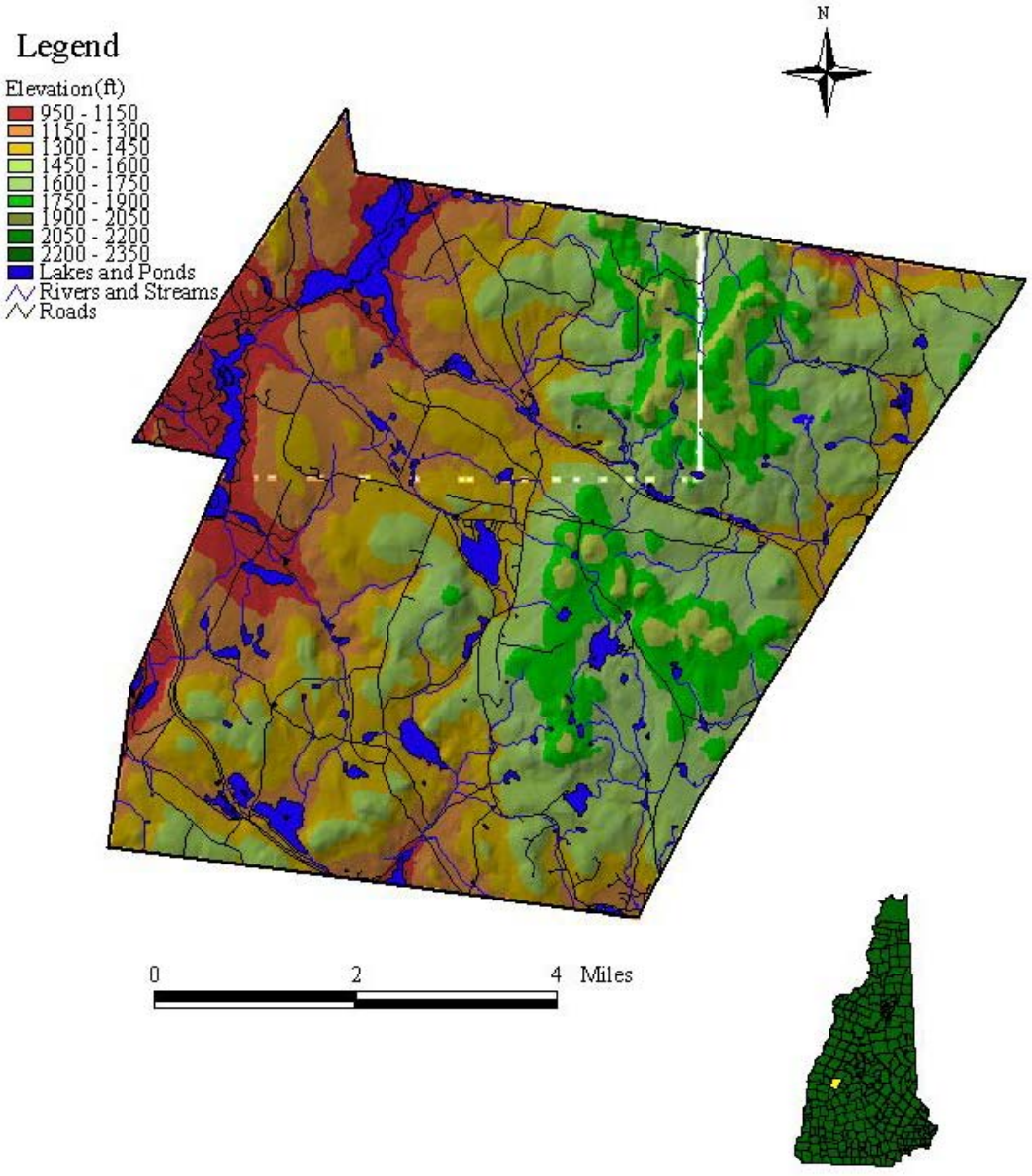
Springfield, NH



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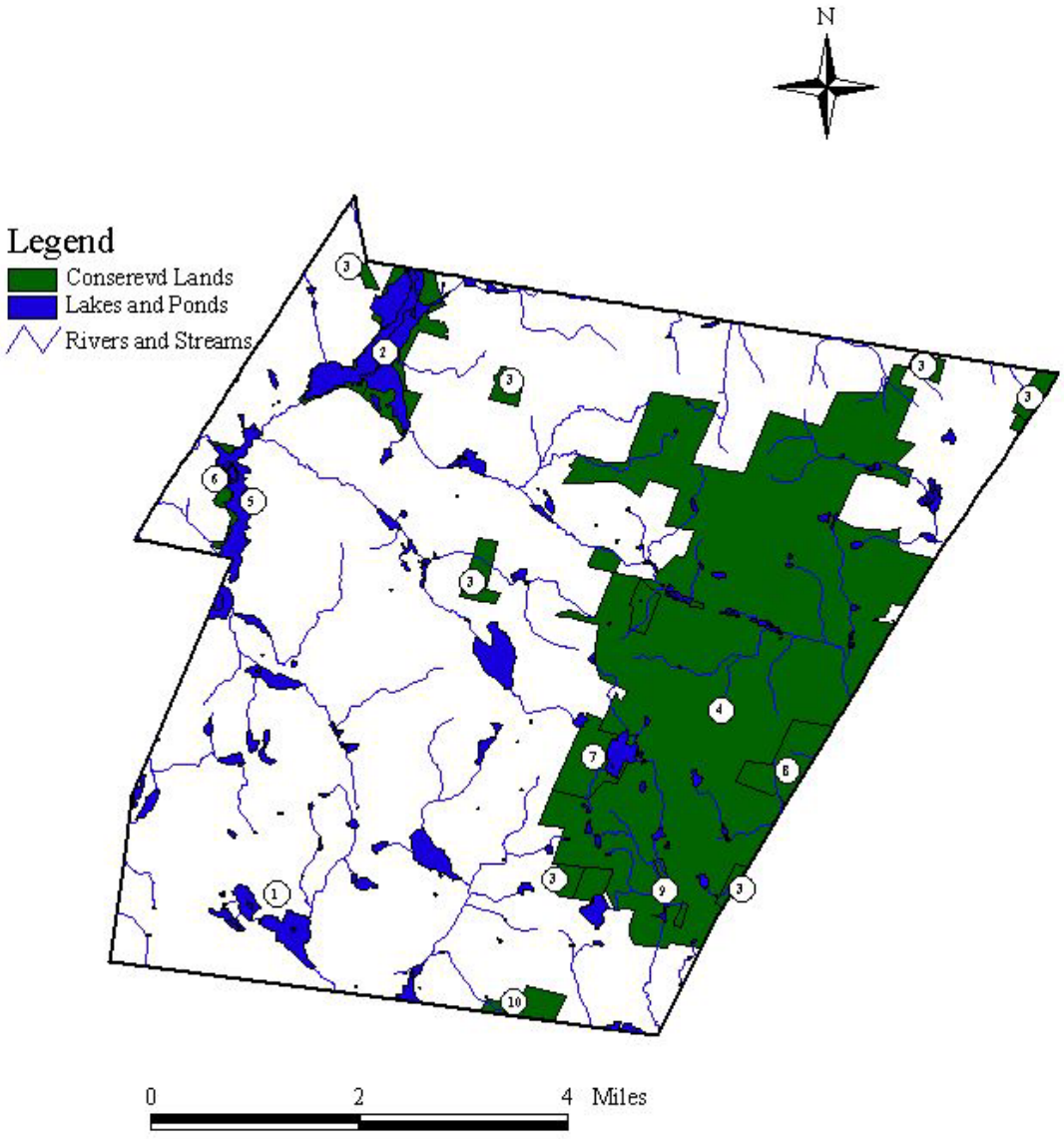
1. How many acres does the town represent, and are there any conserved lands within the town. If so what is the percentage of conserved lands?

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.

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

"Granit Data." Granit. Granit. 09 Mar. 2005 <http://www.granit.sr.unh.edu/cgi-bin/nhsearch>.

Conserved Lands
Springfield, NH



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2. Are there large undeveloped parcels of land in your region?

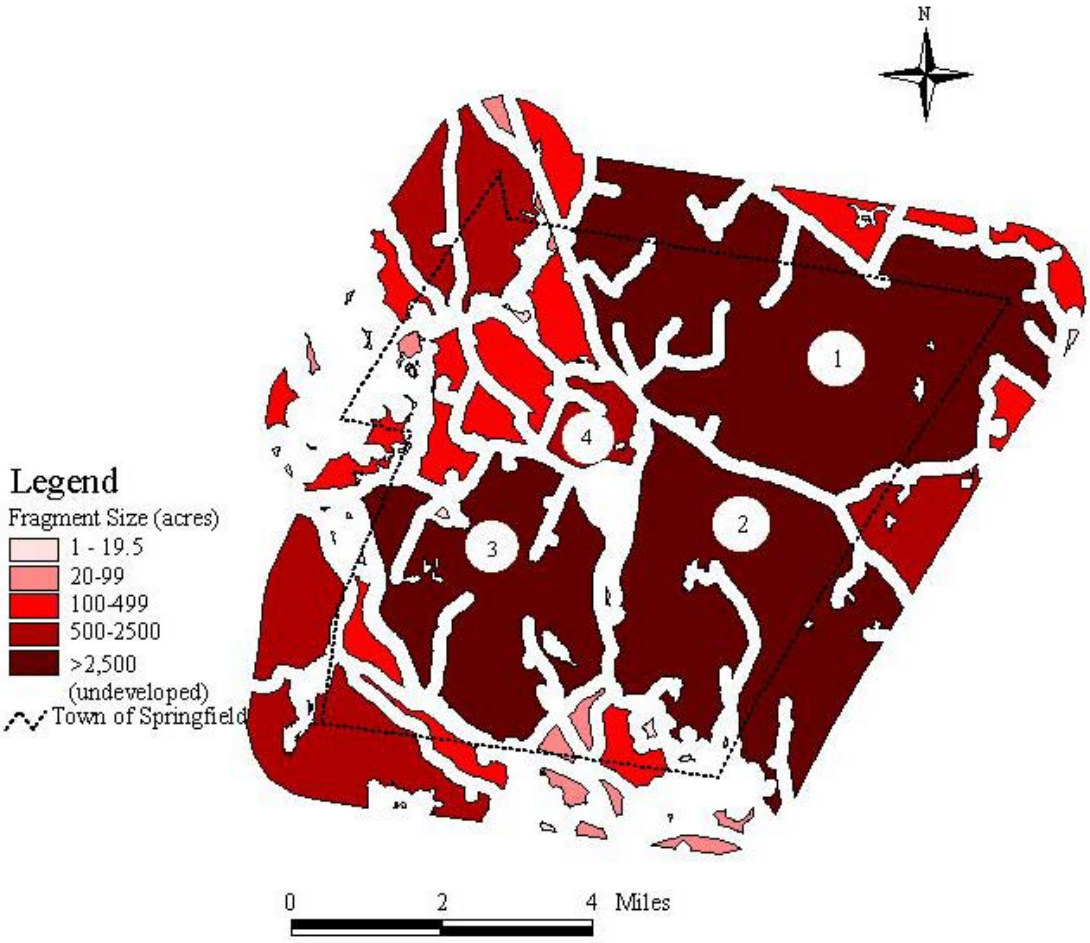
Unfragmented parcels are areas that are not intersected by roads, housing, or any other type of human developments. These areas are prime habitat for many species of wildlife. Generally, the larger the size of the unfragmented parcel the more beneficial it is to wildlife for habitat use. Springfield 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.

Parcel #	**Parcel Size** (in acres)	**% Conserved**	**Landcover**
1	9886	29	MF, OH, SF
2	6290	69	MF, OH, SF
3	4414	0.011	MF, OH, SF
4	578	14	MF, RWP, SF,

"Granit Data." Granit. Granit. 09 Mar. 2005 <http://www.granit.sr.unh.edu/cgi-bin/nhsearch>.

Lambert, Nancy. Mapping Wildlife Habitat using ArcView 3.2 and NH GRANIT Data. Durham: University of New Hampshire Cooperative Extension, 2004.

Unfragmented Lands
Springfield, NH



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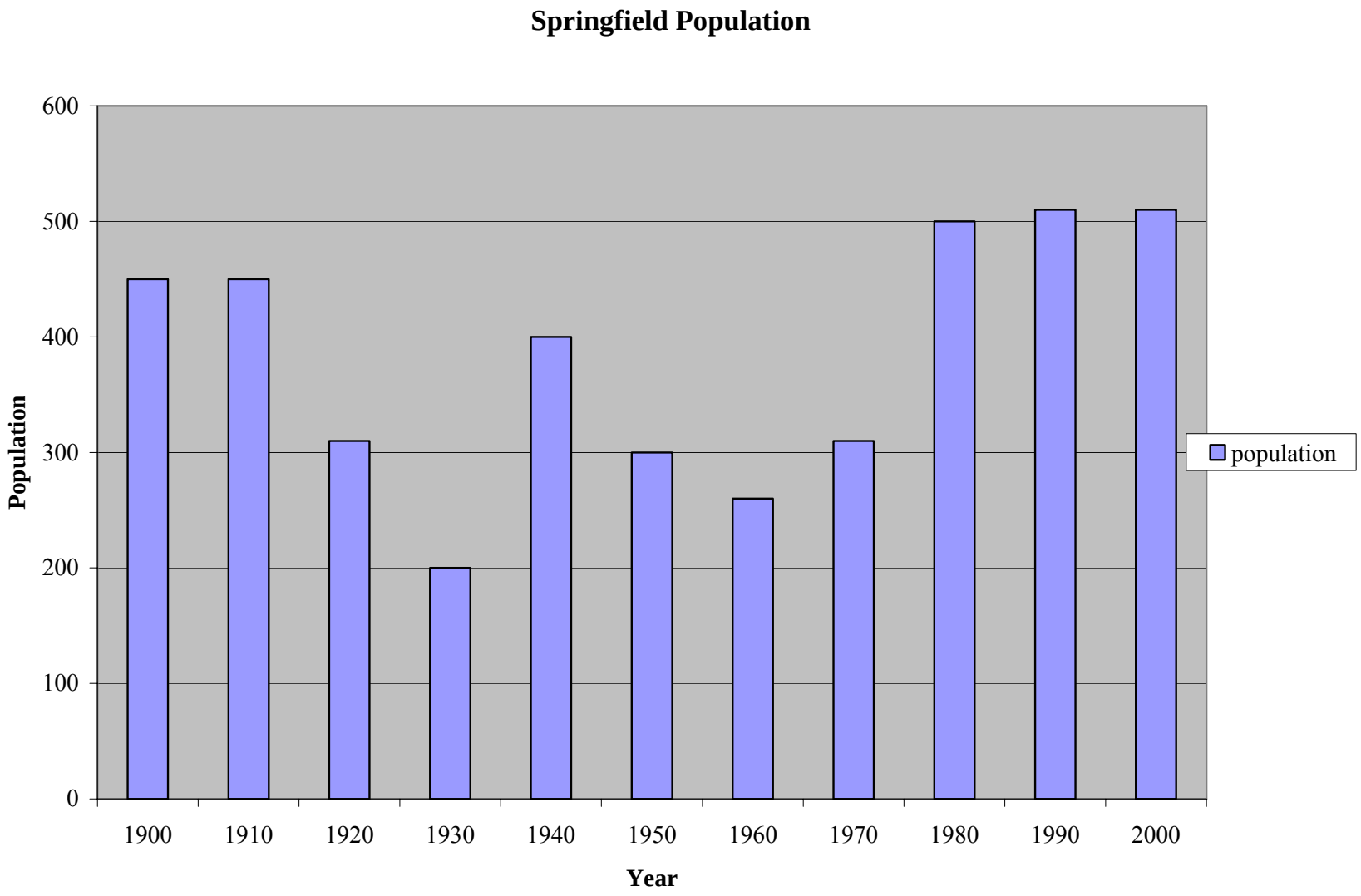
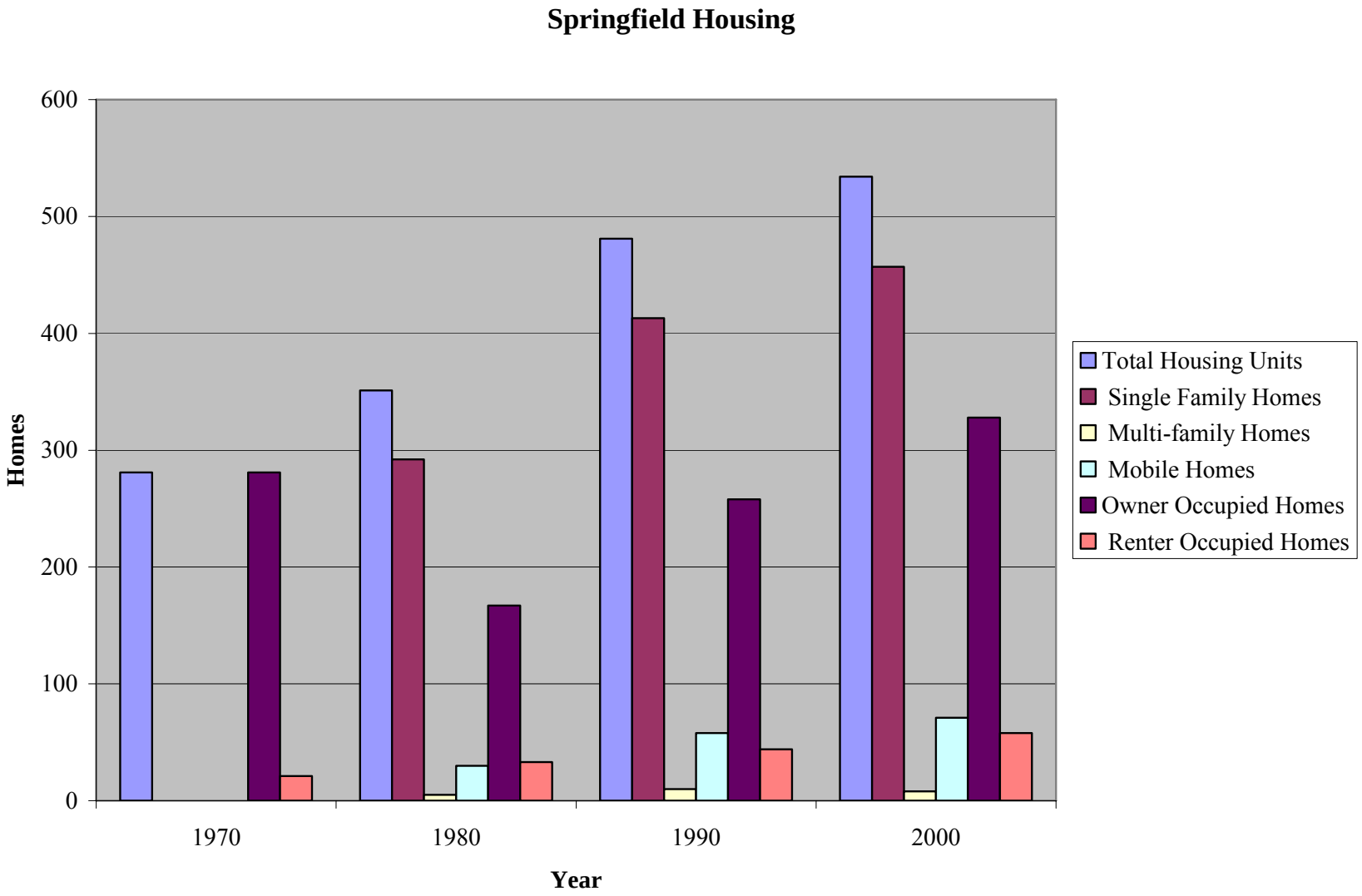
3. What is the rate of development in the past ten years, where has new development occurred, what is the potential for development, and has a build-out analysis been done?

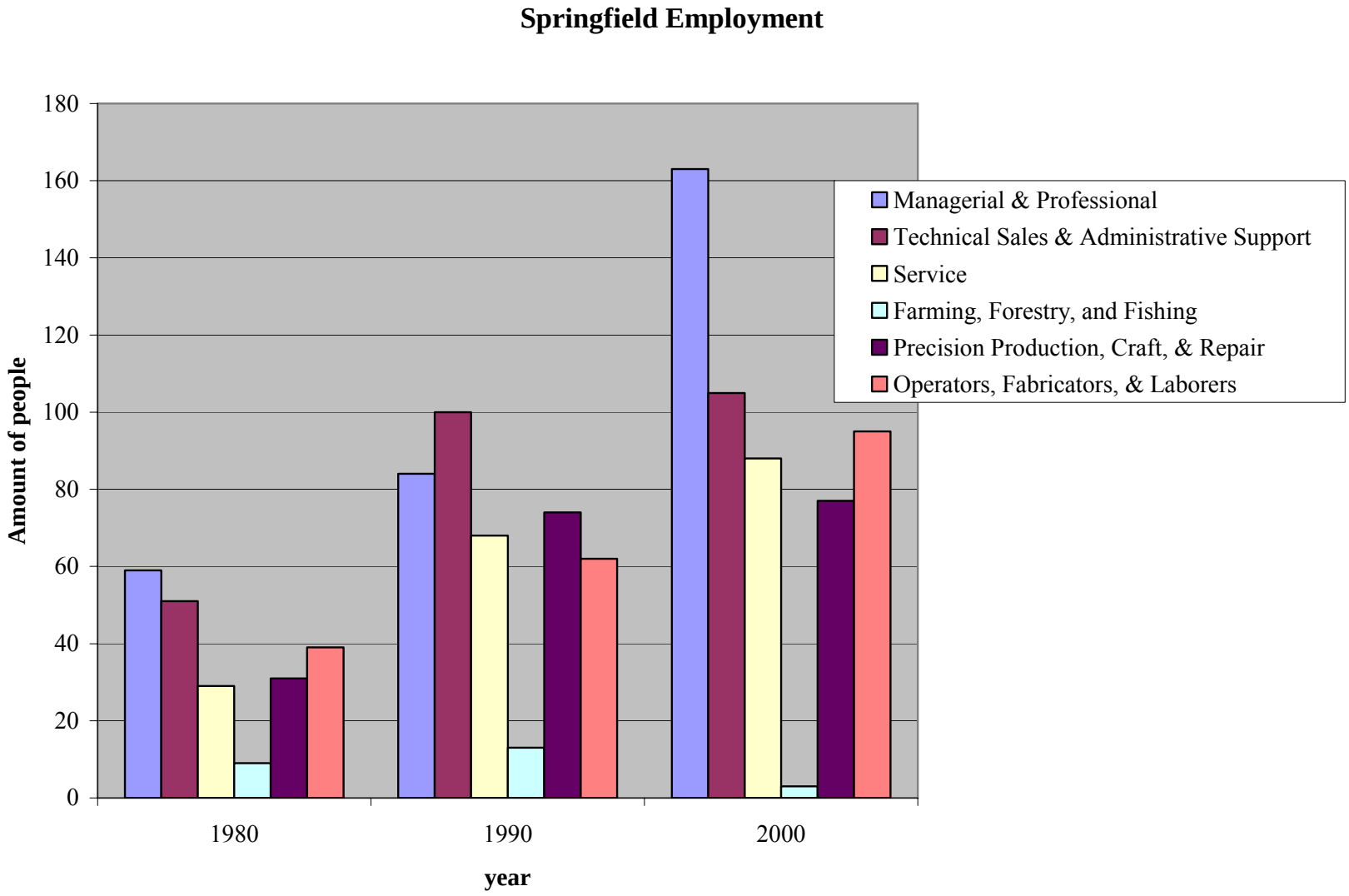
The population in Springfield has fluctuated over the years, but has shown little overall growth. The number of total housing units however has increased significantly. This means that fewer people are taking up more space than once were. In terms of industry, there has been significant growth in managerial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

Source:

UVLSRPC Home. 7 Mar 2005. Upper Valley Lake Sunapee Regional Planning Commission. 09 Mar. 2005 <http://www.uvlsrpc.org/>.


Springfield Population
600
500
400
300
200
100
0
Population
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
Year
population


Springfield Housing
600
500
400
300
200
100
0
Homes
1970
1980
1990
2000
Year
Total Housing Units
Single Family Homes
Multi-family Homes
Mobile Homes
Owner Occupied Homes
Renter Occupied Homes


Springfield Employment
180
160
140
120
100
80
60
40
20
0
Amount of people
1980
1990
2000
year
Managerial & Professional
Technical Sales & Administrative Support
Service
Farming, Forestry, and Fishing
Precision Production, Craft, & Repair
Operators, Fabricators, & Laborers

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 then ten acres, in accordance to the ASLPT standards.

Springfield Actively Managed Agricultural Lands

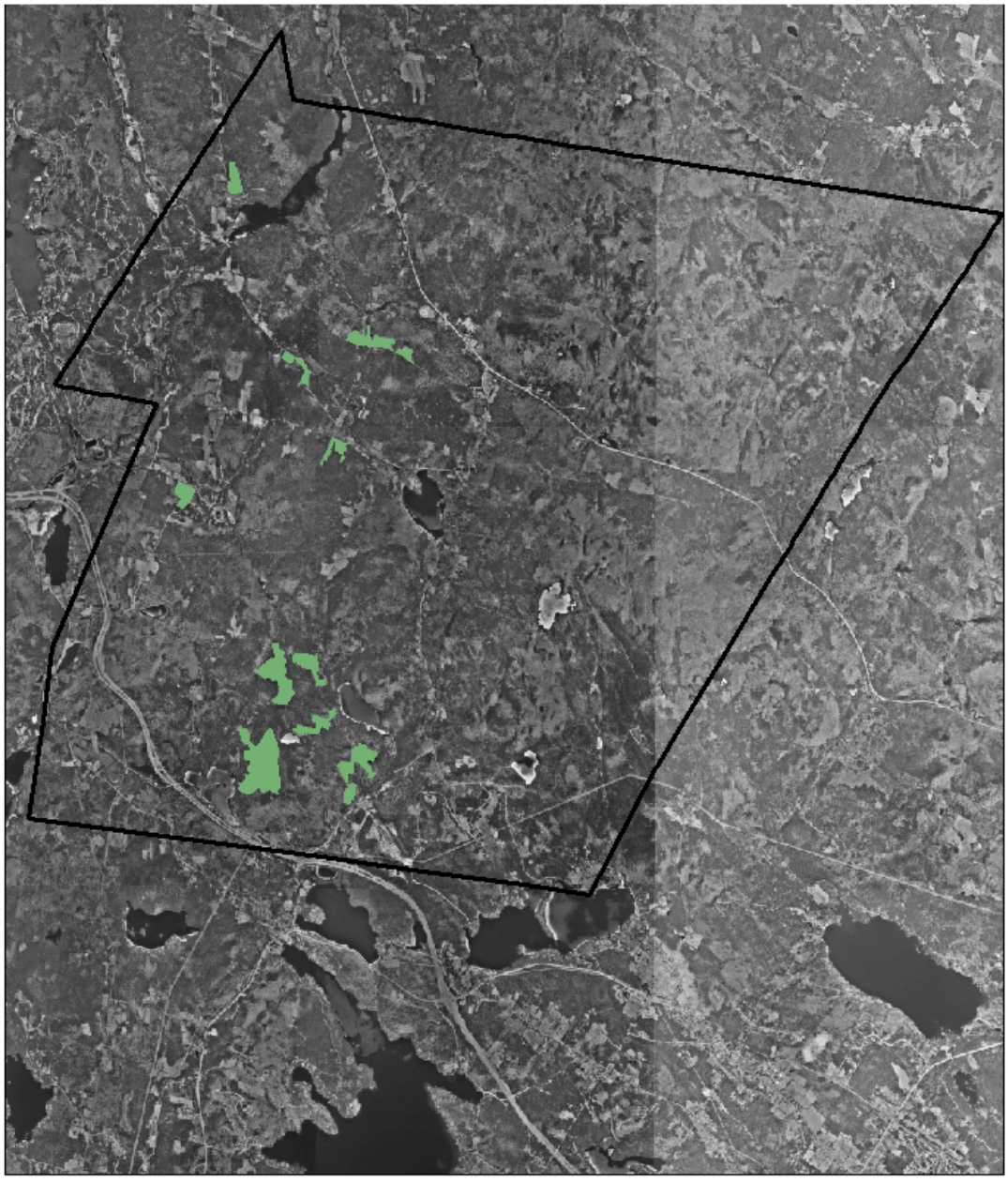
		Conservation	**Public**
Ownership	**Acreage**	**Easement**	**Benefit**
Bushueff, Elizabeth	28	No	no
Patten, Dallas R & Mabel M	27	No	Yes
Patten, Dallas, Mabel and Malcolm	19	No	
Patten, Malcolm	10	No	
Star Lake Properties INC	230	No	no
Tatro, Fred A & Kathleen A	26	No	no

Sources:

Springfield current use document

Janet Roberts, Springfield Town Office, personal communication, June 22, 2005.

Agriculture
Springfield



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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.

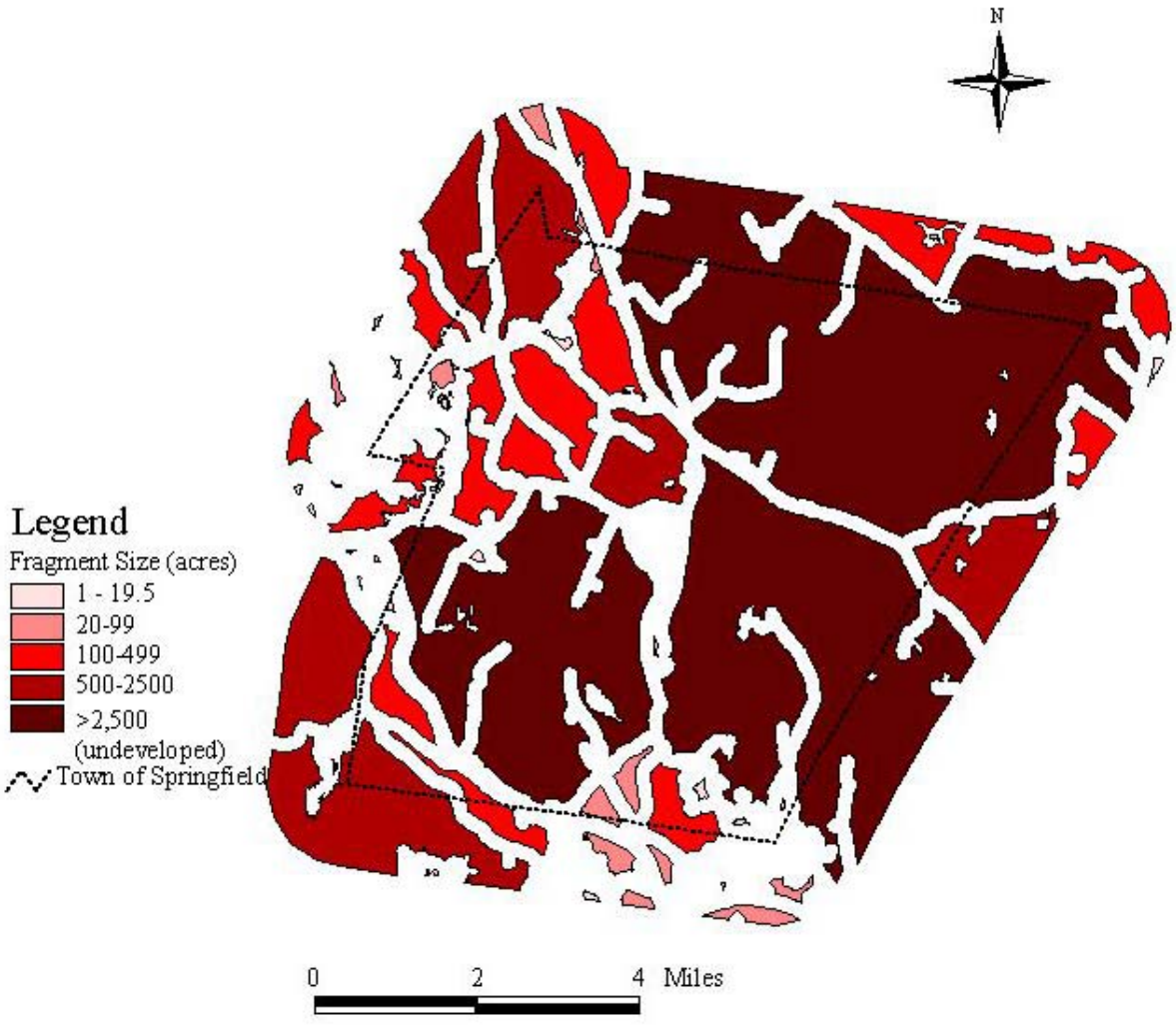
Springfield Actively Managed Forests					
				Conservation	**Public**
Ownership		**Parcel #**	**Acreage**	**Easement**	**Benefit**
Baptist Pond Trust		619	84	yes	yes
Cote & Reney Lumber CO INC		750	184	no	yes
Cote & Reney Lumber CO INC		750	54	no	yes
Garfield, John		854	319	no	yes
Hodges, Elizabeth		930	60	no	yes
Orne, Majorie		1122	65	no	no
R H Webb Forest Preserve LLC		1346	166	yes	yes
Yager, James		1386	67	no	no
Yager, James		1386	53	no	no

Source:

Current use documents and SPNF Tree Farm data.

"GRANIT Data." GRANIT. 25 Oct. 2005. University of New Hampshire and NH Office of Energy and Planning. 07 Mar. 2005 <http://www.granit.sr.unh.edu/>.

Unfragmented Lands
Springfield, NH



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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.

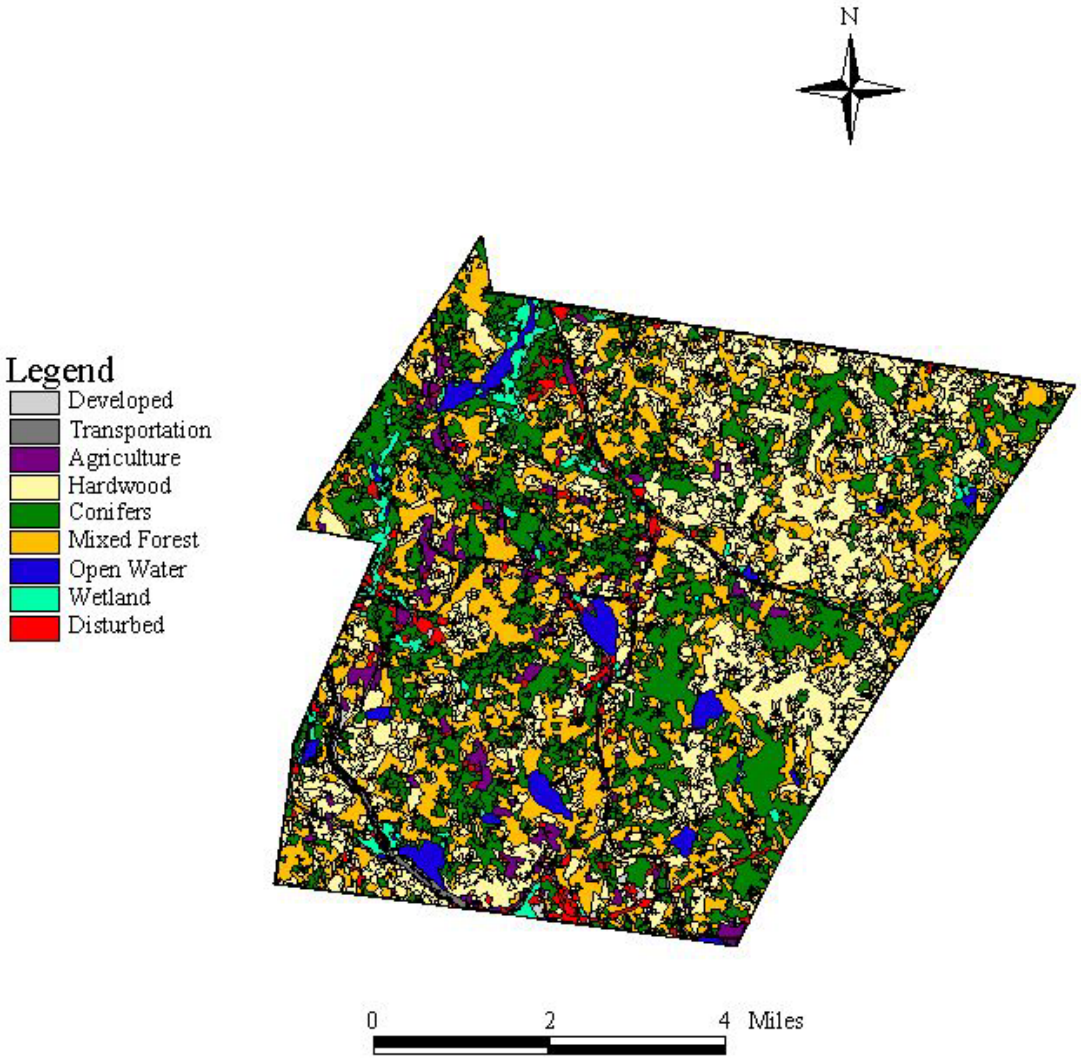
There are two locations in town where uncommon species are found (to protect the species they will not be identified and the locations on the map are estimations of their actual locations). The approximate location of the species can be found on the threatened and endangered species map located on the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

Springfield Landcover	
Landcover Types	**Acres**
Developed	201
Transportation	566
Agriculture	805
Hardwoods	8644
Conifers	8219
Mixed Forest	7825
Open Water	690
Wetland	758
Disturbed	764

Source: the Natural Heritage Bureau.

"GRANIT Data." GRANIT. 25 Oct. 2005. University of New Hampshire and NH Office of Energy and Planning. 07 Mar. 2005 <http://www.granit.sr.unh.edu/>.

Landcover Types
Springfield, NH



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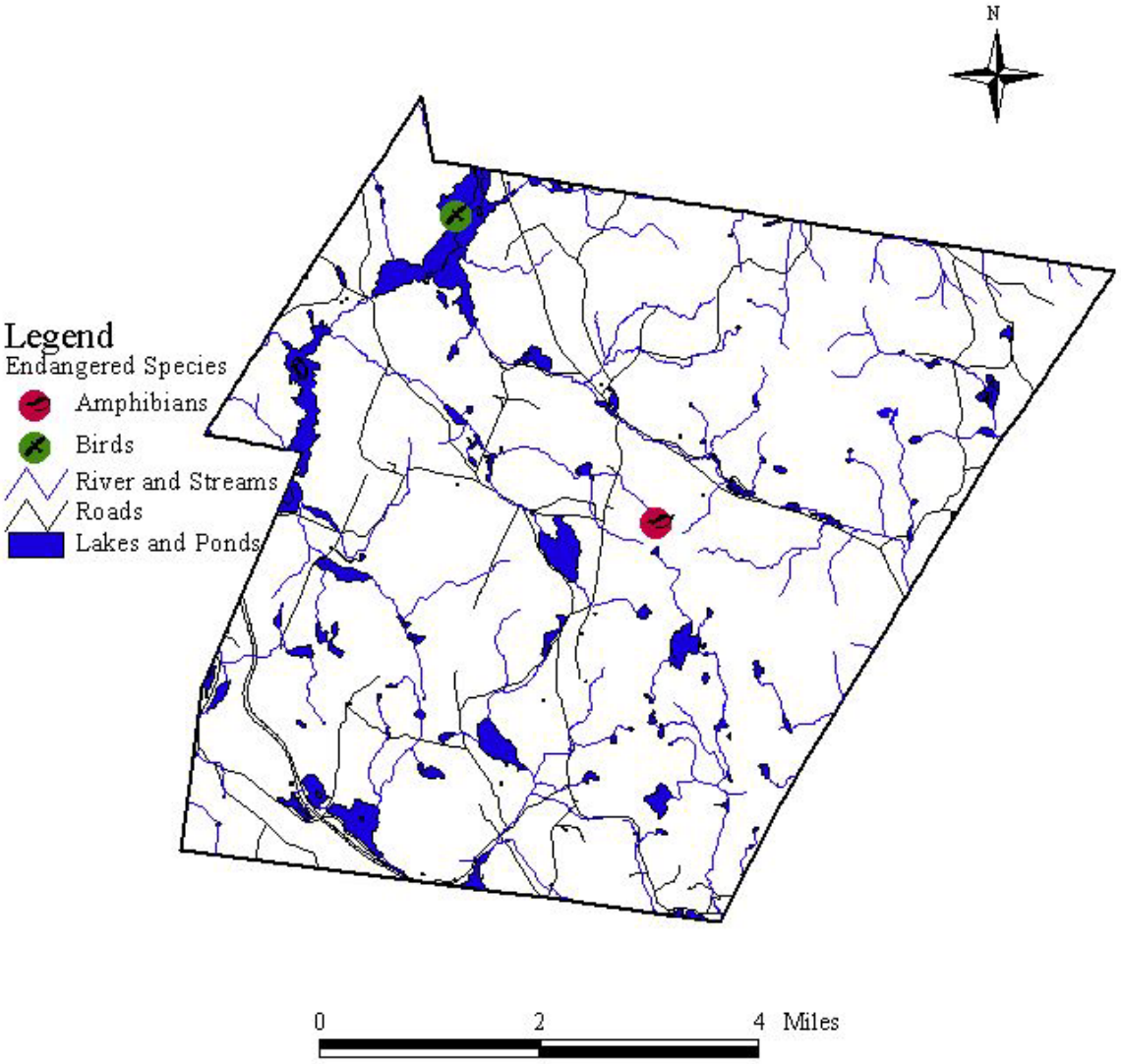
Threatened and Endangered Species
Springfield, NH



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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 map 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 beer, 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 manipulate. 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:

$$\frac{\text{Perimeter(ft)}}{2\sqrt{(\pi \text{area } (\text{ft}^2))}}$$

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

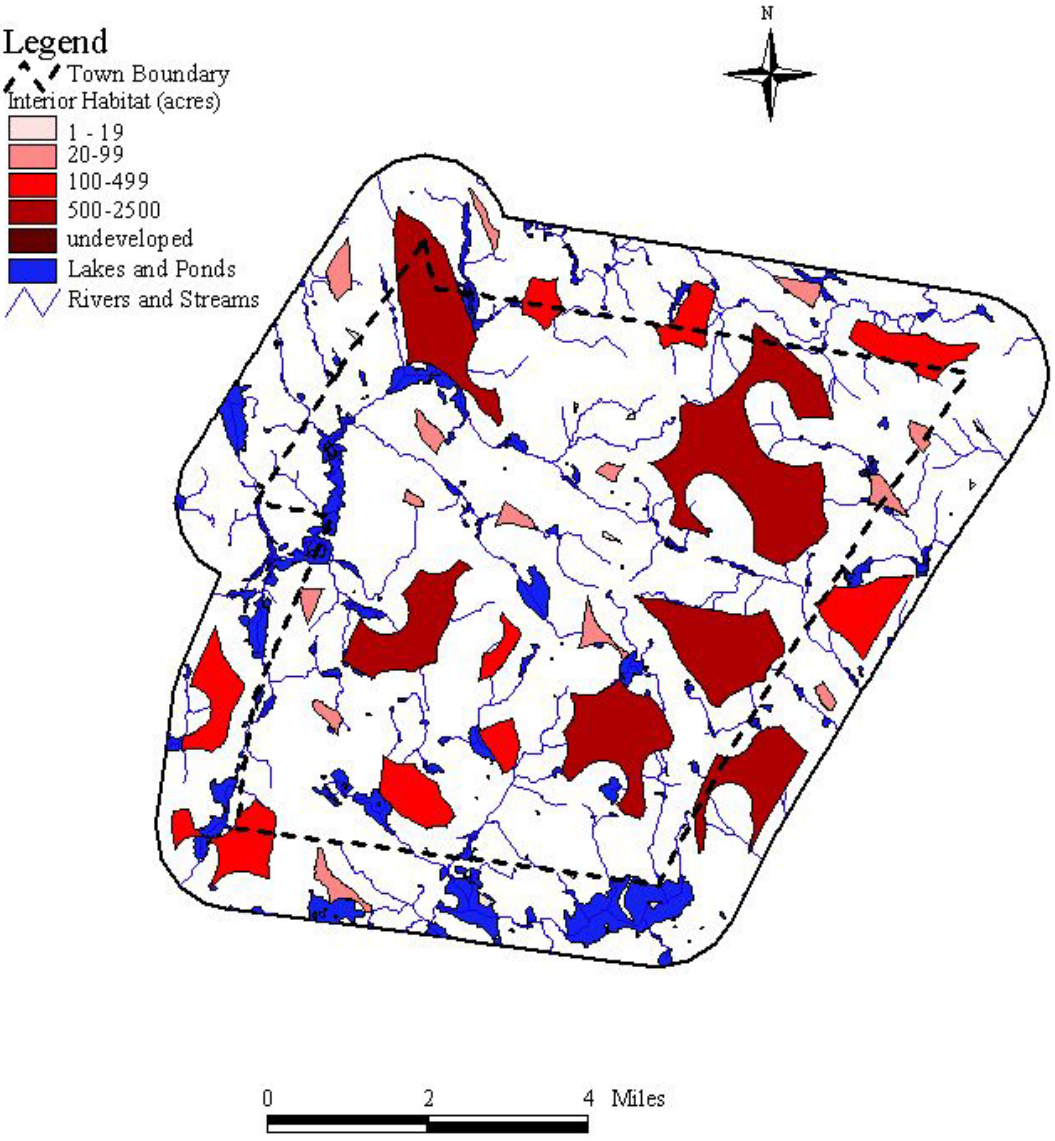
level of diversity, which is essential to sustaining healthy wildlife populations. The best way to allow for interaction between populations is to have large unfragmented parcels, but if this is not possible, corridors can reduce the isolated conditions that are typical of small parcels

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

"GRANIT Data." GRANIT. 25 Oct. 2005. University of New Hampshire and NH Office of Energy and Planning. 07 Mar. 2005 <http://www.granit.sr.unh.edu/>.

Interior Habitat
Springfield, NH



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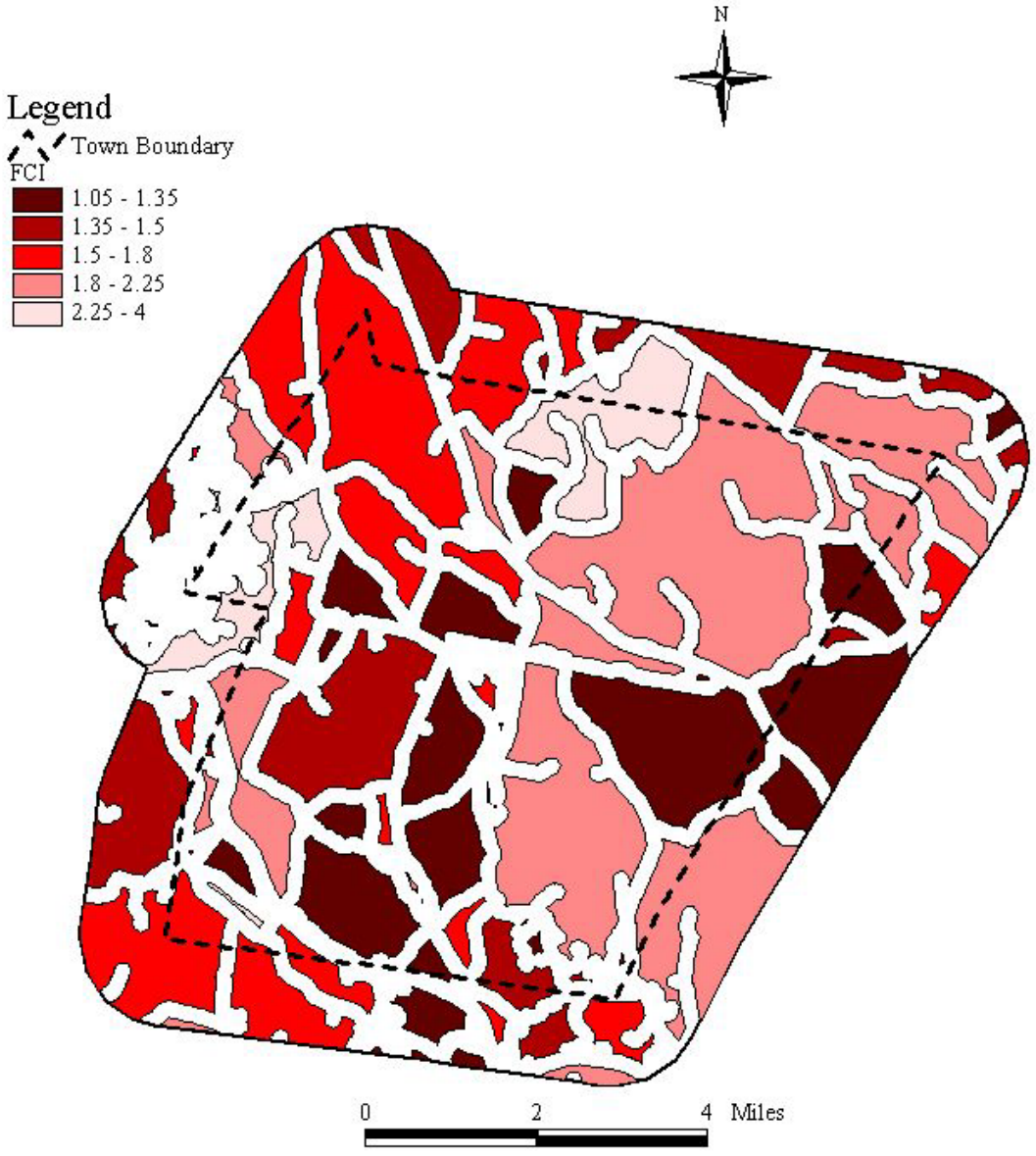
Forest Continuity Index
Springfield, NH



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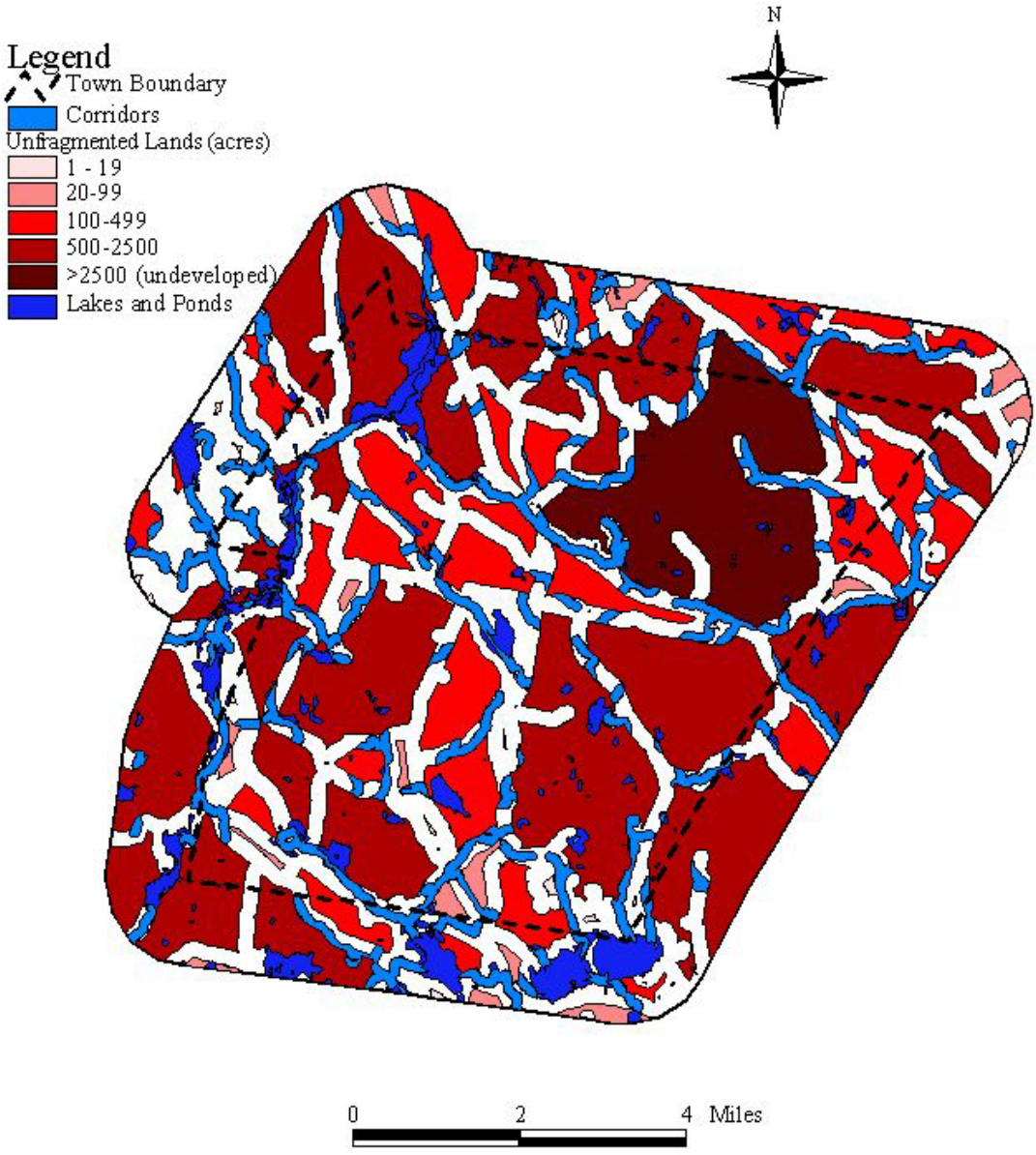
Corridors
Springfield, NH



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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.

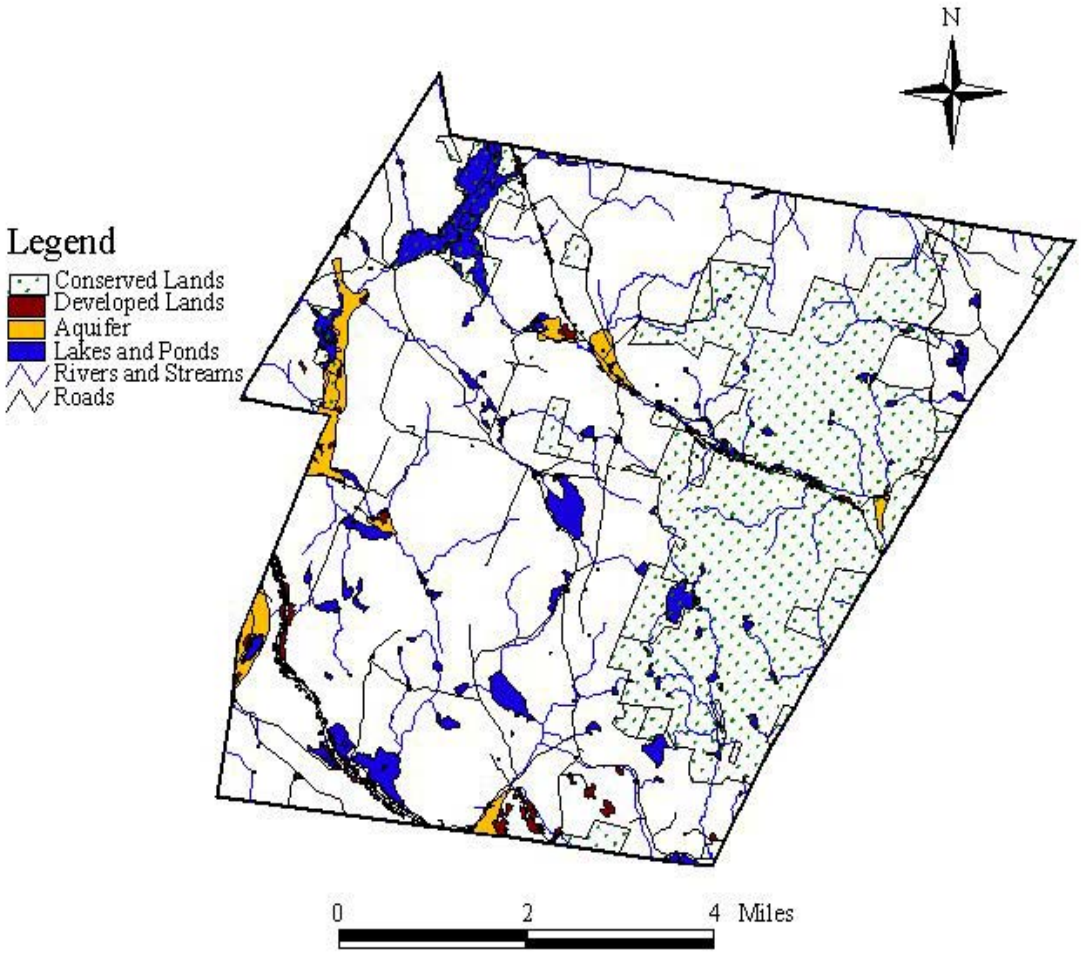
One of the major goals stated in the *New Hampshire Everlasting* is to protect water resources. One way of doing this is to minimize development surrounding water resources. Water resources include both surface water and aquifers.

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:

"GRANIT Data." GRANIT. 25 Oct. 2005. University of New Hampshire and NH Office of Energy and Planning. 07 Mar. 2005 <http://www.granit.sr.unh.edu/>.

Water Resources
Springfield, NH



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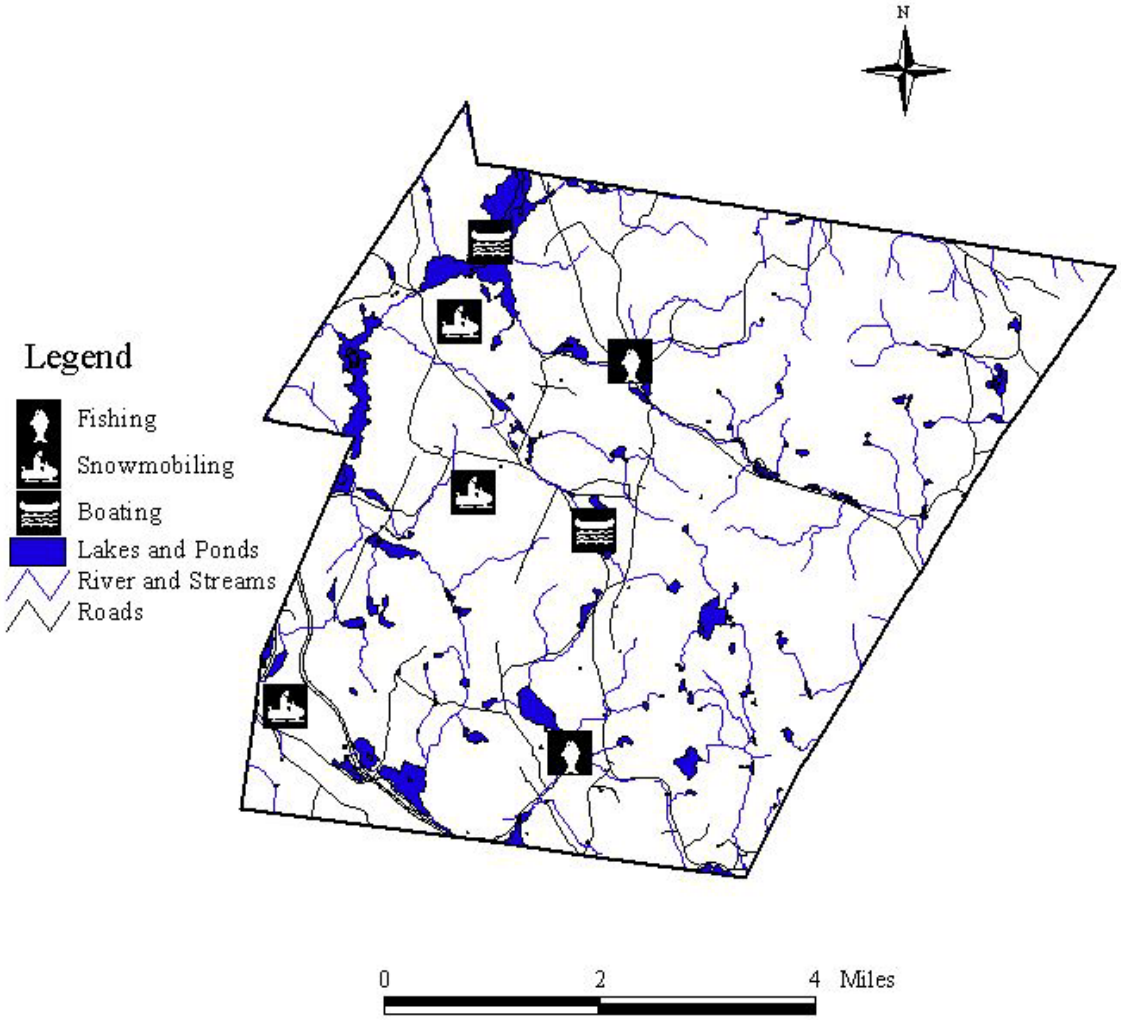
11. What are the recreational uses of land in town?

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.

Recreation Resources
Springfield



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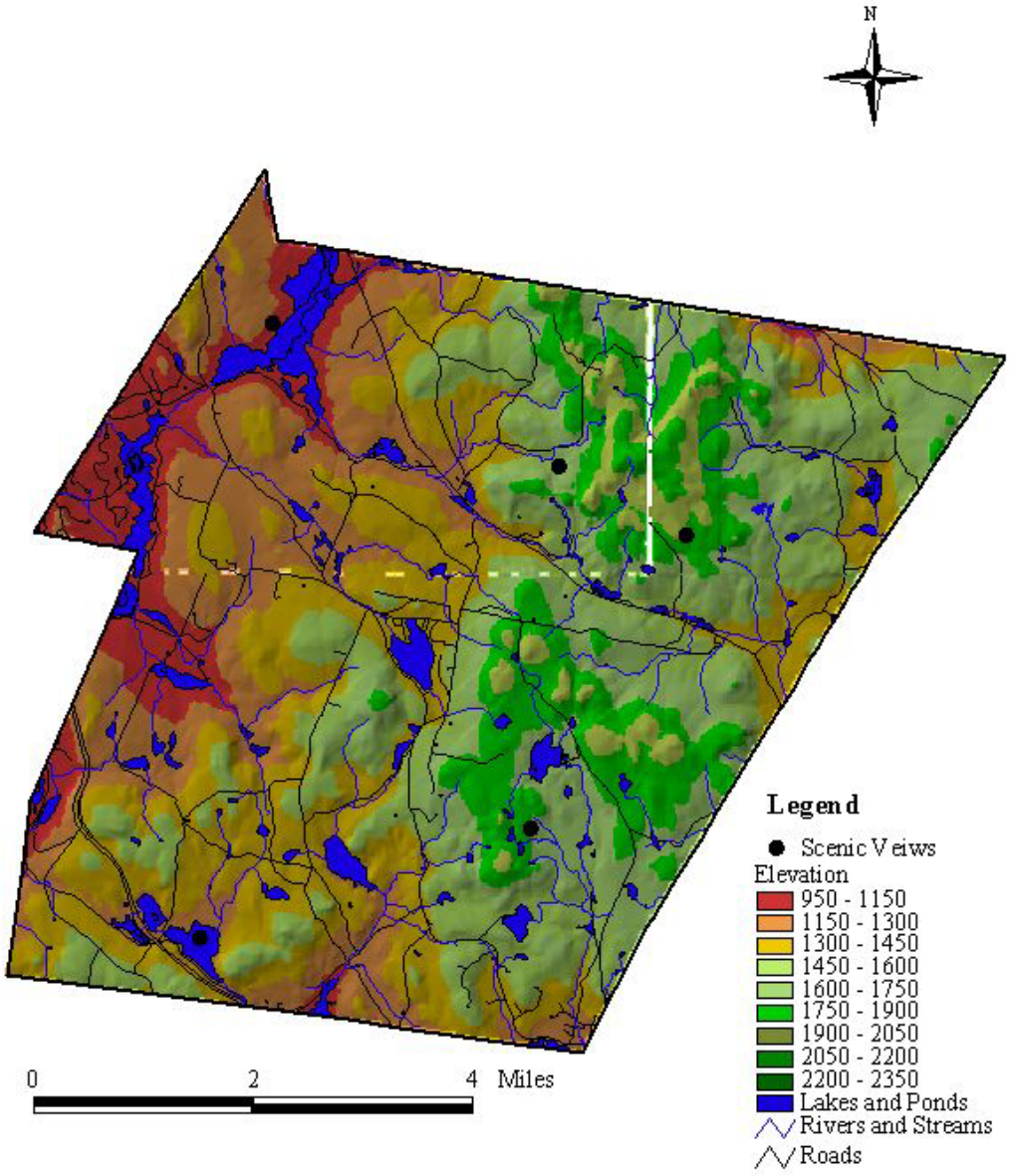
12. Where are there scenic viewing opportunities in town?

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.

Scenic Views
Springfield, NH



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