| 1  | NATURAL AND WORKING LANDS   |
|----|---|
| 2  | RCC - 3/12/16   |
| 3  |   |
| 4  | <u>PREAMBLE</u>   |
| 5  |   |
| 6  | The following is a draft of observations and action steps that the Richmond               |
| 7  | Conservation Commission has come up with thus far. As such, this document solely          |
| 8  | reflects the draft views of the Conservation Commission.                                  |
| 9  |   |
| 10 | The RCC started by incorporating existing RCC material, such as the Science to Action     |
| 11 | Report and material provided by the Agency of Natural Resources. It then looked at        |
| 12 | several other town plans, including those from Jericho, Northfield and Williston, to      |
| 13 | gather ideas. Most particularly careful attention was given to the outcome of the 1/20/16 |
| 14 | planning meeting where Natural Resources was a main topic.                                |
| 15 |   |
| 16 | This draft is organized around the vision statement and key goals from the 1/20           |
| 17 | meeting. Importantly, effort was taken to include all the key suggestions from 1/20.      |
| 18 |   |
| 19 | We also have included a brief summary of what prioritization steps might look like is     |
| 20 | included as an appendix.  |
| 21 |   |
| 22 | The CC would be most interested in any comments the community might offer with            |
| 23 | regard to this draft. These should be sent to Judy Rosovsky, RCC Chair:                   |
| 24 | Judy.Rosovsky@jsc.edu   |
| 25 |   |
| 26 | AGAIN, THIS DOCUMENT ONLY RELECTS ONLY THE DRAFT VIEWS OF THE                             |
| 27 | RICHMOND CONSERVATION COMMISSION.   |
| 28 |   |
| 29 |   |
| 30 |   |

#### **KEY OBSERVATIONS**

Richmond is situated in an ecological "sweet spot" between the state's highest peaks and fertile river valleys, making it home to a distinct diversity of natural and working lands, and the resources associated with them. This diversity is central to Richmond's rural identity and its residents' quality of life and sense of place.

 Important defining features cover a range of landscapes and landforms. These include forests, fields, pastures, watercourses, wetlands, floodplains, hills, ridges, valleys, cliffs and outcroppings. This mosaic and the connections among its elements supports distinct, healthy and mutually dependent communities of species. It also provides habitat to individual species and the unique food sources and refuge needs they require.

 Richmond's traditional settlement pattern is critical to our community's identity and the ecological integrity of the land. The pattern is characterized by clustered, higher density development within the Town's compact, village center and surrounded by much less densely populated areas that include working farms, contiguous forestlands and other important natural resource areas.

Town surveys identify Richmond's natural setting as contributing significantly to a high quality of life. Our setting attracts and retains people, visitors and businesses critical to our community and its economic strength. More than providing a beautiful backdrop, Richmond's natural and working lands support important ecological functions, significant recreational opportunities, the health and well-being of residents, and educational programs focused on the natural world around us.

 A combination of internal and external forces continues to threaten our natural resources. For example:

Climate change has introduced new stresses and threats to the health and integrity of everything from large forested tracts to individual species.
Land use planning and zoning regulations have historically made only limited

use of science-based assessments of natural resources, contributing to resource fragmentation and outright loss throughout the town. This has increased the need for careful, targeted strategies to ensure the quality and integrity of our remaining natural and working lands to support their environmental functions as well as our community's quality of life and economic stability and growth.

• The lack of specificity / granularity in the Town Plan:

 Causes the Town to lose legal leverage such as for communications tower location.

 Has allowed zoning regulations that, even when matched to the Town Plan, have not reinforced lot size issues and have not reinforced

| 1                               | traditional settlement patterns in terms of new housing, with the number of   |
|---------------------------------|---|
| 2                               | parcels increasing by a much larger percentage than the percent by which  |
| 3                               | population has been increasing.   |
| 4                               |   |
| 5                               | <ul> <li>Provides lack of clarity that puts Town and permit applicant alike at a</li> </ul>   |
| 6                               | disadvantage.   |
| 7                               |   |
| 8                               | <ul> <li>Lack of prioritization has compromised the ability to focus on the most</li> </ul>   |
| 9                               | important undertakings to maintain the integrity of our natural resources.  |
| 10                              | map or taking an accounting of the mission and group of the mission accounts of   |
| 11                              | <ul> <li>Recent scientific studies of local resources now provide an unprecedented</li> </ul>   |
| 12                              | scientific evaluation and prioritization of their importance. This allows assessment  |
| 13                              | of threats and opportunities that inform sound town planning.   |
| 14                              |   |
| 15                              | <ul> <li>Richmond has the information, tools and will to employ a variety of proven,</li> </ul>   |
| 16                              | complementary non-regulatory and regulatory techniques to assure the integrity  |
| 17                              | of the town's most significant natural and working lands. A variety of regulatory   |
| 18                              | and non-regulatory strategies are available to develop win-win interfaces   |
| 19                              | between human endeavor and our natural resources.   |
| 20                              |   |
| 21                              | VISION  |
| 22                              | To windly atomord our noticed and wouldn't lands analysis the beauty and booth  |
| <ul><li>23</li><li>24</li></ul> | To wisely steward our natural and working lands, ensuring the beauty and health of our landscapes, waterways, open spaces, wildlife and agricultural resources. |
| 25                              |   |
| 26                              | GOALS   |
| 27                              | <ul> <li>Protect the health of our rivers, streams, forests, floodplains, wildlife and habitat.</li> </ul>  |
| 28                              | Maintain public access to open spaces and nature.   |
| 29                              | Protect our working and agricultural lands and soils.   |
| 30                              | Maintain the beauty of important vistas and scenic landscapes, such as town   |
| 31                              | gateways.   |
| 32                              | <b>3</b> ,  |
| 33                              | STRATEGIES  |
| 34                              |   |
| 35                              | 1. Protect the health of our water resources, natural communities and working   |
| 36                              | <u>lands</u>  |
| 37                              |   |
| 38                              | <ul> <li>Encourage commercial development in the village area, limiting such</li> </ul>   |
| 39                              | development in priority areas such as the Gateway district  |
| 40                              |   |
| 41                              | Water resources   |
| 42                              | Adhara to "boot proctions" for land staviouslebin massimes assessed the   |
| 43                              | <ul> <li>Adhere to "best practices" for land stewardship, resource conservation,</li> </ul>   |
| 44<br>45                        | landscaping and storm water management on property that the Town owns or manages, including roadside ditches. On those properties, minimize erosion             |
| 47                              | manages, including roadside dilches. On those properties, minimize erosion  |

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and stream sedimentation, landscape with native plants, remove invasive species, and employ rain gardens, grass swales, cisterns, porous surfaces and other low-impact techniques to manage storm water.

- Monitor water quality as necessary to protect public health and recreational use of public waters.
- Protect rivers, streams, wetlands, lakes and ponds from encroaching development, including roads and driveways, by incorporating into Town zoning regulations adequate riparian setbacks and buffers. The goal is to maintain and/or establish undisturbed, naturally vegetated riparian buffers for surface waters to:
- Protect water quality, riparian habitat, and cold-water fisheries (e.g. 75-100 foot minimum), as recommended by Vermont Agency of Natural Resources and required by State law (Shoreline Protection Act-<a href="http://www.anr.state.vt.us/dec/waterq/lakes/docs/shoreland/lp\_ShorelandHandbook.pdf">http://www.anr.state.vt.us/dec/waterq/lakes/docs/shoreland/lp\_ShorelandHandbook.pdf</a>)
- Avoid and/or minimize impacts to designated source and surface water protection areas that supply community or municipal water systems;
- Avoid flood hazard areas to the extent feasible or, where necessary, design to minimize flood damage and the loss of life and property;
- Preserve or restore pre-construction runoff conditions.
- Develop river restoration and water quality protection projects along the Huntington River, based on the findings of the recent geomorphic assessment (<a href="http://www.vtwaterquality.org/rivers/docs/FinalReports/rv\_P1\_Huntington.pdf">http://www.vtwaterquality.org/rivers/docs/FinalReports/rv\_P1\_Huntington.pdf</a>)
- Protect the natural conditions and functions of rivers and streams. Restrict alteration of stream channels and discourage removal of woody debris from channels except where it is an obstruction.
- Establish requirements for storm water treatment at development projects that are below the minimum state permitting thresholds.
- Encourage parking lot landscaping, shared parking lots and driveways and creative design approaches that minimize impervious cover while still ensuring public safety and access for emergency vehicles.
- Review local road standards and roads themselves on a recurring basis with the goal of minimizing barriers to storm water management practices, and identifying opportunities to reduce road widths, increase vegetation in the ROW and minimize erosion.

- Base surface water setbacks and buffer standards in zoning ordinances on geomorphic standards and from VT DEC and VLCT model ordinances for all streams and wetlands.
- Protect groundwater recharge and Wellhead Protection Areas for active public water supplies by limiting development in such areas and careful siting when it is justified.
- Develop and implement on a watershed level a "Water Resources Plan" which addresses issues such as availability of potable water, erosion, stream sediment, fisheries habitat, and other water quality subjects, on a watershed basis.

### **Floodplains**

- Encourage protection and restoration of floodplains and upland forested areas that attenuate and moderate flooding and fluvial erosion.
- Explore participation in FEMA's Community Rating System with the goal of securing discounts on flood insurance for policy-holders.
- Enforce regulations preventing development, including but not limited to structures, filling, or substantial grading, within the 100-year floodplain and Fluvial Erosion Hazard Areas. Update these existing regulations based on best practices determined by local, state and federal authorities.
- Prohibit new development in identified flood hazard, fluvial erosion, and river corridor protection areas. Changes to existing development must not exacerbate flooding and fluvial erosion.
- Recognize in flood plain use the increased danger to flooding that is being brought about by climate change.

## Riparian areas, wetlands and vernal pools

- Protect existing forest cover that allows for a minimum of 75-10 -foot riparian buffers on streams, wetlands and vernal pools, including site-specific slope and soil conditions to minimize surface water runoff, erosion, sedimentation and pollution.
- Target high quality areas for protection through the use of planning and easement acquisition described in Part II of <u>Conserving Vermont's Natural</u>

Install and / or relocate utility lines underground wherever feasible.

<sup>41</sup> 42

<sup>&</sup>lt;sup>1</sup> 2013, Vermont Agency of Natural Resources. Download at:

1 Endorse the protection of agricultural lands through cover-cropping and like 2 means. 3 4 Resilience to climate change 5 6 Avoid non-climate stressors, such as forest fragmentation and riparian development 7 that increase ecosystem fragility. 8 9 Develop strategies to maintain ecological function and biological diversity. 10 Protect and enhance habitat connectivity to allow plant and animal 11 species to shift ranges, such as by removing impediments to improve 12 access to new ranges. Use proactive management and restoration strategies to encourage 13 14 ecological transitions and climate change-induced habitat 15 reconfiguration. 16 17 Review emergency preparedness and response plans to account for an increased frequency of extreme weather events. 18 19 20 Scenic Views / Ridgelines 21 22 Update previous studies of scenic views and ridgelines, providing the public with opportunities to identify those they consider important from ecological, 23 cultural and aesthetic perspectives, to guide policies regarding the location of 24 such facilities as for telecommunications and energy generation, and the 25 protection of sensitive habitats, steep slopes and prominent view sheds. 26 27 Exclude towers and other such structures in locations identified as providing 28 scenic views. 29 30 Consider regulatory standards that protect and preserve identified scenic resource, such as subdivision siting standards, density bonus provisions, 31 32 screening standards, or access management policies 33 34 Maintain the scenic integrity of Richmond's Gateways through Gateway 35 District planning. 36 37 Undertake efforts to maintain unimpaired views of the night sky within the Town's rural and undeveloped areas, scenic upland areas, and critical wildlife 38 habitat areas. Develop regulations that ensure that outdoor lighting minimizes 39 40 glare, sky glow, and adverse impacts on adjacent property owners. 41 42 43 44

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 Respond to the practical constraints resulting from Richmond's topography by prohibiting development on slopes of 25% or more. Manage development on slopes of 15%-25% to minimize surface water runoff and erosion. [Are those percentages low enough?]

#### *Invasive species*

 Avoid the introduction and limit the spread of invasive, exotic species that crowd out, destroy or otherwise harm the town's native species, natural communities and working farms and forests. Accomplish this through active management of municipal and public lands, landowner education, and landscaping restrictions under local regulations.

## **Energy**

- Exclude energy facility development, biofuel harvesting and resource extraction operations from locations where the adverse impacts of such operations on air and water quality, long-term forest health, primary agricultural soils, critical wildlife habitat, historic and scenic resources, adjoining properties and uses, public highways and other community infrastructure and services cannot be avoided or adequately mitigated.
- Develop clear language regarding the permissible location of commercial renewable energy projects, such as wind farms, and where the town may want to protect ridgelines or wishes to mitigate impacts caused by development.

#### Air quality

- Include assessment of potential air pollution in permit review.
- Develop town policies that minimize air pollution from motor vehicle idling and like activities.

# 2. Maintain public access to open spaces and nature

- Provide public information / brochures regarding walking exercise paths at key locations such as the Town web site, local medical / physical therapy practices and like locations.
- Pursue opportunities to protect landowners who allow public access to private property.

| 1 2      |    | •             | Take advantage of locally available resources such as the VYCC to maintain Richmond trails. |
|----------|----|---------------|---|
| 3        |    |               |   |
| 4        | 3. | <u>Updat</u>  | te, augment, and regularly maintain existing information and studies on                     |
| 5        |    |               | own's significant natural resources, and implement the recommendations                      |
| 6        |    | of tho        | se studies.   |
| 7        |    |               |   |
| 8        |    | •             | Use newly available studies such as developed by the State Agency of                        |
| 9        |    |               | Natural Resources and Science to Action to identify and prioritize natural                  |
| 10       |    |               | resources for future protection as required by State Title-24, and identified by            |
| 11       |    |               | the Town to be of special importance (See Appendix-I) to be updated every                   |
| 12       |    |               | five years and to include but is not limited to such features as:                           |
| 13       |    |               | <ul> <li>All wetlands (Class I, II, and III including vernal pools.</li> </ul>              |
| 14       |    |               | <ul> <li>Important wildlife areas and corridors.</li> </ul>                                 |
| 15       |    |               | <ul> <li>Important landscapes – contiguous forests, connecting lands and high-</li> </ul>   |
| 16       |    |               | elevation lands required by species with large ranges.                                      |
| 17       |    |               | <ul> <li>Key natural communities – groups of species and their physical</li> </ul>          |
| 18       |    |               | settings that help conserve numerous resource values simultaneously.                        |
| 19       |    |               | <ul> <li>Critical species – individual species needing special attention due to</li> </ul>  |
| 20       |    |               | the threats they face and the role they play in maintaining our area's                      |
| 21       |    |               | ecological health.  |
| 22       |    |               | Steep slopes.   |
| 23       |    |               | <ul> <li>Soils classified by the US Natural Resource Conservation Service as</li> </ul>     |
| 24       |    |               | poorly drained, highly erosive or shallow in depth to bedrock or the                        |
| 25       |    |               | seasonal high-water table.  |
| 26       |    |               | Surface waters, wetlands and associated riparian areas.                                     |
| 27       |    |               | Public water supply recharge areas (mapped Source Protection                                |
| 28       |    |               | Areas).   |
| 29       |    |               | <ul> <li>Mapped flood, fluvial erosion and other known hazard areas.</li> </ul>             |
| 30       |    |               | <ul> <li>Large blocks identified as designated as important for the integrity of</li> </ul> |
| 31       |    |               | natural resources within and for maintaining wildlife connectivity.                         |
| 32       |    | _             | I la data this information arounding areas  |
| 33<br>34 |    | •             | Update this information every five years.   |
| 35       |    |               | Establish policy to include extensive community and landowner opportunity                   |
| 36       |    |               | for involvement whenever substantive changes are made to Town                               |
| 37       |    |               | regulations that affect its natural resources.  |
| 38       |    |               | regulations that allost its mataral resources.  |
| 39       |    |               | Continue to fund the Conservation Reserve Fund.   |
| 40       |    |               |   |
| 41       | 4. |               | ge and educate the community through informational meetings, policy                         |
| 42       |    |               | vs, publications and other means regarding the environmental,                               |
| 43       |    |               | ational and educational values of Richmond's natural resources and the                      |
| 44       |    | <u>effect</u> | s of human activity on them.  |
| 45       |    |               |   |

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- Implement annual programming that inform residents and landowners with regard to the importance of the Town's natural environment. Conduct community forums and other activities on a regular basis that educate landowners and the public on significant natural communities in town, their functions and health, the threats they face and how they can be properly stewarded.
- Support outdoor recreation and education activates that focus on the importance of protecting critical ecological resources and functions.
- Broaden landowners' access to information regarding options that will minimize impact such as voluntary conservation easements, transfers of development rights (TDRs) and the establishment of special conservation overlay districts promoting low-impact, low-density development and uses.
- Update informational pieces such as maps, summary descriptions and brochures and make them available to the public at a clearly identified location on the Town's web site.
- Develop and implement a plan to conveniently locate a Visitor Center that includes educational materials, trail maps and like materials important to fostering the responsible enjoyment of Richmond's natural resources by residents and visitors alike.
- Support the use of the Town's natural resources as an educational tool for its schools.
- Identify natural resources that could be developed as valuable recreational resources that provide access to natural resources, such that their protection through easements and like means.
- Develop a landowner education program regarding the importance of naturally vegetated areas along rivers and streams, as a means to encourage the replanting and maintenance of buffers.
- Organize information meetings regarding current best practices in forest stewardship.
- Provide the community with opportunities to learn sustainable habitat management practices.

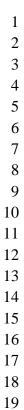
## **APPENDIX - I: Natural Resources: Prioritizing**

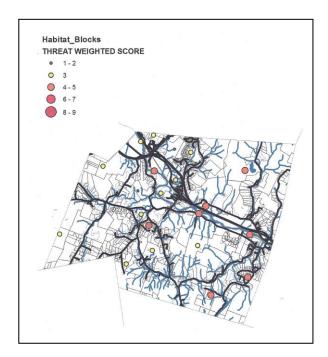
A key aspect of town planning is prioritization, and Natural Resources is no exception. Fortunately, there are several examples of how the myriad, often inter-dependent elements of a natural landscape can be identified and ranked for conservation. These should be used as a starting point for community discussion and development of a land use review process that ensures the integrity of the features and functions deemed most important to Richmond residents.

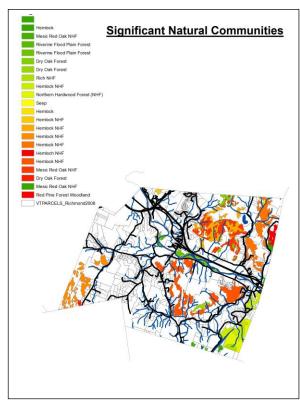
 One approach is illustrated in <u>Conserving Vermont's Natural Heritage</u>, put out by Vermont's Fish and Wildlife Department (F&W) and Agency of Natural Resources (ANR)<sup>2</sup>. It describes a three-tiered method for comprehensively identifying and ranking the elements of a natural landscape:

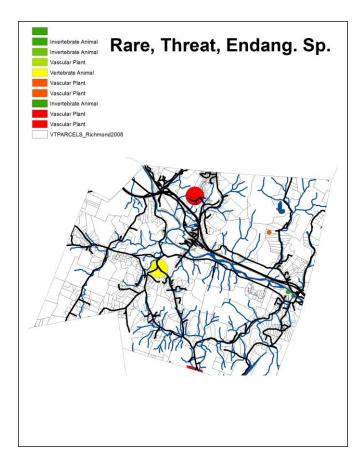
- Species-Level Elements: These are plants, animals and specific habitats with outsized importance and needs, and requiring special attention. Examples: Rare, threatened and endangered species; deer wintering habitats; mast stands; important bat habitat; important turtle habitat; grassland bird habitat; early successional and shrub habitat.
- <u>Community- Level Elements</u>: Groups of species and their physical settings, the conservation of which protects multiple natural resource values simultaneously. Examples: Natural communities, wetlands, riparian areas, vernal pools.
- <u>Landscape-Level Elements</u>: Large areas of undeveloped land encompassing a
  diversity of natural communities, habitats and key individual species, and
  required for the proper functioning of those individual elements. Conservation
  and stewardship at this level will simultaneously protect multiple species and
  communities, while most effectively addressing wide-ranging public interests in
  recreation, public lands and environmental health. *Examples: Contiguous forest,*connecting lands, enduring landscape features.

| The 21 Components Contributing to Biological Diversity |  |  |  |  |  |
|--|--|--|--|--|--|
| #  | Component Name                                   |  |  |  |  |
| Landsca  | Landscapes                                       |  |  |  |  |
| L1   | Habitat Blocks                                   |  |  |  |  |
| L2   | Grasslands and Shrublands                        |  |  |  |  |
| L3   | Rare Physical Landscape                          |  |  |  |  |
| L4   | Representative Physical Landscape                |  |  |  |  |
| L5   | Connecting Lands (<2000ac)                       |  |  |  |  |
| L6   | Connecting Blocks (2,000-10,000ac)               |  |  |  |  |
| L7   | Anchor Blocks (>10,000ac)                        |  |  |  |  |
| L8   | Riparian Connectivity                            |  |  |  |  |
| L9   | Wildlife Road Crossings                          |  |  |  |  |
| Aquatics   |  |  |  |  |  |
| A1   | Surface Waters & Riparian Areas                  |  |  |  |  |
| A2   | Representative Lakes                             |  |  |  |  |
| A3   | Important Aquatic Habitats & Species Assemblages |  |  |  |  |
| Species & Natural Communities                          |  |  |  |  |  |
| SN1  | Rare Species                                     |  |  |  |  |
| SN2  | Uncommon Species                                 |  |  |  |  |
| SN3  | Rare Natural Communities                         |  |  |  |  |
| SN4  | Uncommon Natural Communities                     |  |  |  |  |
| SN5  | Common Natural Communities                       |  |  |  |  |
| SN6  | Vernal Pools                                     |  |  |  |  |
| SN7  | Vernal Pools (Potential)                         |  |  |  |  |
| SN8  | Wetlands   |  |  |  |  |
| SN9  | Mast production areas                            |  |  |  |  |



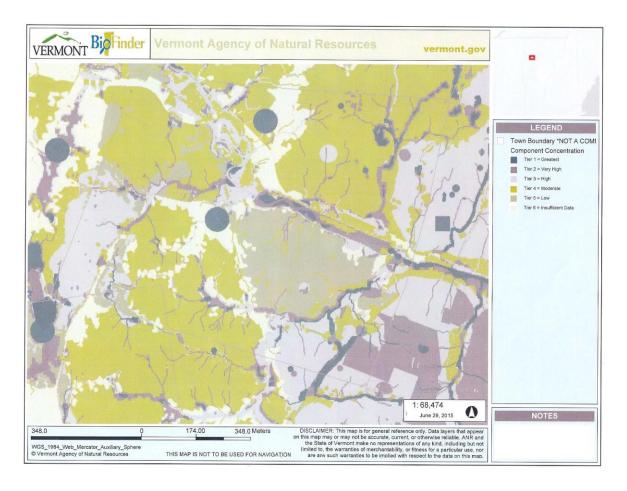


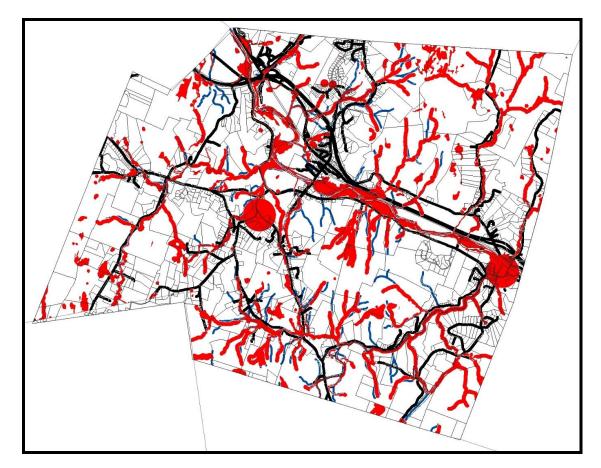




The identification and mapping of these natural features has depended heavily on many years of work undertaken by ANR available through the State's Biofinder program (<a href="http://biofinder.vt.gov/biofindermap.htm">http://biofinder.vt.gov/biofindermap.htm</a>). Components were put in three general categories: landscapes, aquatics and species and natural communities. Components of these features were then prioritized and mapped, with supporting details such as acreage assigned to each.







#### **Primary Conservation Areas**



- Rare, Threatened, & Endangered species element occurrences
- Wetlands & Streams (with 50' buffers)
- Riparian habitats as mapped by Science to Action
- Vernal pool with 100' buffer
- Natural communities: S1-Rare Species; S2- uncommon species; S3 rare natural communities

The task at hand is to undertake a community review of its natural resource priorities, evaluating what has been provided by the State and such additional sources as Science to Action and establishing its own. This then involves the development and implementation of conservation strategies.