



Shaping
Our Region
From the Ground Up

Environment and Natural Resources: DRAFT Goals, Policies and Strategies

12/4018/2014

Theme: Surface and Groundwater Resources

Goal: Conservation and protection of surface and groundwater resources.

1. Encourage the improved identification and mapping of surface and groundwater resources.
 - a. Work with state and federal partners, such as U.S. Geological Survey, VT Geological Survey, and the Agency of Natural Resources in delineating groundwater supply, aquifers, and groundwater protection areas.
 - b. Support towns in identifying wetlands and vernal pools that are not already mapped by the State of Vermont.
2. Support the betterment of surface water quality in the region
 - a. Assist and conduct outreach to municipalities and partner with state agencies in implementation of proposed actions to reduce pollutants outlined in the Lake Champlain Total Maximum Daily Load for phosphorous, including those regarding: agricultural practices, transportation infrastructure, river corridor protection, and efforts to limit stormwater runoff in developed areas.
 - b. Native vegetated buffer strips in riparian zones and shoreland areas should be protected or maintained according to Best Management Practices outlined in the Vermont *Handbook for Shoreland Development* (2014) and *VT ANR Riparian Buffer Guidance Regarding Riparian Buffers* (2005) to protect functional habitat and improve water quality.
 - c. Encourage towns to collaborate with organizations such as the Friends of the Winooski River to engage volunteers in watershed protection and restoration efforts, including various types of water quality monitoring.
 - d. Encourage towns to support the work of Natural Resource Conservation Districts by encouraging their constituents' voluntary participation in conservation programs and help identify resource priorities in Central Vermont on a yearly basis.
 - e. Encourage and assist with the acquisition of conservation easements along waterways according to priorities identified in River Corridor Plans

- f. Disseminate information regarding guidelines for failed septic systems put forth by the Vermont Agency of Natural Resources and financial resources for repair or replacement.
 - g. Encourage application and implementation of wastewater treatment technologies that will help protect and improve water quality.
 - h. Support efforts to educate about invasive species. Support efforts to contain and mitigate the spread of riparian and aquatic invasive species. Assist towns in applying for grants, such as the Vermont Aquatic Nuisance Species Grant-in-Aid program, to combat aquatic invasive species.
 - i. Encourage the preservation of wetlands so as to protect their function and productivity. Efforts (including consideration of site design options) should be made to mitigate against the possible adverse impacts of development on the Region's wetlands.
 - j. Encourage and support the redevelopment of brownfields by continuing to pursue funding to facilitate assessment and clean-up of contaminated properties and redesign as appropriate.
 - k. Assist with and support efforts to remove dams and other artificial barriers from rivers and streams. Help identify dams that are no longer useful or safe and that should be listed for removal.
3. Protect ground water quality and ensure adequate, safe drinking water supply.
- a. Through participation in state permitting processes, require hazardous waste to be disposed of properly (in accordance with state and federal regulations, etc.) to prevent any degradation of groundwater.
 - b. Encourage and support all towns to maintain or create regulations to ensure that land use near ground water sources will not contaminate public water supplies or wells.
 - c. Support towns in applying for funding sources to better their groundwater quality, such as VT Ecosystem Restoration Grants.
4. Encourage watershed based cooperation of towns and organizations representing people that live, work, and recreate in the watershed Partner with and assist towns and organizations in implementing the Winooski River Basin Water Quality Management Plan and in keeping it current by helping to identify issues and high priority projects.

- a. Convene a mini-conference of town officials, ~~govt~~ernment agencies and ~~NGOs~~non-profit organizations that looks specifically at ways the towns could cooperate and coordinate to improve water quality and contribute to the Lake Champlain ~~TMDL~~Total Maximum Daily Load for phosphorous goals.

5. Encourage enhanced education opportunities on watershed functions, protection and restoration, particularly those targeted to youth.

- ~~b.a.~~ Develop a clearinghouse of resources that could be used by teachers and other groups working with youth to provide education on these topics

Theme: Flood Resilience and Climate Change

Goal: Mitigation of, and adaptation to flooding in the Region.

5.6. Avoid or limit development and investment in identified flood hazard areas, where feasible.

- a. Continue to conduct outreach to municipalities regarding the new state River Corridor maps as delineated by the VT Agency of Natural Resources and their implications.
- b. Encourage and provide technical assistance to municipalities in enhancing the regulatory standards in their municipal flood hazard regulations, including the incorporation of River Corridor regulations.
- c. New buildings within mapped floodways as identified on FEMA Flood Insurance Rate Maps shall be ~~strongly discouraged~~prohibited, except where a substantial public benefit is provided.
- d. Wetlands that provide a flood storage functions as determined by the VT Wetlands Program should be left undisturbed or a development should be required to provide compensatory storage or restoration on-site or in the immediate vicinity, if disturbed.
- e. Assist municipalities in identifying and limiting development on lands adjacent to waterways that provide flood storage or other beneficial function through acquisition, easement, deed restriction or zoning that encourages cluster design.

6.7. Support stream bank and shoreland restoration and stabilization efforts.

- a. Assist individual landowners in identifying funding opportunities to support buffer plantings on their properties that would support stream bank restoration.

7.8. Continue assessment, provide mapping assistance, and encourage replacement, removal or repair of dams and culverts, bridges, or other transportation infrastructure that may contribute to destabilization of the waterway.

8.9. Promote better stormwater management throughout the watershed.

- a. Municipal regulations should include requirements to preserve existing vegetated areas, increase canopy cover and limit clearing in the development process through regulatory techniques, such as use of building envelopes to preserve vegetation or setting aside a percentage of open space.
- b. Structural Best Management Practices (BMP's) should be used, as appropriate, to control stormwater on new development sites before, during and after construction (including plans for long term maintenance and operations). Objectives and applications include:
 - Storm water retention: wet ponds, artificial wetlands;
 - Storm water detention: dry basins;
 - Storm water filtering: bio-retention, sand filters, compost filters;
 - Storm water velocity control: filter strips, grassed swales, rock swales;
 - Erosion control: construction schedule, seeding/mulching, check dams, runoff diversions;
 - Sediment control: sediment basins/traps, filter fabric/silt fences, hay bales, inlet protection; and
 - Infiltration: infiltration basins, trenches, dry well, leaching catch basins, infiltration islands, pervious surfaces.
- c. Municipalities should consider adopting policies and practices to reduce the volume and impacts of storm water runoff, including:
 - Adhering to standards set forth in the updated Vermont Stormwater Manual with regards to development and redevelopment.
 - Encouraging storm water management through the use of BMP's (as outlined in strategy b) in local plans, zoning bylaws, and building permits;
 - Minimizing zoning setbacks to allow for shorter driveways, and allowing shared driveways;

- Instituting maximum, as well as minimum, parking ratio requirements in local bylaws to prevent "overbuilt" parking lots;
 - Allowing for shared parking facilities in local bylaws;
 - Minimizing development [impacts](#) in high elevations and steep slope areas ~~from intensive development~~ via local bylaws;
 - Properly sizing, setting and maintaining culverts;
 - Properly maintaining ditches on dirt roads to slow runoff and filter sediments as per the "Road Design and Maintenance Handbook" published by the Vermont Local Roads Program;
 - Separating combined storm water/sewer systems (CSO's) which can discharge raw sewage to surface waters during big storms; and
 - Making sure road salt storage areas are covered; and
 - Consulting the "Erosion Control Prevention Manual" published by the Vermont Geological Survey.
- d. Assist municipalities in applying for funding sources for the preparation of stormwater mapping and stormwater master plans and creation of stormwater utilities. Educate on the impacts and considerations of stormwater management.

9.10. Protect and reduce flood risk in vulnerable settlements.

- a. Assist municipalities and property owners in pursuing funds for relocations, home elevations or floodproofing measures.
- b. Explore opportunities and partnerships for local educational campaigns and public voucher programs to encourage measures such as fuel-tank tie-downs and sewer line valve installations in areas prone to inundation flooding.
- c. Redevelopment or rebuilding in flood-prone locations should add additional flood storage capacity such as new parks and open space.
- d. Assist municipalities in efforts to protect or relocate critical facilities and infrastructure in vulnerable areas.
- e. Assist municipalities in identifying agricultural lands vulnerable to flooding and possible mitigation solutions, including encouraging buffer plantings.
- f. Encourage, facilitate and educate on the need to document flood extents and costs of past damages in order to improve access to FEMA mitigation grant funding.

10.11. Identify "safer areas" for future development, where appropriate.

- a. Encourage municipalities with downtowns, village centers or commercial districts at flood risk to identify safer growth areas in municipal plans and local hazard mitigation plans.
- b. Assist municipalities with ordinance revisions and capital improvement planning to support development in preferred safer growth areas.

11.12. Encourage the continued assessment and monitoring of dams by federal and state agencies, municipal partners and private owners that may pose a threat to human safety.

- a. Work with partners to ensure that Emergency Action Plans are up to date for High Hazard Potential Dams as designated by the State.
- b. Encourage state agencies and municipalities to consider potential impacts of dam release or failure to infrastructure in hazard mitigation planning and prioritization processes.
- c. Encourage formation of dam committees to expand community_capacity to address issues related local dams of concern.

12.13. Improve flood resilience planning, education and outreach activities at both the municipal level and amongst property owners and residents to create citizenry aware of flood risks, potential costs, and actions that can serve to reduce risk and future property loss.

- a. Continue to assist municipalities in developing local hazard mitigation plans and flood resilience elements as part of municipal plans.
- b. Promote participation in FEMA's Community Rating System, where appropriate. : Assist un-enrolled towns in applying for the Community Ratings System and assist towns already involved in the Community Ratings System in improving their rating.
- c. Publicize and share the results of the Vermont Economic Resiliency Initiative (VERI) study in Barre City and Barre Town with all municipalities in the Region to help promote flood resilience.
- d. Consider coordination of a multi-jurisdictional Program for Public Information, an ongoing effort to prepare, implement, and monitor a range of public information activities.
- e. Perform an audit of municipal web sites and communications and recommend additional information and communication methods that will increase local awareness of flood risks, municipal flood resilience

planning, and actions property owners and residents can take.

- f. Partner with the Vermont Agency of Natural Resources to coordinate Region-wide flood resilience-related trainings targeted to real estate agents, developers, business owners and other stakeholder interests in floodplain management, where appropriate.

~~13.14.~~ Implement the goals and policies presented in the Land Use, Energy, Transportation and Community Resources elements of this Plan that reduce the Region's contribution to the drivers of Climate Change.

Theme: Wildlife Habitat

Conservation and management of diverse natural areas and wildlife habitats.

~~14.15.~~ Enhance mapping and identification of the location and extent of ~~natural and fragile areas~~critical resource areas, contiguous wildlife habitat and corridors, and vulnerabilities of these resources.

- a. Work closely with partners such as the Nature Conservancy, the Staying Connected Initiative and Vermont Fish and Wildlife to identify areas within the Region that are sensitive to development, which house the most recorded species, the most diverse communities, etc., and reproduce this data for incorporation in member Town Plans.
- b. Encourage the inclusion of ~~natural and fragile areas~~critical resource areas information and mapping in local plans. (Municipalities should not be limited by the definitions and designations included here, as it is recognized that this Plan may not include all locally significant sites.)

~~15.16.~~ Continue and enhance environmental and outdoor education offerings, particularly those targeted to youth, via community and school-based learning opportunities to strive for broader public understanding of complex environmental issues and for the health and well-being of residents.

~~16.17.~~ Protect ~~natural and fragile areas, wildlife corridors, and important plant and animal habitats~~critical resource areas.

Critical resource areas include: rare threatened and endangered species, significant natural communities, National natural landmarks, state-designated Natural areas, and areas above 2,500 ft in elevation.-

- a. Promote protection of critical resource areas by educating towns and the public on the importance of preserving natural and fragile areas. Preserve critical resource areas by identifying key sites and by assisting towns in incorporating provisions in their town plans and land use regulations to

protect them (and, as appropriate, restore them).

- b. ~~Encourage local programs for the purchase of development rights, conservation easements or fee simple acquisition to protect contiguous areas of active, successional or potential wildlife habitat.~~
- c. Where natural and fragile areas occur on developable private lands and where their adequate protection would preclude any other reasonable use of those properties, acquisition in fee simple or less than fee simple is recommended.
- d. ~~Support communities in working with interested landowners to foster participation in state and federal programs such as Forest Legacy, Land and Water Conservation Fund and the Wildlife Habitat Incentive Program.~~

18. Protect wildlife corridors and contiguous habitat, including but not limited to deer winter habitat, wetlands, habitat for rare, threatened or endangered species and feeding and denning areas for black bears.

- a. Encourage local programs for the purchase of development rights, conservation easements or fee simple acquisition to protect contiguous areas of active, successional or potential wildlife habitat.
- b. Development and associated infrastructure (roads, driveways, utilities, etc.) should be designed and sited in a manner to preserve contiguous areas of active, successional or potential wildlife habitat.
- c. Support communities in working with interested landowners to foster participation in state and federal programs such as Forest Legacy, Land and Water Conservation Fund and the Wildlife Habitat Incentive Program.

17.19. Prevent the spread of terrestrial invasive species and forest pests.

- a. Work with partners to implement coordinated invasive species and forest pest education, detection, prevention and control measures.
- b. Encourage landscaping with native species over the use of nonnative species, particularly in non-urban environments. Work with UVM Extension Master Gardeners on educating homeowners on the use of native trees and plants.

Theme: Productive Resources

Sustainably managed natural resources and supported industries.

~~18.20.~~ Support and encourage the protection and continued productivity of viable ~~primary agricultural soils and forestry practices~~agricultural and forestry soils.

a. ~~Encourage sound agricultural land use planning including flexible development options, fair government pricing taxation and subsidy programs, agricultural diversification, and promotion of value-added products and industries as means to this end.~~ Encourage the protection of prime and statewide agricultural soils.

b. Assist municipalities ~~to~~ in identify locally significant agricultural and forest parcels and/or districts through locally and consensually developed processes, including land evaluation and site assessment programs (e.g. LESA and FLESA). Such identification can assist in establishing protection priorities and programs.

~~b.c.~~ Encourage use of mandatory clustering, planned unit development, or conservation subdivision design to conserve the best farmland for and productive forest blocks.

~~e.d.~~ Assist local farms in identifying options for keeping farm parcels intact and viable.

~~d.e.~~ Public improvements are considered a significant reason for farmland's metamorphosis into prime development land. The installation of sewer or water lines, and roads across or into the immediate vicinity of agricultural parcels or primary agricultural soils can encourage the development of farmland. For this reason they require careful review. Such improvements will be discouraged unless:

- such a position would conflict with the local plan; or
- the improvements are required to implement the settlement pattern goals set forth in this Plan or in that of a Central Vermont municipality;
- there is an overriding public need being served; or
- adequate permanent protection is inherent in the development proposal; or
- parcels or soils affected are determined to be "not viable" for reasons of size, topography, surrounding land use, or potential productivity.

~~19.21.~~ CVRPC recommends continuation of, and participation in, the Use Value Appraisal Program as a means to promote continuing sound management of resource lands by taxing them fairly and according to their current use.

~~20.22.~~ Encourage and assisting towns in setting up local tax stabilization programs for forestland protection.

~~21.23.~~ Municipalities are encouraged to map the important, accessible mineral sources.

~~22.24.~~ The extraction of sand and gravel should not be unduly detrimental to surrounding land uses or the environmental quality of the area. A reclamation plan should be included as part of any extraction proposal. Possible alternative uses should be identified in local plans.

~~23.25.~~ Occupants of New developments that encroach upon those lands identified or designated as important sources of mineral resources, ~~and the occupants thereof,~~ are encouraged to respect the rights of resource land owners to continue existing operations, and undertake appropriate expansions, according to ~~accepted practices~~ Best Management Practices promoted by the Vermont Dept. of Environmental Conservation.

~~24.26.~~ Implement the goals and policies presented in the Strong and Diverse Economy element of this Plan that support the entire value-chain of the agriculture and forest-based industries.

~~25.27.~~ Implement the goals and policies presented in the Energy element of this Plan that facilitate the sustainable utilization of our natural resources for renewable energy production to decrease dependence on fossil fuels.

Theme: Air Quality

Air quality that maintains attainment of the National Ambient Air Quality Standards.

~~26.28.~~ Work with state and regional entities to identify localized air quality impacts.

~~27.29.~~ Encourage the use of best-available technology for all emission sources within the airshed, including residential emission sources.

Theme: Outdoor Recreation and Scenic Resources

Accessible outdoor recreational opportunities and scenic resources that meet the needs of residents and visitors and respect the natural environment.

~~28.30.~~ Develop public process to identify, map and monitor impacts to significant scenic resources.

~~29.31.~~ Encourage siting and design of development that minimizes impacts on scenic resources.

- a. Municipalities and developers are encouraged, through design and siting of structures, to make a concerted effort to preserve access to and

enjoyment of scenic views for the public.

- b. Unless effectively screened, or clearly in the best interest of the general public, ridge line development or conspicuous development on locally prominent landscape features is discouraged.
- c. The scale and siting of new structures should be in keeping with the surrounding landscape and architecture.
- d. Utility infrastructure and corridors shall be sited so as to minimize aesthetic impacts. Wherever feasible, utility lines will be installed underground.
- e. Where possible, parking lots and storage areas should be well landscaped and/or otherwise screened from view from transportation corridors.
- f. The location of telecommunication towers is a significant aesthetic issue within the Region. Policies intended to minimize negative impact are presented in the Utilities & Facilities element of this Plan.
- g. Outdoor lighting should be limited to minimum levels necessary to ensure safety and security of persons and property. Due consideration should be given to the guidelines set forth in the “Outdoor Lighting Manual for Vermont Municipalities.”
- h. Light sources shall be shielded and not directly visible from transportation corridors or adjacent residences. Due consideration should be given to the guidelines set forth in the “Outdoor Lighting Manual for Vermont Municipalities.”

| 30.32. Encourage the State and municipalities to maintain existing roadside views by means of vegetation clearing, where appropriate.

| 31.33. Any new development should make all reasonable attempts to minimize noise pollution and shall not exceed accepted standards in residential areas.

| 32.34. Assess and anticipate recreational needs and identify recreational access issues specific to resources or user groups.

- a. Encourage and foster the provision of diverse outdoor recreational opportunities, with consideration given to the needs of the elderly, disabled, and economically disadvantaged.
- b. Public access to rivers, streams, lakes, ponds and recreation lands is a need in the Region. Municipalities, the State, and private groups, such as

land trusts, should coordinate efforts to provide for improved recreational access to the Region's surface waters. At the same time, significant water related natural areas should be maintained and protected.

- c. Participate in Act 250, Section 248 and state rulemaking processes related to use of public waters within the Region to implement policies and strategies in this Plan related to water resources and recreational use.
- d. New development proposals are encouraged, through design, to make an effort to preserve access to recreational uses for the general public.
- e. Landowners are encouraged to voluntarily keep their lands open for public recreation and enjoyment where possible, so as to maintain the Region's tradition of informal, resource based recreation on private lands.
- f. Encourage participation of recreational user groups in municipal planning and long-range planning for public land units to enhance management and mitigate conflicts.
- g. Participate in long-range planning for regionally significant public land units.
- h. Municipalities should develop and implement strategies to protect important recreation lands.

| 33-35. Encourage those recreational activities that focus on, respect, enhance, and educate about the natural environment. Recreation and related facilities should minimize impacts on natural resources.

| 34-36. Support and encourage the creation and existence of intermunicipal recreation districts. (Inter-municipal districts are legal arrangements whereby a governmental entity joins with another to provide recreational facilities or services. Through these arrangements, increased opportunities may exist for municipalities to acquire or develop land, provide services, or manage an area). Accordingly, we will continue to provide administrative and technical assistance to the Wrightsville Beach Recreation District Board of Directors.

| 35-37. Work towards and support the maintenance and development of trail and greenway networks to provide for recreational diversity, tourist amenity, habitat linkage, and low impact transportation choices.

- a. Work with individual municipalities, at their request, to help plan local trails and greenways;

- b. Work with groups of municipalities and/or citizens to promote the concept and development of a Regional trail, greenway, and recreation plan that connects and builds upon local initiatives;
 - c. Encourage the development of multi-purpose trail corridors along abandoned rail beds;
 - d. Encourage municipalities to ~~retain~~ maintain public access on Class IV roads and public trails for public recreational use.
 - e. ~~Encourage the provision of recreation along utility corridors, as appropriate.~~
 - f. Encourage formation and sustained efforts of local trail committees and volunteer groups to support expansion of local trail networks.
- 36-38. Enhance awareness and promotion of recreational resources to residents and visitors.
- a. Develop and distribute Region-wide recreation map.
 - b. Engage with tourism promotion organizations and businesses groups to incorporate recreational resources into tourism promotion efforts.
- 37-39. Enhance the viability of existing ski areas and foster their development in a manner which will enable them to remain competitive while ensuring that they will protect and co-exist with the natural, physical, and socio-economic environment.
- a. Encourage equitable means of sharing external costs between ski areas and their host towns where such costs cannot be avoided.
 - b. Any expansion or redevelopment should be conducted in a planned, orderly manner that reflects and addresses the relationship between recreation and facility development, natural and scenic resources and historic village and settlement patterns.