Digital data in NH GRANIT represent the efforts of the contributing agencies to record information from the cited source materials. Complex Systems Research Center (CSRC), under contract to the Office of Energy and Planning (OEP), and in consultation with cooperating agencies, maintains a continuing program to identify and correct errors in these data. Neither OEP nor CSRC make any claims as to the validity or reliability or to any implied uses of these data.

Springfield, NH

Legend

- Elevation (ft)
  - 950 - 1150
  - 1150 - 1350
  - 1350 - 1450
  - 1450 - 1550
  - 1550 - 1650
  - 1650 - 1750
  - 1750 - 1850
  - 1850 - 1950
  - 1950 - 2050
  - 2050 - 2200
  - 2200 - 2350
  - Lakes and Ponds
  - Rivers and Streams
  - Roads

0 2 4 Miles
1. How many acres does the town represent, and are there any conserved lands within the town. If so what is the percentage of conserved lands?

Springfield represents 28,479 acres of the ASLPT region. Of this 28.9% is conserved, the conserved land is made up of 10 parcels. Springfield has surpassed the 25% goal of conservation set by New Hampshire Everlasting. For more detailed information on each of the parcels please see attached chart.

<table>
<thead>
<tr>
<th>Parcel #</th>
<th>Acres</th>
<th>NAME</th>
<th>Agency Holding</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.473</td>
<td>Baptist Pond Island</td>
<td>Springfield</td>
</tr>
<tr>
<td>2</td>
<td>537</td>
<td>McDaniels Marsh WMA</td>
<td>NH Fish &amp; Game</td>
</tr>
<tr>
<td>3</td>
<td>393</td>
<td>Springfield Town Forest</td>
<td>Springfield</td>
</tr>
<tr>
<td>4</td>
<td>6568</td>
<td>Gile State Forest</td>
<td>NH Dept. of Resources &amp; Economic Dev. (DRED)</td>
</tr>
<tr>
<td>5</td>
<td>11</td>
<td>Village District of Eastman Easement</td>
<td>Village District of Eastman</td>
</tr>
<tr>
<td>6</td>
<td>112</td>
<td>Village District of Eastman Land</td>
<td>Village District of Eastman</td>
</tr>
<tr>
<td>7</td>
<td>237</td>
<td>Morgan Pond</td>
<td>New London - Springfield Water Systems Precinct</td>
</tr>
<tr>
<td>8</td>
<td>203</td>
<td>French #1</td>
<td>Society for the Protection of NH Forests/Audubon Society of New Hampshire</td>
</tr>
<tr>
<td>9</td>
<td>21</td>
<td>Water Precinct Reservoirs</td>
<td>New London - Springfield Water Systems Precinct</td>
</tr>
<tr>
<td>10</td>
<td>91</td>
<td>The Donovan Family Trust</td>
<td>Ausbon Sargent Land Preservation Trust/Springfield</td>
</tr>
</tbody>
</table>

Conserved Lands
Springfield, NH

Legend
- **Conserved Lands**
- **Lakes and Ponds**
- **Rivers and Streams**

Digital data in NH GRANIT represent the efforts of the contributing agencies to record information from the cited source materials. Complex Systems Research Center (CSRC), under contract to the Office of Energy and Planning (OEP), and in consultation with cooperating agencies, maintains a continuing program to identify and correct errors in these data. Neither OEP nor CSRC make any claims as to the validity or reliability or to any implied uses of these data.
2. Are there large undeveloped parcels of land in your region?

Unfragmented parcels are areas that are not intersected by roads, housing, or any other type of human developments. These areas are prime habitat for many species of wildlife. Generally, the larger the size of the unfragmented parcel the more beneficial it is to wildlife for habitat use. Springfield has four large parcels of unfragmented land. Parcel #1 is 3409 acres in size, and the dominant plant communities within the parcel are spruce, fir, mixed forest, and other hardwood. Parcel #2 is 6290 acres in size, and the dominant plant communities within the parcel are spruce, fir, mixed forest, and other hardwood. Parcel #3 is 4414 acres in size, and the dominant plant communities within the parcel are spruce, fir, mixed forest, and other hardwood. Parcel #4 is 578 acres in size, and the dominant plant communities within the parcel are spruce, fir, mixed forest, and other hardwood.

<table>
<thead>
<tr>
<th>Parcel #</th>
<th>Parcel Size (in acres)</th>
<th>% Conserved</th>
<th>Landcover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9886</td>
<td>29</td>
<td>MF, OH, SF</td>
</tr>
<tr>
<td>2</td>
<td>6290</td>
<td>69</td>
<td>MF, OH, SF</td>
</tr>
<tr>
<td>3</td>
<td>4414</td>
<td>0.011</td>
<td>MF, OH, SF</td>
</tr>
<tr>
<td>4</td>
<td>578</td>
<td>14</td>
<td>MF, RWP, SF,</td>
</tr>
</tbody>
</table>


Digital data in NH GRANIT represent the efforts of the contributing agencies to record information from the cited source materials. Complex Systems Research Center (CSRC), under contract to the Office of Energy and Planning (OEP), and in consultation with cooperating agencies, maintains a continuing program to identify and correct errors in these data. Neither OEP nor CSRC make any claims as to the validity or reliability or to any implied uses of these data.
3. What is the rate of development in the past ten years, where has new development occurred, what is the potential for development, and has a build-out analysis been done?

The population in Springfield has fluctuated over the years, but has shown little overall growth. The number of total housing units however has increased significantly. This means that fewer people are taking up more space than once were. In terms of industry, there has been significant growth in managerial and professional jobs, and a significant decrease in agriculture.

Source:

4. + 5. Does the master plan in your town address conservation? Is there a conservation commission? Are they actively pursuing any parcels?

The town of Springfield does not address conservation in its master plan but does have a conservation commission and the only thing that is being looked at in Springfield by its conservation commission is the use of ATV’s in Giles State Forest. The conservation commission is very opposed to the idea of allowing ATV’s in the state forest.

Laura Hummel, Springfield Conservation Commission 11/15/04.
6. Are there actively managed agricultural lands in town, do they provide a public or private benefit, and do they have an easement on them?

There are several actively managed agricultural lands in Springfield that are over ten acres and the largest is 230 acres. Actively agricultural lands are open fields and crops that are growing or have been hayed recently. The following map shows aerial photos taken of Springfield in 1998. The large open parcels of land were identified and digitized using GIS. The digitized land was then queried to 10 acres allowing the map to show only the parcels of land greater than ten acres, in accordance to the ASLPT standards.

### Springfield Actively Managed Agricultural Lands

<table>
<thead>
<tr>
<th>Ownership</th>
<th>Acreage</th>
<th>Conservation</th>
<th>Public Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bushueff, Elizabeth</td>
<td>28</td>
<td>No</td>
<td>no</td>
</tr>
<tr>
<td>Patten, Dallas R &amp; Mabel M</td>
<td>27</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Patten, Dallas, Mabel and Malcolm</td>
<td>19</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Patten, Malcolm</td>
<td>10</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Star Lake Properties INC</td>
<td>230</td>
<td>No</td>
<td>no</td>
</tr>
<tr>
<td>Tatro, Fred A &amp; Kathleen A</td>
<td>26</td>
<td>No</td>
<td>no</td>
</tr>
</tbody>
</table>

Sources:

Springfield current use document

Digital data in NH GRANIT represent the efforts of the contributing agencies to record information from the cited source materials. Complex Systems Research Center (CSRC), under contract to the Office of Energy and Planning (OEP), and in consultation with cooperating agencies, maintains a continuing program to identify and correct errors in these data. Neither OEP nor CSRC make any claims as to the validity or reliability or to any implied uses of these data.
7. Are there any actively managed forested lands in town, and do they have an easement on them.

Springfield has nine forests that were listed as actively managed forests in their current use documents that are over 20 acres. 20 acres is what the class decided to use as a standard for actively managed forests. The largest forest that was listed was 319 acres. Six of the actively managed forests offer public benefit whether it be for hiking biking fishing or hunting To get approximate locations of other actively managed forests in Springfield we also used the unfragmented layer that we created using GIS. Unfragmented areas represent lands that are uninterrupted by roads or development thus they are generally large forested areas. The locations of these areas can be seen on the attached map.

<table>
<thead>
<tr>
<th>Ownership</th>
<th>Parcel #</th>
<th>Acreage</th>
<th>Conservation</th>
<th>Public</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baptist Pond Trust</td>
<td>619</td>
<td>84</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Cote &amp; Reney Lumber CO INC</td>
<td>750</td>
<td>184</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Cote &amp; Reney Lumber CO INC</td>
<td>750</td>
<td>54</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Garfield, John</td>
<td>854</td>
<td>319</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Hodges, Elizabeth</td>
<td>930</td>
<td>60</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Orne, Majorie</td>
<td>1122</td>
<td>65</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>R H Webb Forest Preserve LLC</td>
<td>1346</td>
<td>166</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Yager, James</td>
<td>1386</td>
<td>67</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Yager, James</td>
<td>1386</td>
<td>53</td>
<td>no</td>
<td>no</td>
</tr>
</tbody>
</table>

Source:
Current use documents and SPNF Tree Farm data.

Unfragmented Lands
Springfield, NH

Legend
Fragment Size (acres)
1 - 19.5
20-99
100-499
500-2000
>2,500
(undeveloped)

Town of Springfield

Digital data in NH GRANIT represent the efforts of the contributing agencies to record information from the cited source materials. Complex Systems Research Center (CSRC), under contract to the Office of Energy and Planning (OEP), and in consultation with cooperating agencies, maintains a continuing program to identify and correct errors in these data. Neither OEP nor CSRC make any claims as to the validity or reliability or to any implied use of these data.
8. What plant communities are in town? Are there any threatened, or endangered species?

In order to find the types of plant communities in our towns, we used land cover information and calculated each type of habitat to find out how much of that plant community was present. Springfield also has mixed forest as its dominant plant community with 7,825 acres. The other common land cover types in Springfield are spruce/fir, beech/oak other hardwoods, and red and white pine.

There are two locations in town where uncommon species are found (to protect the species they will not be identified and the locations on the map are estimations of their actual locations). The approximate location of the species can be found on the threatened and endangered species map located on the attached page. One of these is a bird and the other is an amphibian.

<table>
<thead>
<tr>
<th>Springfield Landcover</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Landcover Types</strong></td>
<td><strong>Acres</strong></td>
</tr>
<tr>
<td>Developed</td>
<td>201</td>
</tr>
<tr>
<td>Transportation</td>
<td>566</td>
</tr>
<tr>
<td>Agriculture</td>
<td>805</td>
</tr>
<tr>
<td>Hardwoods</td>
<td>8644</td>
</tr>
<tr>
<td>Conifers</td>
<td>8219</td>
</tr>
<tr>
<td>Mixed Forest</td>
<td>7825</td>
</tr>
<tr>
<td>Open Water</td>
<td>690</td>
</tr>
<tr>
<td>Wetland</td>
<td>758</td>
</tr>
<tr>
<td>Disturbed</td>
<td>764</td>
</tr>
</tbody>
</table>

Source: the Natural Heritage Bureau.

Landcover Types
Springfield, NH
Threatened and Endangered Species
Springfield, NH

Legend
Endangered Species
- Amphibians
- Birds
- River and Streams
- Roads
- Lakes and Ponds

Digital data in NH GRANIT represent the efforts of the contributing agencies to record information from the cited source materials. Complex Systems Research Center (CSRC), under contract to the Office of Energy and Planning (OEP), and in consultation with cooperating agencies, maintains a continuing program to identify and correct errors in these data. Neither OEP nor CSRC make any claims as to the validity or reliability or to any implied uses of these data.
9. Are there ecologically important lands in your town to wildlife?

All of the maps used to identify ecologically important lands were generated by manipulating the unfragmented lands map. These maps show lands that are important for maintaining healthy populations of wildlife.

**Interior Habitat**

Interior habitat represents the core habitat within each unfragmented parcel. Species that prefer to have no human interaction, such as bear, moose, and deer will remain in these pieces of core habitat. If the interior habitat of a parcel is not big enough to support such large animals, it still serves as an ideal habitat for smaller species.

In order to map interior habitat, the unfragmented lands layer was manipulated. A 1000 foot buffer was placed on the inside of each unfragmented parcel. The 1000 foot buffer was then clipped away, and the land remaining was said to represent the interior habitat of a parcel.

There are five distinct patches of interior habitat within the town of Springfield. These patches would be ideal to conserve and would provide habitat for a number of different species.

**Forest Continuity Index**

Forest continuity index (FCI) gives a measurement of how much habitat is infringed on by the edge effect. Edge effect refers to the impacts often related to habitat on the edge of development. Many species will avoid the edge of the habitat in order to stay away from potential human impacts. Certain parcel shapes provide more usable habitat, and therefore a better FCI, than parcels of the same area with a different shape. A circle has the maximum amount of usable habitat. Therefore parcels with a rounder shape will have a better FCI and more usable habitat than long parcels, or parcels with jagged edges. A circle has an FCI of one. Any other shape would have an FCI above one. The closer to one an FCI is, the more usable habitat there is within the parcel.

In order to calculate the FCI’s for each parcel in the ASLPT region, the unfragmented lands layer was manipulated. The FCI of a parcel is equal to:

\[
\text{Perimeter(ft)} \div \sqrt{2 \pi \text{(area (ft}^2))}
\]

This formula was entered into the GIS program, and FCI value for each parcel was calculated. These values were then used to color-code the parcels according to FCI.

Within the town of Springfield, there were a few medium and small parcels with reasonable FCI’s. These parcels have more usable habitat than other parcels of comparable area.

**Forest Connectivity (Corridors)**

Corridors are pieces of undeveloped land that connect unfragmented parcels. The connectivity created by the corridors is significant because it allows for interaction between populations in separate parcels. This is an integral aspect of maintaining ecological stability because by allowing interaction between populations, breeding between populations is made possible. Breeding between populations leads to a greater
level of diversity, which is essential to sustaining healthy wildlife populations. The best way to allow for interaction between populations is to have large unfragmented parcels, but if this is not possible, corridors can reduce the isolated conditions that are typical of small parcels.

Within the town of Springfield, almost all unfragmented parcels are connected. This allows for a great deal of interaction between wildlife populations in different unfragmented parcels.

Source

Digital data in NH GRANIT represent the efforts of the contributing agencies to record information from the cited source materials. Complex Systems Research Center (CSRC), under contract to the Office of Energy and Planning (OEP), and in consultation with cooperating agencies, maintains a continuing program to identify and correct errors in these data. Neither OEP nor CSRC make any claims as to the validity or reliability or to any implied uses of these data.

Interior Habitat
Springfield, NH

Legend
- Town Boundary
- Interior Habitat (acres)
- 1 - 19
- 20 - 99
- 100 - 499
- 500 - 2500
- undeveloped
- Lakes and Ponds
- Rivers and Streams

Institute for Community & Environment
541 Main Street
New London, NH 03257
(603) 526-3444
Digital data in NH GRANIT represent the efforts of the contributing agencies to record information from the cited source materials. Complex Systems Research Center (CSRC), under contract to the Office of Energy and Planning (OEP), and in consultation with cooperating agencies, maintains a continuing program to identify and correct errors in these data. Neither OEP nor CSRC make any claims as to the validity or reliability or to any implied uses of these data.

Forest Continuity Index
Springfield, NH
Corridors
Springfield, NH

Legend
- Town Boundary
- Corridors

Legend
- Unfragmented Lands (acres)
  - 1 - 19
  - 20 - 99
  - 100 - 499
  - 500 - 2300
  - >2500 (undeveloped)
- Lakes and Ponds

Digital data in NH GRANT represent the efforts of the contributing agencies to record information from the cited source materials. Complex Systems Research Center (CSRC), under contract to the Office of Energy and Planning (OEP), and in consultation with cooperating agencies, maintains a continuing program to identify and correct errors in these data. Neither OEP nor CSRC make any claims as to the validity or reliability or to any implied uses of these data.
10. Are there areas in town adjacent to surface waters that are undeveloped, are there any aquifers in town? Identify where impervious surface threatens water quality.

One of the major goals stated in the *New Hampshire Everlasting* is to protect water resources. One way of doing this is to minimize development surrounding water resources. Water resources include both surface water and aquifers.

There is little development around, or on aquifers, but there is quite a bit of development surrounding surface waters. This could lead to the possible contamination of aquatic habitat and drinking water.

Source:

Digital data in NH GRANIT represent the efforts of the contributing agencies to record information from the cited source materials. Complex Systems Research Center (CSRC), under contract to the Office of Energy and Planning (OEP), and in consultation with cooperating agencies, maintains a continuing program to identify and correct errors in these data. Neither OEP nor CSRC make any claims as to the validity or reliability or to any implied uses of these data.
11. What are the recreational uses of land in town?

Recreation is very important to the residents of Springfield, as such there are large amounts of recreational opportunities available in Springfield. The recreational uses of the land in Springfield include the following: boating, fishing, snowmobiling, hunting, cross-country skiing, biking, hiking, swimming, canoeing, horse back riding, and many more. On the map we used icons that are just a general representation of where its located.

Sources:

Master Plan, ground truthing and asking community members such as Laura Hummel who is the chairman of the Springfield Conservation Commission.
Digital data in NH GRANIT represent the efforts of the contributing agencies to record information from the cited source materials. Complex Systems Research Center (CSRC), under contract to the Office of Energy and Planning (OEP), and in consultation with cooperating agencies, maintains a continuing program to identify and correct errors in these data. Neither OEP nor CSRC make any claims as to the validity or reliability or to any implied uses of these data.
12. Where are there scenic viewing opportunities in town?

From talking with community members in Springfield, NH and the chairman of the conservation commission, Laura Hummel it was determined that Gile State Forest is a very scenic and pristine area in there town. The other scenic views are McDaniel Marsh, Baptist Pond, and the Royal Arch. The rest area on I-89 north also has great scenic views.

Source:

Phone conversation with Laura Hummel, March 31, 2005.
Digital data in NH GRANIT represent the efforts of the contributing agencies to record information from the cited source materials. Complex Systems Research Center (CSRC), under contract to the Office of Energy and Planning (OEP), and in consultation with cooperating agencies, maintains a continuing program to identify and correct errors in these data. Neither OEP nor CSRC make any claims as to the validity or reliability or to any implied uses of these data.