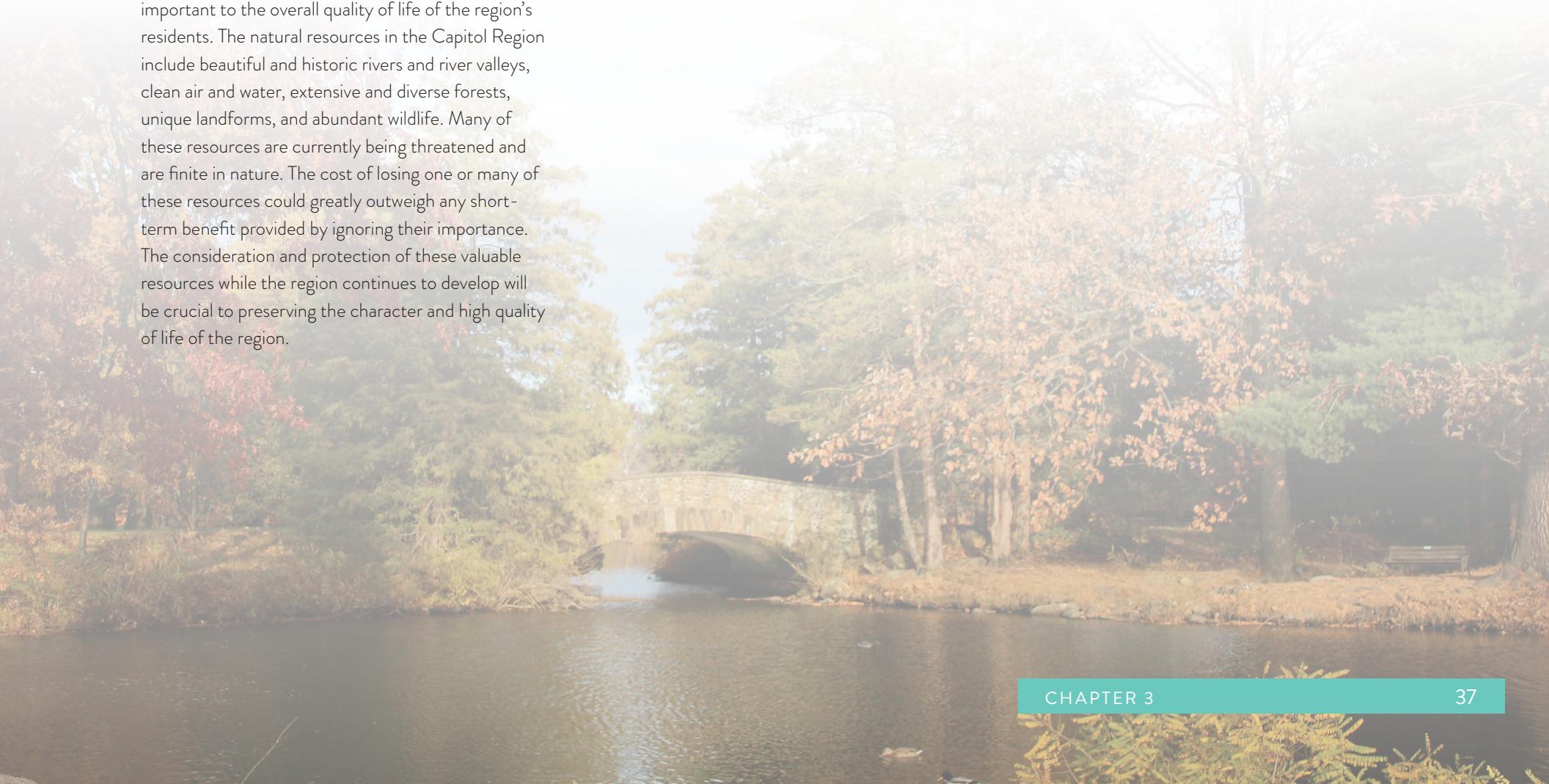


Natural Resources Conservation

Statement of Purpose

While decent and affordable housing, high quality educational opportunities and economic growth are ongoing priorities for the Capitol Region, the conservation of our natural resources is equally important to the overall quality of life of the region's residents. The natural resources in the Capitol Region include beautiful and historic rivers and river valleys, clean air and water, extensive and diverse forests, unique landforms, and abundant wildlife. Many of these resources are currently being threatened and are finite in nature. The cost of losing one or many of these resources could greatly outweigh any short-term benefit provided by ignoring their importance. The consideration and protection of these valuable resources while the region continues to develop will be crucial to preserving the character and high quality of life of the region.



Current Conditions

The general heading of “natural resources” can be broken down into a number of categories for analysis. Each of these categories represents some environmental factor that exists in a given area which may present a deterrent to development. More than merely an obstacle, however, these factors should be important considerations when selecting or assessing the development potential of a site. Many areas with constraints are also those areas of critical habitat or important natural resource features. Taken individually, these natural resource constraints can often be planned around or environmental impacts can be mitigated. When more than one constraint exists on a given site, development of the land becomes less and less advisable. This is both because the site may become difficult and costly to develop, and also because of the important function that natural resources serve.

Floodplain: These lands, defined both by their floodplain soils and the farthest extent of the 100-year (1 percent probability) flood, extend laterally outward from a riverbank. The size of the Connecticut River creates a substantial floodplain zone through the center of the region. The Farmington River and other watersheds also have observed floodplain zones. Floodplains provide valuable flood storage function. Because of the threat of flood and the corresponding danger to life and property, floodplain zones are often

nearly entirely off-limits to development. Floodplains are also often the natural habitat of key plant and animal species.

Wetland Soils: Wetlands, which can be characterized either by vegetation or soil type, are often a barrier to development. In Connecticut, wetlands are regulated on the basis of soil types. All floodplain soils are wetlands. Almost all wetlands are extremely diverse and productive wildlife habitats, and the plant, animal, and bacteria populations are instrumental in removing many pollutants from ground and surface water. In addition, a wetland’s typically high groundwater level can impair septic system functioning, thus making construction on wetlands more difficult. Limiting development in floodplains is also critical in protecting public safety and reducing economic losses due to flooding.

Other Soil Constraints: Like wetland soils, shallow and rocky soils can impair septic system function, leading to groundwater contamination. Excessively drained soils, because of the short travel times of water-borne pollutants, are also susceptible to contamination. Hardpan soils, in addition to being difficult to build on, also

tend to have high groundwater levels, and thus are often unsuitable for septic systems. Soil type, drainage ability, and groundwater location are crucial factors in determining a site’s suitability for development as well as assessing the appropriate intensity of development.

Landforms: Hilltops, ridge lines, valleys, hollows, and inland water bodies are all important natural resources. Aside from water bodies, these landforms may seem to many in the general public to serve little functional purpose in the community. All however, can be important environmental and recreation resources as well as valuable scenic assets, which help to define and preserve community character.

Steep Slopes: Land with slopes of more than 15 percent is generally considered to be unsuitable for intensive development. Slope increases the potential for erosion both during and after construction. This erosion could be severe if the soil layer is shallow on

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the slope. Slope stability and other structural concerns also discourage development.

Aquifers: The Connecticut Department of Public Health has developed a policy discouraging the development of new surface water drinking water supplies (reservoirs). Accordingly, dependence on aquifer-based drinking water supply will continue to increase as the Capitol Region continues to develop. The protection of these zones from contamination so that residents are assured a stable and high-quality water supply is of utmost importance. Development should be closely regulated above these aquifer protection zones.

Natural Diversity Areas: These areas, defined by the Connecticut Department of Energy and Environmental Protection, are the habitat of important species of animals or plants. Some of these species are endangered, threatened, or protected. In some cases, these areas are established to accommodate migratory patterns or some specific forest growing condition. In all cases, these are valuable resource zones that would be exceedingly difficult to replace if lost. Instead of mitigating development impacts in these zones, development should endeavor to prevent disturbance of the natural diversity in these areas, or consider development away from them entirely.

Beyond these important natural resource features that affect development decisions, other key resources must also be considered. Healthy forestland, including forests used for commercial purposes, urban forest

land, and larger, unfragmented forests in rural portions of the region, have tremendous importance to the ecosystem and our quality of life. Forests as a habitat for threatened species, as a flyway for migratory birds, and as a continuous wildlife corridor are resources that must be protected in our ever-fragmenting, ever-developing world.

Table 3.1 provides a glimpse of the natural features and constraints to development that exist within the Capitol Region. When totaled, the features would seem to comprise almost 50 percent of the region's total area. This does not mean that the other 50 percent of the region is made up of buildable land. Many of these natural features overlap in area. For instance, a large percentage of the Natural Diversity Areas in the region are in floodplain or aquifer protection areas. Further, as was stated previously, the existence of one or even two of these features in an area does not necessarily preclude any and all development in that area. The desire to protect these natural resources may, however, guide where development is placed on specific sites.

The Farmington Valley Biodiversity Project is an example of a collaborative effort to integrate the conservation of natural resources into local planning. The Farmington Valley Biodiversity Project, undertaken in the early 2000's, provides a model for Connecticut towns on intermunicipal cooperation and partnerships with local and regional conservation organizations to proactively plan for the conservation of biological resources. The project collected and mapped data on

ecological regions, habitats, and landforms in a seven town area consisting of Avon, Canton, East Granby, Farmington, Granby, Simsbury and Suffield. Priority conservation areas were identified for inclusion into each town's plan of conservation and development thus helping to guide municipal planning and land use and development decision making. The project also helped raise awareness of the importance of biodiversity conservation among citizens and local commission members. The biodiversity conservation areas identified by the project align well with CRCOG's Priority Conservation Areas and Conservation Corridors identified on the Conservation Focus Areas Map. Details of the project can be found at <http://bit.ly/1oUP41t>.

Table 3.1 Natural Resource Features

	Area (Sq. Miles)	Percent of Region
Capitol Region	820.4	100.0%
Aquifer Protection Area	43.0	5.2%
Steep Slopes	95.8	11.7%
Floodplain	49.7	6.1%
Water Bodies	18.6	2.3%
Natural Diversity Area	201.4	24.5%

Sources: Connecticut Department of Energy and Environmental Protection GIS Database and TeleAtlas (Water bodies).

Note: These categories are not mutually exclusive.

GOALS & POLICY RECOMMENDATIONS



A. Protect the Air, Water and Soil Quality of the Capitol Region

Degradation of our physical environment can often be a very subtle and widely dispersed process. Exhaust from thousands of individual vehicles, fertilizer runoff from hundreds of lawns, pollution from scores of failing septic systems can combine to seriously damage crucial natural resources. Aside from providing an adequate, high quality drinking supply for the region's human residents, water resource protection also allows animals and plants that inhabit the region to thrive. Likewise, air pollution harms not only people, but can also be detrimental to the region's wildlife.

Policy Recommendations

1. Encourage intermunicipal cooperation on nonpoint water pollution issues, to address problems on a watershed basis.
2. Support transit and carpooling programs to help reduce air pollution.
3. Consider and evaluate the cumulative impact of incremental air, soil, and water pollution on natural resources.
4. Support continued and expanded hazardous waste collection programs.
5. Establish strong controls for development in floodplains, wetland areas and aquifer protection zones.
6. Participate in educational programs to encourage the region's residents to conserve, recycle, and reduce their individual pollution impacts.

7. Encourage and direct development to redevelopment and infill sites, and specifically encourage cleanup of brownfield sites.

B. Grow and Develop in Harmony with Natural Resources

Glaciers, rivers, and historical land use have created a diverse natural environment in the Capitol Region. Because the ability of the land to support development varies across the region, plans must reflect the particular capacities and limitations of the proposed development area. This includes consideration of air, water, and soil resources, as well as existing wildlife populations and geologic features. Every effort should be made to mitigate or prevent harmful development impacts on natural resources.

Policy Recommendations

1. Encourage zoning regulations to allow increased development intensity where compatible with natural resource constraints and existing infrastructure, such as water, sewer, and roadways.
2. Encourage zoning regulations to reduce allowed development intensity where infrastructure is neither available nor planned, and in areas where development may exceed the natural capacity of land and water resources to support this development.

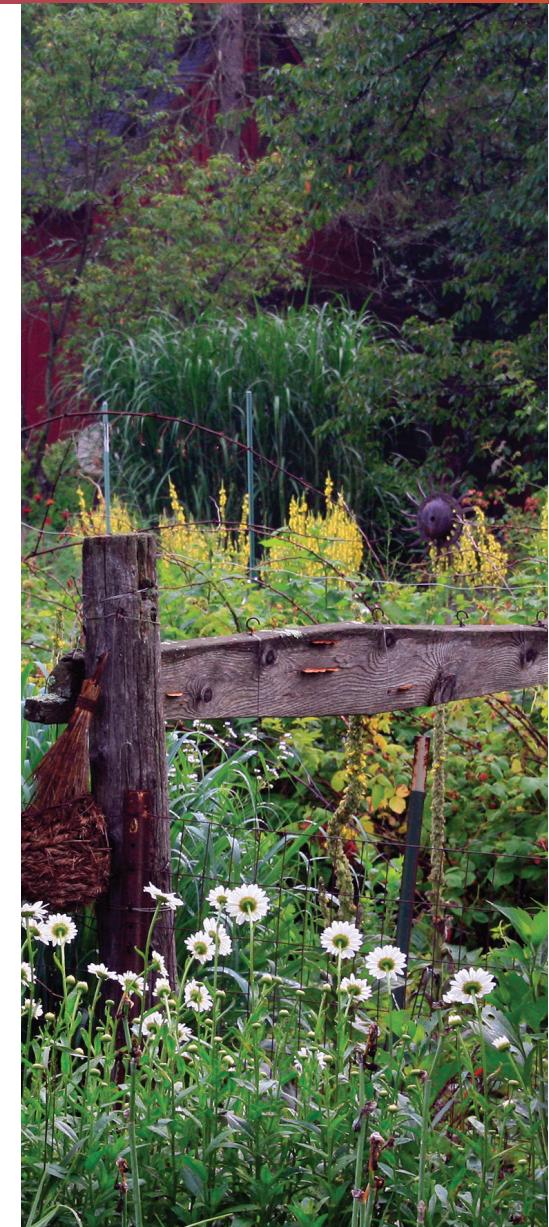
3. Strongly encourage municipalities to facilitate the development of clustered housing, where appropriate, to preserve and protect natural resources.
4. Work with municipalities and developers to employ current best management practices (BMPs) to prevent nonpoint source pollution from construction and existing development and encourage use of Low Impact Development (LID) techniques for new development.
5. Support enforcement and strengthening of regulations for floodplains, buffers, easements, and setbacks to protect sensitive natural resource areas.
6. Encourage land uses along town lines which are compatible with or prevent harmful development impacts on natural resources and land uses on neighboring lands in abutting municipalities.

C. Promote Active Stewardship of Natural Resources

Growth in the Capitol Region, as in many areas of the state or nation, is driven by residential and business development. Accordingly, natural resource protection often becomes passive, or a reaction to development. Local governments are often more likely to require that developers mitigate natural resource impacts than they are to seek out opportunities to protect natural resource areas on their own. The importance of preserving vital natural resources should motivate the region's governing bodies to become more proactive in their approach to this issue.

Policy Recommendations

1. Encourage municipal and private groups to acquire or protect valuable natural resource areas as open space.
2. Support proactive and creative zoning that protects and preserves wildlife and water quality from development impacts such as LID regulations.
3. Encourage scientific management of forest lands and wildlife populations.
4. Promote local, state, and federal tax policies that would encourage protection of sensitive natural resource areas.



REGIONAL PLAN of CONSERVATION and DEVELOPMENT

Map 3.1. Natural Resource Features and Constraints to Development

