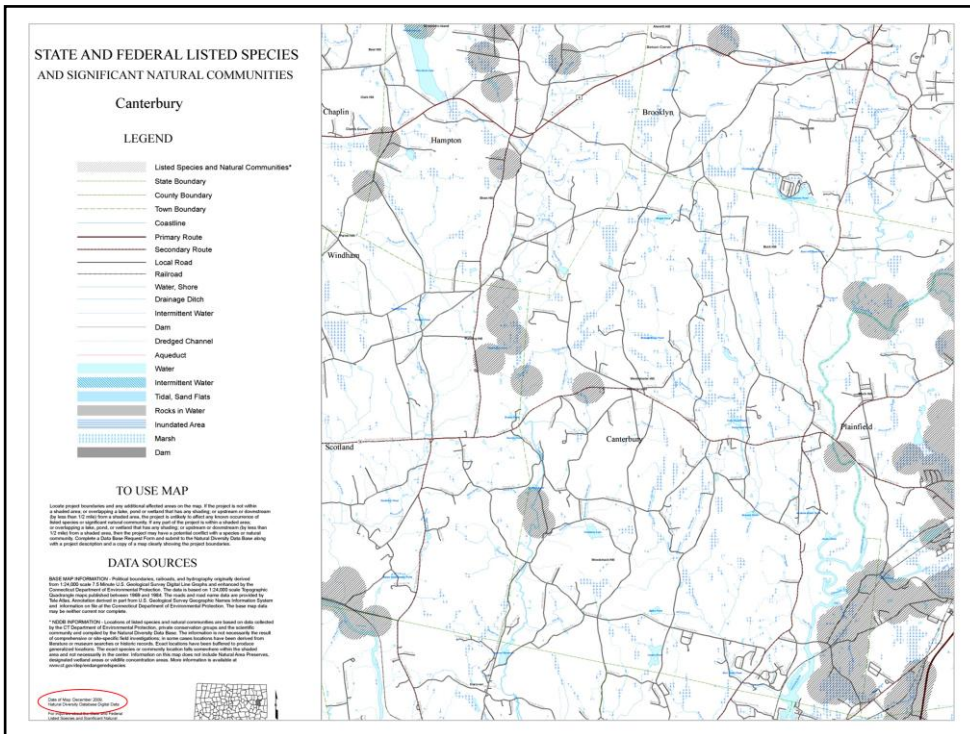
- State Geological and Natural History Survey
- DEP employees
- Conservation groups, including the New England Wildflower Society, CT Botanical Society, and CT Ornithological Association
- Landowners
- Universities and the scientific community
- Museum records, literature, and specimens

Rely heavily on outside supporters who submit data.

NDDDB Maps: A Pre-screening Tool

- Maps indicate generalized locations of state and federally listed species and significant natural communities
- Now available on the internet as PDF files and as GIS data
- Maps are updated every six months (June and December)

In order to help state agencies, residents... comply with ESA, developed maps as a prescreening tool. Important to use the most recent version. Always check back.



Clipped version of NDDB Map. Listed Species and natural communities in shaded areas (blobs). Instructions in the “To use Map” section. Notice the Map Date circled in Red.

Where to Find NDDDB Maps

- www.ct.gov/dep/endangeredspecies
- www.cteco.uconn.edu

The screenshot shows the website for the Department of Environmental Protection (DEP) of the State of Connecticut, specifically the 'Endangered Species' page. At the top, the URL 'www.ct.gov/dep/endangeredspecies' is displayed. The page header includes the CT.gov logo, the text 'STATE OF CONNECTICUT', and the 'DEPARTMENT OF ENVIRONMENTAL PROTECTION'. A navigation menu contains links for 'ABOUT US', 'PROGRAMS AND SERVICES', 'PUBLICATIONS', 'FORMS', 'CONTACT US', and 'HOME'. A search bar is located on the left side of the page.

The main content area is titled 'Endangered Species'. It contains two paragraphs of text. The first paragraph states: 'The DEP conducts a variety of research and management programs to protect and restore endangered, threatened and special concern species in Connecticut and serves as the primary source of information on the status of rare plant and animal species throughout the state.' The second paragraph states: 'Information on state and federal listed species and natural communities is compiled and made available through the Department's Natural Diversity Data Base (NDDB). Established in 1983, the NDDB contains data from biological inventories conducted over the past 100 years. The NDDB currently contains information on the status of nearly 2000 species of plants and animals, including invertebrates and 45 natural community types.' A third paragraph states: 'The DEP's Wildlife, Fisheries and Forestry Divisions conduct research and collect data on state listed species. Biologists, students, volunteers, conservation groups, and landowners, have all contributed valuable data that help us learn more about the biological diversity in our state.'

On the left side of the page, there is a vertical menu with the following items: 'ENDANGERED SPECIES', 'ENDANGERED, THREATENED, AND SPECIAL CONCERN SPECIES IN CT', 'SPECIES FACT SHEETS', 'ABOUT NDDB MAPS', 'REVIEW/DATA REQUESTS', 'CONTRIBUTING DATA', 'ENDANGERED SPECIES MAIN PAGE', and 'DEP MAIN MENU'. A red circle highlights the 'ENDANGERED SPECIES' link. Below the menu is a '1635 375 2010 CONNECTICUT'S Anniversary!' logo and contact information for the Department of Environmental Protection: '79 Elm Street, Hartford, CT 06106-5127', 'Phone: (860) 424-3000', and 'Voice/TTY'. There are also links for 'Directions' and 'Printable Version'.

On the right side of the page, there are several sections: 'REPORT AN ENVIRONMENTAL CONCERN OR PROBLEM', 'Featured Links' (with links to 'Endangered Species Slide Show', 'Endangered Species/Wildlife Income Tax Check-Off', and 'Collection Permits'), 'Related Info' (with links to 'Connecticut's Comprehensive Wildlife Conservation Strategy', 'Invasive Species', 'State Environmental Conservation Police', 'Maps and Spatial Information', and 'DEP Store'), and 'Related Organizations' (with links to 'US Fish & Wildlife Service' and 'NatureServe').

Check out all the links on the left. See the link for the MAPS (next slide).



Endangered Species Maps

Each town map identifies general areas of concern with regard to state and federally listed endangered, threatened, and special concern species and significant natural communities. (Note: You must have Adobe Acrobat Reader installed on your computer to view these maps.)

Choose a Town

Town	File Size	Download Map	Updated
Ashford	894 kb	See Instructions Below	December 2009

Instructions for Viewing Maps

There are two ways to view these maps. If you simply click on the Download Map link, the map will open in Acrobat Reader on your screen. Due to the large file size of each of these maps, however, this may take some time. If you plan on viewing this map more than once, you may want to download it to your computer, so that it will reside locally and will take less time to open.

To download a map to your computer, right click on the "Download Map" link. Select "Save Target As" from the drop-down menu. You will be prompted for the location on your computer where you would like to save the file. Navigate to the appropriate location and select "Save". Be sure to make a note of the file name for future file retrieval. After the save is complete, you can view the map by double clicking on the file name in "My Computer" or Windows Explorer.

[Natural Diversity Data Base](#)

[Home](#) | [CT.gov Home](#) | [Send Feedback](#)

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CT ECO Connecticut Environmental Conditions Online
Maps and Geospatial Data for Planning, Management, Education and Research

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► Maps ► Guides ► Data ► Training

CT ECO provides a variety of tools for sharing natural resource and environmental information. Types of information include water resources, soils, open space, geology and aerial imagery.

ctMAPS **INFOGUIDES** **GISDATA** **ECOTRAINING**

- **Map Catalog**
A variety of maps in PDF format.
- **Simple Map Viewer**
Easy-to-use interactive map viewer for single topic maps.
- **Advanced Map Viewer**
Advanced interactive map viewer with more data and tools than the Simple Map Viewer.
- **Data Guides**
Basic description of CT ECO geospatial data and maps.
- **Resource Guides**
Comprehensive explanation of natural resource and environmental information.
- **Data Download**
Link to sources of geospatial data for Connecticut.
- **Map Services**
Connect your GIS software to CT ECO map services. Add our data to your maps.
- **Geoprocessing Services**
Access online geoprocessing tools. Use our resources to do your spatial analysis.
- **Training**
Information about online resources and instructor-led training opportunities.
- **Tutorials**
Learn how to use this website.

ECOUPDATES See what's new as of April 8. Subscribe to CT ECO.

This website may be down for maintenance on Wednesday mornings.

CT ECO is a partnership between the Connecticut Department of Environmental Protection and the University of Connecticut.
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Interactive viewer and data download pages. Encourage everyone to take advantage of this.

What should we do with NDDB maps?

- We no longer mail maps to the towns
- Use maps for preliminary screening for development and conservation projects – submit environmental review for more info
- Use with other natural resources data in a plan of conservation and development

Who needs an NDDB review?

Required

- Activities that require State Permits
- Projects that use State funding
- Activities performed by the State

Recommended

- Towns are encouraged to check the maps as they review local projects to help make more informed decisions.

Nancy take over.

Environmental review process for State funded or authorized projects

Applicant Responsibilities:

- Use the NDDB maps to review the area of impact
- Criteria – If the site is in a shaded area,
 - Upstream or downstream within ½ mile of shaded area,
 - Overlaps a waterbody with any shading
- Then, a potential conflict is present, you should submit a review form and map of the impacted area

Environmental review process for State funded or authorized projects

CTDEP Responsibilities:

- NDDB staff will review the project to determine conflict
- Return a letter either stating no conflict was found or a letter with recommended changes to avoid impacts
- If more information is needed, the applicant may be asked to conduct biological surveys or provide alternatives
- In the rare event that no alternatives are available, and species populations will be impacted, additional agency authorization is required

Alternatives

- Often project modifications can be made to avoid impacts
- Incidental Take – authorized taking that will not adversely affect the entire population of an endangered or threatened species
- Exemptions – to date all impacts have been addressed through Incidental Takes and not Exemptions
- These are complex processes, requiring DEP and OPM coordination, and mitigation actions

Relevance to Municipal Inland Wetlands Agency

- Connecticut Endangered Species Act does NOT apply to the jurisdiction or actions of municipal IWA
- Under the Connecticut Inland Wetlands and Watercourses Act NDDB information may be relevant
 - Factors for Consideration Sec. 22a-41
 - Subsection (c): Directly in wetland/watercourse can consider ANY aquatic, plant or animal life and habitats – endangered or not
 - Subsection (d): Outside of wetland/watercourse make physical connection first, then can consider information – endangered or not

Darcy will explain the last two bullets.

Example of Site Review

Subdivision and replacement of culvert in Watertown

- Look up the project area on the NDDDB map and check criteria

CTECO Connecticut Environmental Conditions Online
 Maps and Geospatial Data for Planning, Management, Education and Research

Home | About | Contact | CLEAR | CT DEP | FAQs

Choose a Map Theme

Refresh Map

Base Map

- Connecticut Streets
- Soils**
 - Soils
 - Farmland Soils
 - Hydric Soils
 - Inland Wetland Soils
 - Soil Parent Material
 - Soil Potential for Subsurface Reseed Cultural
 - Soil Flooding Class
 - Soil Drainage Class
- Habitat**
 - Natural Diversity Data Base Area, December 2009**
 - Critical Habitats
- Water Resources**
 - Aquifer Protection Areas
 - Water Quality Classifications
- Open Space**
 - Protected Open Space Mapping Project
 - 1997 Municipal and Private Open Space
 - DTP Property
 - DOT scenic Land Strips
- Geology**
 - Surficial Materials
- Watersheds**
 - Planning Basins

Find an Address
 Find a Place
 Find a Longitude / Latitude
 View a Map Legend
 Print a Map

Map Theme: Natural Diversity Data Base Area, December 2009

Streets | 2008 Color Photos | 2006 Color Photos | 2004 B&W Photos | State | Last | Next | Locator Map

Map Scale: 1:12,000

Longitude: -73.14874 Latitude: 41.65766

Example of Project Review

Subdivision and replacement of culvert in Watertown

- Project meets the criteria – overlaps a shaded area
- Fill out an NDDDB Review Request Form
- Include a copy of a USGS topographic map



Connecticut Natural Diversity Data Base Review Request Form

Please complete this form only if you have conducted a review which determined that your activity is located in an area of concern.

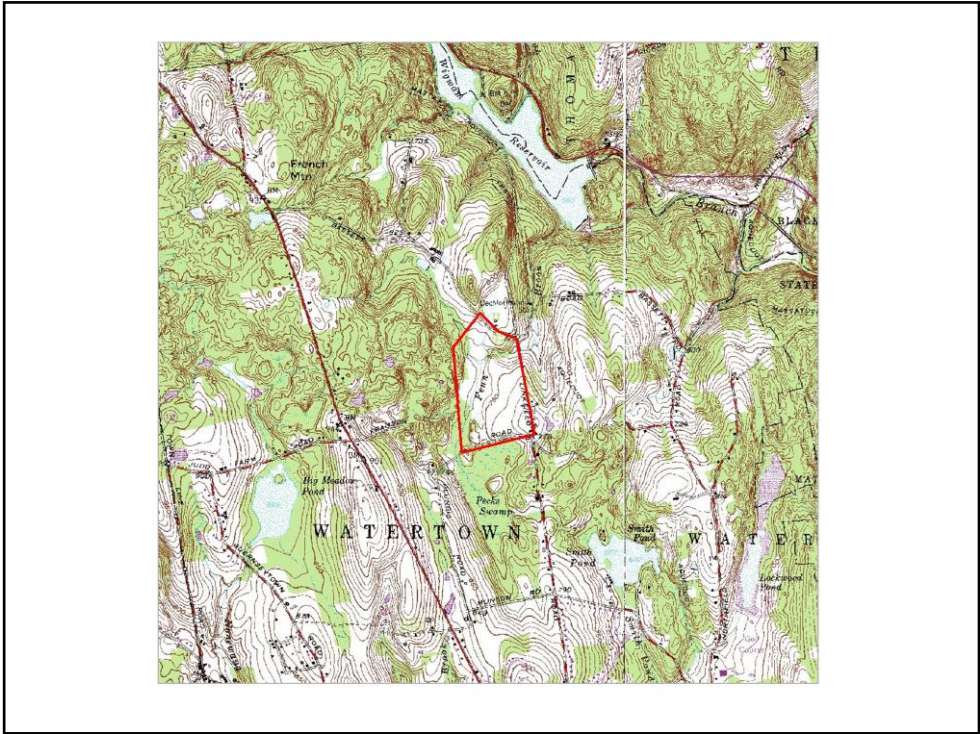
Name:
Affiliation:
Address:
City: State: Zip: -
Business Phone: () ext. Fax: ()
Project or Site Name:
Project Location USGS Quad:
Town: USGS Quad:
Brief Description of Proposed Activities:

Have you conducted a "State and Federal Listed Species and Natural Communities Map" review?
Yes No Date of Map:
Has a field survey been previously conducted to determine the presence of any endangered,
threatened or special concern species? Yes No
If yes, provide the following information and submit a copy of the field survey with this form.
Biologist's Name:
Address:

If the project will require a permit, list type of permit, agency and date or proposed date of
application:

(See reverse side - you must sign the certification on the reverse side of this form)

Included in handouts.



Good overview site map with land marks and site labeled.

Results



Savanna sparrow, SC



Swamp lousewort, T

Savannah Sparrow (SC). Grassy fields with dense, low growing vegetation. Build nest close to ground in vegetation. Declining due to loss of grassland habitat to mowing, growth of forests, suburban development.

Swamp lousewort (T). Grows in moist fields, swamp edges, wet ground, wet meadows, open swamps, stream edges.

Recommendations

- To minimize impacts on grassland breeding birds, time the project to avoid the nesting season (May -June).
- Flag plant population and document location on site plans to prevent impacts to the species. No heavy equipment should be allowed in this area.

Limitations of NDDB

- Do not have comprehensive information on all towns nor on all species.
- Maps are a general representation of the data that we have compiled.
- Weigh benefits of sharing information with the need to protect species locations.

NDDB Improvement Goals

- Improve efficiency and turn around time
- Improve response tracking and internal coordination with other DEP programs
- Improve quality of response
- Free up staff time to concentrate on data collection, site management and other conservation research and projects
- Changes – new forms, new internal process, electronic submission

LEAN - New forms- require more info up front from requesters so that we can make better decisions.

Summary

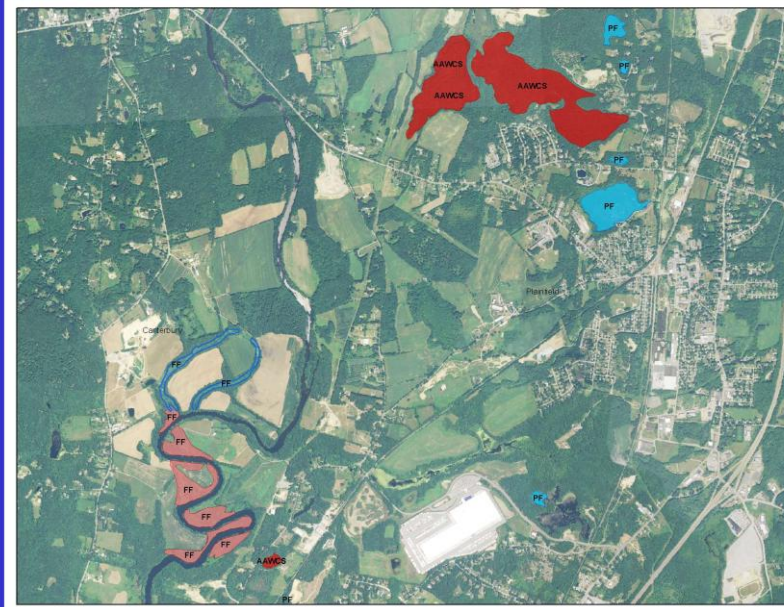
- Generalized maps and GIS data are available on-line
- Updated every six months (June and Dec.)
- Use maps as a first stop source for endangered species information
- Contact NDDDB for site specific information

Other Useful Information

Critical Habitat Maps

- Statewide mapping project 2007-2009
- Developed based on work done for the Comprehensive Wildlife Conservation Strategy (CWCS)
- The information can be used as part of project planning, but is not required
- The mapping project does not include all critical habitat types and the data is incomplete
- Freshwater wetland habitats are included in the Palustrine category

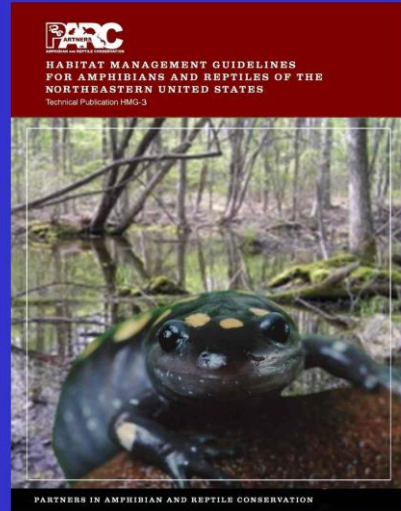
Critical Habitat Map Sample



Alluvial marsh, floodplain forest, Acidic Atlantic white Cedar Swamp, Poor Fen. Mapping mostly done by aerial photo interpretation.

PARC: Partners in Amphibian and Reptile Conservation publication

<http://www.pwrc.usgs.gov/neparc/Products/HMG.htm>



Example of publication – Habitat management guidelines for amphibians and reptiles in the northeastern united states.

Recommendations from herpetologists and ecologists. Keep the common species common, restore/maintaining important habitats.

Organized by habitat type

Invasive Species

- Invasive plants and animals threaten species habitats
- Freshwater wetland examples – Phragmites, Purple loosestrife, Eurasian watermilfoil, Yellow floating heart





Yellow floating heart



One of top threats

www.hort.uconn.edu/cipwg/

Connecticut Invasive Plant Working Group | UConn - Microsoft Internet Explorer provided by State of Connecticut DEP

http://www.hort.uconn.edu/cipwg/list.html

File Edit View Favorites Tools Help

Connecticut Invasive Plant Working Group | UC...

Connecticut Invasive Plant Working Group

University of Connecticut
College of Agriculture and Natural Resources

CIPWG HOME

Select Your Page - GO

Invasive Plant Council
Why Are Plants Invasive?
Invasives List
Criteria
Photo Gallery
Publications and Fact Sheets
Calendar of Events
Membership
Archives

Connecticut's Invasive Plant List

Click below to view the Connecticut Invasive Plant List. The list includes Invasive and Potentially Invasive Plants as determined by the Connecticut Invasive Plants Council in accordance with Connecticut General Statutes 22a-381a through 22a-381d.

The list was most recently revised in July 2009.

[2009 Revised CT Invasive Plant List sorted by common name \(pdf\)](#)
[2009 Revised CT Invasive Plant List sorted by scientific name \(pdf\)](#)



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