



# **Agency of Natural Resources Strategic Plan**

Planning Period: 2011-2015

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## Message from the Secretary

The Agency of Natural Resources is committed to carrying out its mission in an efficient and effective manner. Four of the seven Governor's priorities are reflected in our efforts: Most notably, our work centers on advancing the Governor's second priority of **Environmental Conservation and Renewable Energy**, though we have a significant role in advancing the **economy** (Priority #1) and in **modernizing Vermont's infrastructure** (Priority #2). Doing this work in a manner that both employees of the Agency and Vermonters can be proud requires exemplary customer service, performance and accountability, and throughout the term of this Strategic Plan we will implement measures that continuously **improve the effectiveness of government** (Priority #5).

2011 has been a challenging first year for this new administration in general, and the Agency of Natural Resources in particular. It is hard to imagine the five year period of this Strategic Plan being driven by anything other than our response to the flooding in Lake Champlain in May and the devastation caused by Irene in August. This is a defining moment, and the Agency embraces the challenges and will use the recovery effort to focus our attention on the opportunities to protect and improve our natural resources, so that their vibrancy, health and resiliency in turn help make Vermont a healthier, stronger place to live and work, in the immediate future, and for generations to come.

Accordingly, Flood Resiliency is the centerpiece of this Strategic Plan and our work over the next several years. It will be the fulcrum that leverages our work in restoring rivers and ensuring flood capacity upstream and down of towns and roads that must be protected. It will guide our redevelopment of brownfields, investment in and maintenance of infrastructure, and management of stormwater in our built environment, and protection of our wetlands, water quality, soils and forests in our natural environment. Done right, fish and wildlife habitat is protected and enhanced both for purposes of biodiversity and for recreation and economy.

If flood resiliency is the specific focus of this 5-year period, then Climate Change is the overarching driver of our work. We must prepare for, protect against, and adapt to the warmer, wetter climate Vermont is already experiencing. Energy choices dramatically affect our environment and economy, so implementation of the new Comprehensive Energy Plan with sister agencies and through leadership of the Climate Cabinet is a high Agency priority. Adaptation to changes that are already occurring will be a part of this work, to protect our natural resources from reduced air and water quality, invasive plant and animal species, flooding and to respond to inevitable changes to the natural resource base that could reduce our quality of life or our economic vitality.

Protection of Vermont's natural resources will be enhanced by a smart, consistent plan for investing in Infrastructure and growth that aligns with planning and development goals. As such, brownfields re-development is a high priority of the DEC and the Agency, and we will be assessing all our funding of water and sewer services, and permitting related to stormwater, downtown development, and our land acquisition priorities to ensure they advance the broader goals of flood resiliency, compact development, and natural ecosystem connectivity and protection.

Finally, all success of the Agency relies on exemplary leadership and management and commitment of the employees whose service is fundamental to our success. Effective governance of the Agency now is a two-fold challenge: First, after years of downsizing and poor economic conditions, we have the challenge of stabilizing the agency funding and rebuilding staff morale and a re-dedication to our work that earns the respect and appreciation of all Vermonters through the consistent application of the best science and the laws under which we operate. To be successful, our three departments must work together as one agency to advance the goals both internally and in our daily work with sister agencies and the general public. Second, having lost our central office to Irene, we are operating in six different locations in addition to the regional offices. During the first part of this Strategic Planning period it is critical that the Agency be relocated back to one central facility that exemplifies sound environmental principles while enabling us to work together, under one roof, in the vicinity of the capital and our sister agencies with whom we work most closely, namely AOT, ACCD, AAF&M and DPS. This is a management and governance challenge that will be a central priority to ensure that the Agency is positioned to provide great service to the citizens, and that we effectively fulfill our responsibility to protect Vermont's natural resources for this and future generations.

Deborah L. Markowitz, Secretary

## Agency Overview

### MISSION STATEMENT

**To protect, sustain, and enhance Vermont's natural resources for the benefit of this and future generations.**

### OUR VISION

**Vermont's environment and natural resources are vital to our quality of life, culture and economy, and environmental stewardship is essential to our collective prosperity, based on a shared ethic of protection, respect and enjoyment of our natural environment.**

### OUR VALUES

**Draw from and build upon Vermonter's shared ethic of responsibility for our natural environment, an ethic that encompasses a sense of place, community and quality of life, an understanding that we are an integral part of the environment, and that we must all be responsible stewards for this and future generations. Cultivate stable, efficient, effective, inclusive decision making, informed by science and the rule of law.**

### OUR AGENCY

The Agency consists of a Central Office including the Secretary, Office of Planning and Legal Affairs, Budget, Personnel, IT and general administration, along with three departments: Environmental Conservation, Fish and Wildlife, and Forests, Parks and Recreation. We are responsible for the assessment and stewardship of Vermont's natural resources.

To do this, we hold and manage public lands and fish and wildlife resources in the public trust for ecosystem diversity, conservation and recreation, including state parks, access areas and dams. We manage air and water resources for environmental and public health, and in the public trust. We measure environmental conditions such as air and water quality, dam safety, forest health and wildlife resources for status and trends. We issue licenses and permit and enforce environmental regulations to ensure compliance with state and in many cases federal law. We collect, interpret and communicate environmental scientific information to Vermonters, and provide a forum for public comment on our work. We provide technical assistance to landowners, businesses, municipalities and individuals regarding environmental issues and resource management. We manage funding and support for environmental projects

including site clean-up, recreational access, and infrastructure including water supply, stormwater and wastewater systems. Our scientists managers and field staff provide expert testimony and assistance to other organizations, partners and sister agencies at the state, federal, local and regional levels to advance our mission and people’s understanding of our natural environment, its importance and relevance.

## **Agency Strategic Planning Process**

The Agency of Natural Resource has been through many planning exercises and last completed a full suite of Strategic Plans for the Agency and its Departments in 2000. Further, since 2000, the Agency has engaged in several intensive planning exercises that involved significant staff participation and resources. These exercises resulted in important and useful planning work that was, for the most part, not implemented. In the course of our strategic planning effort, we have drawn from the best thinking captured from these exercises. Given this background, and in light of staff reductions and workloads, we chose to conduct this work by updating the 2001-2005 plans, to draw from the planning work done by the Agency over the past decade, and to work through our leadership team to incorporate and respond to the Governor's priorities, with limited strategic involvement of staff.

We initiated our planning and goals in a leadership team retreat in April, followed by participation in the Governor's strategic planning sessions for the Cabinet and as part of the innovations workshop for the green economy. After considering the vision, values and guiding principles developed by the Governor, we began to set our goals and objectives and align them with the Governor's priorities.

We completed a second leadership team retreat in November, and raised several of the ideas with the Agency division managers at a meeting last month. Thereafter, we drafted this plan with input of priority work areas, goals and measures from each of the Departments.

## **Statutory Environment**

The Agency derives its authority and responsibilities from various chapters within Title 10 of the Vermont Statutes Annotated. These are listed in Appendix A. In addition, the Agency, specifically the Department of Environmental Conservation, is delegated authority for implementation of various federal programs including state implementation of the Clean Air Act, Clean Water Act, Safe Drinking Water Act, Toxic Substances Control act, Resource Conservation and Recovery Act, the Comprehensive Environmental Response, Compensation and Liability Act, and implementation of the National Flood Insurance Program.

## Agency Goals for the planning period related to Statewide Priorities

**Statewide Priority #1. The Economy:** Create a brighter economic future for Vermonters by raising incomes, growing jobs, and improving job preparedness.

**Goal 1: Brownfields:** Promote the redevelopment of brownfields sites to return these properties to beneficial use while addressing the health and environmental risks from contamination.

### Measures:

- a. Establish and launch Enhanced Brownfield Initiative by spring 2012.
- b. Cleanup 3-5 contaminated sites per year starting in 2013.
- c. Promote the development of 2-3 brownfield projects per year starting in 2014.

### Strategies:

- a. Collaborate with Agency of Commerce and Community Development and the Regional Planning Commissions to establish a new brownfields initiative to foster cooperation among the federal, state, regional and local entities to prioritize and expedite development on projects with significant economic potential.
  - i. Inventory known contaminated sites.
  - ii. Develop pipeline of contaminated sites appropriate for cleanup.
  - iii. Develop pipeline of brownfields appropriate for redevelopment.
  - iv. Prioritize opportunities based on significance and available funding.
- b. Establish and sponsor a training program for peer to peer exchanges of information among brownfields developers, lenders, insurers, attorneys and engineers.
  - i. One training session every six months for three years starting the winter of 2012
  - ii. Attendance will be tracked and feedback will be solicited from training participants

**Goal 2: Tourism and Recreation:** Promote increased opportunity and activity for hunting, fishing and diverse outdoor recreation for both Vermonters and visitors.

### Measures:

- a. Increase by 15% the number of licenses sold annually by 2014.
- b. Increase by 15% State Park Visitation rates by 2015.

### Strategies:

- a. Vermont's 52 State Parks are well-maintained and capital investments continue to be made annually.
- b. FP&R continues to use "Challenges for Change" to advance recreational goals.

- c. F&W and FP&R continue to promote opportunities through social media and traditional media sources.
  - i. Work with Travel and Tourism to promote opportunities.
  - ii. Track social indices – fans on facebook/twitter followers, etc. – to inform promotion strategies.

**Goal 3: Permitting and Grant-making Efficiency:** Implement a program of continuous improvement to permitting and grant-making programs. The focus of this program will be to assess existing business practices in a strategic and systematic fashion to ensure that our practices are efficient, transparent, fair, and take full advantage of advances in technology without compromising our vision and statutory obligations to protect the environment.

**Measures:**

- a. Completion of business transformation plan by 2012.
- b. Implementation of the milestones in the plan.
- c. 25% of potential electronic permitting systems in place by 2015.
- d. *Percent of permits meeting performance standards (“Dashboard” measure)*
  - i. 25% by 2013.
  - ii. 50% by 2014.
  - iii. 75% by 2015.

**Strategies:**

- a. Develop a business transformation plan by summer 2012 with a schedule for completing a review of priority programs. A primary goal of this plan will be to move all high volume permitting programs to an electronic, on-line system.
- b. Finalization of an electronic permitting system for the on-site wastewater systems program by spring 2012.
- c. Implement a pilot program for electronic permitting for the stormwater permitting program by fall 2012.
- d. Addition of at least one program to the electronic permitting system per year until complete.

**Statewide Priority #2. Environmental Conservation and Renewable Energy:** Enhance our quality of life and economic security through environmental conservation and by building a strong renewable energy and energy efficiency economy that will grow businesses, create well-paid jobs, save Vermonters money, get us off our addiction to fossil fuels, and take important steps to fight the effects of climate change.

**Goal 1: Climate Cabinet:** Implement climate change goals of the Comprehensive Energy plan to meet 2025 statutory targets.

**Measures:**

- a. Completion of a Climate Adaptation Plan by 2013.
- b. Completion of Resource Mapping Project by December 31, 2012.

- c. Measure tons of carbon absorbed by the working landscape.
  - i. Develop measure in 2012.
  - ii. Establish baseline in 2013.
- d. Reduce CO2 emissions from Vermont sources.
  - i. Establish Baseline in 2012.
  - ii. 3% annual reductions beginning in 2014.
- e. Beginning in 2013, increase renewable energy supply annually to meet CEP benchmark goals across all sectors.

**Strategies:**

- a. Promote climate adaptation through the development of statewide plans based on the study of climate impacts on Vermont
  - i. Participate and support scientific study of climate trends in Vermont and the impacts of those trends on Vermont’s environment
  - ii. Establish climate adaptation plans for water, air and waste programs by summer 2012
- b. Facilitate energy project assessments by completing resource mapping project.
- c. Provided continued leadership of the Climate Cabinet and promote collaboration with partner agencies to meet energy goals, emission reduction targets, and energy security goals.
  - i. Work with DPS to complete a Total Energy Standard to augment RPS by 2013
- d. Take lead in wood energy assessment and policy implementation component of CEP
  - i. Develop credible carbon accounting system for forest resources
  - ii. Evaluate feasibility of granting carbon credits for forest and ag resources managed for carbon sequestration

**Goal 2: Flood Resiliency:** In recovering from the May, 2011 floods and Tropical Storm Irene in August, 2011, ensure Vermont is more flood resilient and able to weather increased and more severe rainfall events into the future.

**Measures:**

- a. Reach milestones for performance measures in Interim and Long Term Flood Resiliency Plans by 2015.
- b. Completed 90% of proposed River Corridor plans by 2015.
- c. By 2013, identify acres of conserved habitat that also serves flood resiliency objectives. (“Dashboard” measure)
- d. Increase the stream miles of state river corridors meeting fluvial geomorphology objectives by 15% by 2015.
- e. By 2014, identify unfragmented stream miles resulting from the proper installation of infrastructure that may serve as a model for future development.

**Strategies:**

- a. Coordinate a statewide flood resiliency strategy to respond to the floods of 2011 and to plan for future flood events. The development of this strategy will involve other state agencies and state officials, federal agencies, regional planning commissions, and local governments as well as businesses and the public. Through this strategy, the state will support efforts to
  - i. protect public health and safety from the risks posed by catastrophic flood events,
  - ii. enhance economic vitality and quality of life by reconstructing livable communities and reestablishing commerce, and
  - iii. restore and maintain habitat protection (fisheries, waterfowl, wildlife) and the ecological health of our river, floodplains and wetlands system.
  - iv. Specific steps will include:
    - Follow through on the request to the International Joint Commission for a study of the causes and potential responses for reducing flooding in Lake Champlain;
    - Work with the Lake Champlain Basin Program, Quebec and New York to hold a series of workshops and a regional summit to discuss flood resiliency policy to take place in the spring of 2012;
    - Coordinate the development and implementation of an interim state operational flood resiliency plan for responding to the post-Irene flood events by the winter 2012; and
    - Coordinate the development and proposal of a longer-term set of state flood resiliency policy proposals by the fall of 2012.
    - Develop policies/regulations that minimize the building of new infrastructure in areas that will increase the risks for flooding and forest fragmentation.
- b. Work with communities to develop river corridor plans to promote flood resiliency for every major river system in Vermont, taking the impacts of climate change on flood intensity and frequency into account, by winter 2014
- c. Work with partner federal, state, regional and local agencies and organizations to assist communities in the implementation of river corridor plans
- d. Increase the number of municipalities participating in NFIP.
- e. Evaluate statewide changes to NFIP program including consideration of state standards beyond NFIP requirements and added incentives for towns to adopt these advanced standards.
- f. Provide technical assistance and outreach to community leaders, citizens, legislators and those active in river and lakeshore management, use and development of flood and river processes to establish community based strategies to ensure greater flood resiliency.

**Goal 3: Lake Champlain, St. Albans Bay Watershed Protection Initiative:** Convene a group of community leaders in the St. Albans Bay watershed for the purpose of establishing a plan to

comprehensively address phosphorus discharges into St. Albans Bay.

**Measures:**

- a. Convene St. Albans Bay Watershed Protection Initiative by spring 2012
- b. Facilitate completion of a St Albans Watershed Protection Plan, spring 2013, with performance measures such as,
  - i. Number of upgraded failed septic systems
  - ii. Upgrade of Sewage Treatment Facility with phosphorus controls
  - iii. Reduction in phosphorus runoff from farm practices
  - iv. Reduction in phosphorus runoff from stormwater
  - v. Acquisition of wetlands
  - vi. Implementation of better backroads practices

**Strategies:**

- a. Invite the key leaders in St. Albans Bay watershed together to develop and implement a specific plan for addressing phosphorous pollution into the bay.
  - i. The plan would involve St. Albans town and city, the Northwest Regional Planning Commission, local farmers, businesses and watershed groups as well as other state and federal agencies.
  - ii. Elements of the plan could include coordinated local land use planning, back road maintenance, upgrades to failed septic systems, implementation of innovative farm practices, acquisition of important riparian wetlands, stormwater management, and upgrading the wastewater treatment plant and sewer system.
  - iii. This effort would begin in the winter 2012 with the goal of developing a shared watershed plan, by spring 2013
- b. Implement plan in planning years 2013-2015

**Statewide Priority #3: Vermont's Infrastructure: Support modernization and improvements to Vermont's infrastructures, including our electric grid, road network, telecommunications system, and waste and storm water systems, to ensure Vermont's long-term economic and environmental sustainability.**

**Goal 1: Water, Sewer and Stormwater Infrastructure:** Ensure Vermont's water, sewer and stormwater infrastructure meets minimum federal and state requirements and is located and constructed so as to minimize damage and failure in the event of flooding or other natural disasters.

**Measures:**

- a. Establish a baseline inventory of flood susceptible sewer and water systems by 2012.
- b. By 2013, establish standards for communities to meet the state's stormwater management objectives.

- c. By 2015, document that at least 75% of communities have met the state's stormwater management standards.
- d. By 2012, establish Governor's Blue Ribbon Panel to develop options for funding water, sewer and stormwater infrastructure improvements

**Strategies:**

- a. Identify sewage treatment facility components and water supply infrastructure susceptible to flooding and prioritize improvements.
  - i. Coordinate upgrades for flood resiliency with priority of improvements to water treatment facilities for reconstruction, repair or water pollution control objectives.
- b. Ensure water and sewer river crossings are designed and constructed to withstand flood scouring and ice damage.
- c. Promote improved stormwater management to improve water quality and increase flood resiliency in Vermont communities.
  - i. Establish state government as a model of Low Impact Development and Green Infrastructure methods.
  - ii. Support implementation of Governor's Executive Order once signed and report back to the Governor on behalf of state agencies by Fall of 2012.
- c. Issue municipal separate storm sewer system (MS4) permits for large Lake Champlain watershed communities by winter 2012 and provide technical assistance to affected communities during the three year planning phase of the permit.
- d. Support the Governor's blue-ribbon panel established to study potential revenue options to assist local governments with the cost of water pollution control investments including stormwater management with a report due to the Governor and Legislature by January 2013.

**Goal 2: Align Funding Priorities:** Ensure state resources, community funding through grants and loans, and our tax structure align with flood-resiliency and land use objectives.

**Measures:**

- a. *Money invested in Municipal Infrastructure ("Dashboard" measure)*

**Strategies:**

- a. Align land and easement acquisition priorities with flood resiliency, habitat protection, working lands and recreational access priorities.
- b. Prioritize work of grant/loan programs in the Agency to:
  - i. Support compact development in downtowns, villages and growth centers
  - ii. Redevelop brownfields
  - iii. Discourage parcelization and fragmentation
  - iv. Reduce need for future investment in new water/sewer infrastructure
  - v. Improve access for fishing, hunting and other outdoor recreational

- opportunities
- c. Collaborate with other Agencies and Departments to align their investment and tax policies to accomplish these goals concurrently with their own.

**Statewide Priority #5: State Government and Employees: Improve the effectiveness of state government by support of a motivated and healthy workforce and through greater accountability, performance measurement, and focus on customer service.**

**Goal 1: Customer Service** Effective training and professional development and the implementation of efficient processes and technology enable all Agency employees to make decisions and provide services that meet the needs of our external and internal customers.

**Measures:**

- a. Increase level of employee satisfaction:
  - i. Establish baseline with satisfaction survey using social media in 2012.
- b. Increase training for all employees pertaining to their job and other relevant training.
  - i. Increase on-line job-related course use by 25% by 2015.
  - ii. Identify the highest need training areas by 2013.
  - iii. Develop and implement new training content to meet highest needs by 2014.
- c. Incorporate individual development plans in the performance management process of every employee by 2015.
- d. Decrease time required by staff to address administrative processing activities, such as timesheets, contracts and grants processing, etc.
  - i. Establish baseline in 2013.

**Strategies:**

- a. Training of employees to continuously improve work quality and responsiveness.
- b. Seek continual feedback from Vermonters and guests in order to understand their needs and preferences, their levels of satisfaction, and their suggestions for improvement in our performance.
- c. The department and divisions should evaluate performance measures annually in order to track programs' status.
- d. Develop an operational planning process that ties work projects to priorities identified in the strategic plan.
- e. Identify training needs or opportunities that support program priorities.
- f. Reduce unnecessary inefficiencies in government operations to reduce staff time in activities only peripherally related to the mission.

**Goal 2: Employee Morale and Work Satisfaction:** Attract, develop, promote and retain the best possible workforce, providing optimal workplace environment in order to improve morale

and engagement.

**Measures:**

- a. Improve the Agency's scores on employee surveys originally administered under Challenges for Change by 10% by 2014.
- b. Offer cross-training in another job function to 10% of Agency employees between 2013 and 2014.
- c. Engage staff in design of new permanent office space.

**Strategies:**

- a. Ensure effective and frequent communication to and from management.
- b. Continue to work on telecommuting policy and implementation options.
- c. Continue Leadership and Management training program.
- d. Continue to convene internal staff 'space' working group.
- e. Coordinate with DHR to maximize training and professional development opportunities.

**Goal 3: Re-establishment of a Central Office:** Efficiency and improvements in operations requires as our highest management priority during the initial part of this planning period the re-establishment of the Agency under one roof, in a central location that is accessible to other governmental entities and sister agencies with whom we work, and that exemplifies smart growth and green building principles as a model for others.

**Measures:**

- a. Complete permanent office move by end of 2012 if existing space is to be used, or by the end of 2013 if new construction is decided upon.

**Strategies:**

- a. Work with BGS and administration to prioritize this effort and ensure we are working expeditiously to accomplish this goal.

**Goal 4: Stable Funding for Departments and Agency as a whole:** Ensure that funding for the departments and the agency is based on realistic assessments of our workload and responsibilities in light of our mission and public expectations, as well as our revenue and funding sources.

**Measures:**

- a. Our budgets support the work expected.

**Strategies:**

- a. In the immediate period of this plan, we must address three systemic funding issues:
  - i. In F&W – a decline in license sales over time.

- ii. In FPR – an unsustainable reliance on timber sales subject to volatile markets and weather.
- iii. In DEC – an undefined but expected reduction in federal funding.
- b. Ensure fee bill for 2012 covers adequately the expected contribution of fees to their respective permit/licensing processes for the full three year period of FY2013-2015.

**Statewide Priority #8: Working Landscape: Support the economies and cultures of Vermont's working landscape by investing in agriculture and forestry, the economic drivers of our natural resources-based economy, which helps define and protect Vermont's increasingly unique pattern of alternating villages and countryside.**

**Goal 1: Forest Health and Productivity:** Maintain and enhance forest ecosystem health and productivity.

**Measures:**

- a. Area of forest land at risk due to fragmentation and other potentially damaging agents.
- b. Annual removal of wood volume compared with net growth.
- c. Acres of public and private lands under forest management plans and/or conservation easements.

**Strategies:**

- a. Maintain the productive capacity of forests.
  - i. Encourage appropriate forest management that maintains health and productivity.
  - ii. Maintain and enhance soil productivity.
  - iii. Support wildland fire preparedness planning and suppression activities.
  - iv. Monitor and report current forest health and evaluate potential threats.
- b. Retain native flora and fauna across the landscape.
  - i. Prevent the introduction and slow the spread of invasive exotic species.
  - ii. Support programs that maintain Vermont's common flora and fauna.
  - iii. Provide technical assistance to towns and regional commissions to minimize impacts to working lands and the natural resources they support.
  - iv. Participate in the regulatory process to protect fish and wildlife habitat, significant natural communities, and large forest blocks.
  - v. Protect and manage riparian buffers to reduce costs of land management, flooding damage and to protect fish habitat and connectivity
  - vi. Maintain connectivity between large forest blocks for plant and animal dispersal and climate change resilience

**Goal 2: Forest Products and Ecosystem Services:** Maintain and enhance forest contribution to ecosystem services, such as water quality protection and flood resilience.

**Measures:**

- a. Percent of forest cover.

- b. Percent of tree canopy cover over urban areas.
- c. Wood and wood products production, consumption and trade.
- d. Miles of hiking, biking and other recreational trails.
- e. Employment and wages in forest-related sectors.
- f. Property loss due to wildland fire and natural disasters.
- g. Economic benefit to the state of fish and wildlife based activities.

**Strategies:**

- a. Maintain and enhance the production of forest products.
  - i. Work with partners to assess Vermont’s capacity to produce raw materials for forest products.
  - ii. Support the forest-based economy including maintaining and diversifying markets to encourage forest management activities and local production and use of forest products.
  - iii. Support research that improves the procurement and utilization of the full suite of forest products.
  - iv. Encourage stable solid wood and biomass supply to support forest industry.
- b. Maintain and enhance water resources.
  - i. Encourage inclusion of soil and water conservation considerations by foresters, forest landowners and loggers through appropriate forest planning and practices.
  - ii. Encourage trees and forests for flood mitigation and storm water management.
  - iii. Identify, conserve, restore and protect priority forested watersheds valued for water resources.
- c. Conserve and restore Vermont’s fish, wildlife, and plant species.
  - i. Implement recovery plans for threatened or endangered species
  - ii. Protect and manage habitats that are necessary for the conservation and restoration of species
  - iii. Implement fish and wildlife disease and invasive/exotic monitoring/eradication protocols
  - iv. Inventory, research, and manage the abundance, diversity, and distribution of Vermont’s fish and wildlife species in order to conserve populations for future generations.
- d. Maintain and enhance recreational opportunities.
  - i. Build partnerships that enhance forest-based recreational opportunities.
  - ii. Work with partners to maintain forest access, land stewardship awareness and outreach, and well-maintained trail networks that support recreational opportunities.
- e. Maintain and enhance forest carbon.
  - i. Support research that improves the understanding of measuring, monitoring and trends in forest carbon, including applications for forest carbon marketing.
  - ii. Work with partners to enhance forest carbon market opportunities.

**Goal 3: Use Value Appraisal (UVA):** Increase the amount of private lands, both forests and agricultural, enrolled in UVA and actively managed for natural resource and economic purposes.

**Measures:**

- a. Increase enrollment of eligible acres in UVA by 10% by 2015.
- b. Increase acres under productive forest management.
- c. Expand the volume of forest products (in cords) harvested per year.
- d. Grow the number of forest products jobs in Vermont by 5% by 2015.
- e. Increase the number of landowners enrolled in the Current Use Ecologically Sensitive Treatment Area (ESTA) program.

**Strategies:**

- a. Work through county foresters to promote UVA program and active management of privately held forest lands.
  - i. Expand eligibility and broaden the scope of allowable management objectives, such as incentivizing additions to floodplain forests to advance flood resiliency and fish and wildlife habitat protection and connectivity.
  - ii. Improve administrative efficiency of the UVA forestry program to support expanded enrollment.
  - iii. Encourage open access to private lands for hunting, fishing, and trapping.
- b. Continue advance planning on state management areas to enable appropriate timber sales consistent with management objectives, providing a stable supply of timber from agency lands.
  - i. Expand the use of Agency lands for education and demonstration of exemplary management.
- c. Support and enhance forest products harvesting, manufacturing, and marketing:
  - i. Support, promote, and expand the use of Vermont value-added wood products with AAFM, ACCD, BGS, et al.
  - i. Promote VT wood in green building and in State and institutional contracting.
  - ii. Decrease (from approx. 40) the % of sawlog volume cut in VT but sent and processed elsewhere

**Goal 4: Legal, Institutional and Economic Framework:** Vermont has a legal, institutional and economic framework in place for forest conservation and sustainability.

**Measures:**

- a. Number of Agency land management plans.
- b. Number of violations of state forestry and wildlife laws and regulations.
- c. Acres subject to conservation easements.
- d. Number of easement acres monitored annually.
- e. Acres enrolled in the UVA Program and third-party certification programs.

**Strategies:**

- a. Maintain an organizational structure within the Division of Forests and the Department of Fish and Wildlife to support management, protection, conservation and enhancement of Vermont's forests, fish and wildlife habitat, and natural communities.
- b. Expand financial opportunities to support forest/fish and wildlife stewardship.

- c. Strengthen, implement and enforce Vermont's forestry policies, rules and laws.
- d. Encourage and support policies, programs and initiatives that assist private forest landowners in maintaining the working landscape, such as Use Value Appraisal, best management practices, third party certification, conservation easements, and cost-share grant programs.

**Goal 5: Wildlife Based Recreation:** Provide hunting, fishing, and trapping opportunities (that are consistent with resource management goals and within ecological limits) through the conservation and enhancement of habitat and ecosystem integrity.

**Measures:**

- a. Minimize the number of acres of contiguous forest lost to fragmentation/parcelization.
- b. Increase in the number of town plans that promote protection of local fish and wildlife resources.
- c. Increase public access to Vermont waters or lands.

**Strategies:**

- a. Develop an outreach and an education plan that promotes a consistent message about the relationship between wildlife habitat and the "Working Vermont Landscape"
- b. Prioritize and implement land acquisition to increase protection of high-value areas such as rare or significant natural communities, fish and wildlife habitats, corridors, and riparian and aquatic habitats while returning value to landowners participating in such programs.
- c. Increase efforts to manage and restore high-value fish and wildlife habitats and natural communities on all lands (e.g., Partnering with USDA, VLT, etc, private landowner technical assistance, local and regional wildlife management planning).
- d. Evaluate private landowner incentive opportunities to encourage public access to private lands and waters.
- e. Assist municipalities, regional planning commissions, and other land management groups in the implementation of land conservation strategies for fish and wildlife resources at the local and regional levels.

**Goal 6: Flood Mitigation:** Protect agricultural and forest lands that play an important role in mitigating flooding and flood damage.

**Measures:**

- a. Agricultural and forest lands which have an especially critical role in mitigating downstream flooding and flood damage are identified.
- b. The amount of forested riparian areas and floodplain forests conserved through easement or ESTA management increases by XX% by 2015

**Strategies:**

- a. Work with the Agency of Agriculture, Food and Markets and agricultural landowners to identify and protect areas of floodplain that can help attenuate floodwaters and reduce flooding damage downstream.
- b. Work with the Agency of Agriculture, Food and Markets to explore new incentives for farmers to adopt best management practices that help mitigate the risk of flooding downstream
- c. Work with the UVA (current use) program to explore incentives for forest land owners to adopt best management practices or ESTAs that help mitigate the risk of flooding downstream as a means of increasing landowner value for these areas and conservation practices.

## Appendix A: Agency Statutory Authority/Relevant Rules & Regulations

### State Statutes

Chapter 7	GEOLOGIC SURVEYS AND REPORTS §§ 101 – 105
Chapter 8	GEOGRAPHIC INFORMATION §§ 121 – 126
Chapter 9	GEOGRAPHIC NAMES §§ 151 – 154
Chapter 11	DEVELOPMENT OF LAKE CHAMPLAIN BASIN §§ 171 – 201
Chapter 19	SCENERY PRESERVATION §§ 421 – 425
Chapter 20	VERMONT TRAILS SYSTEM §§ 441 – 449
Chapter 23	AIR POLLUTION CONTROL §§ 551 – 585
Chapter 31	SOIL CONSERVATION ACT §§ 701 – 748
Chapter 32	FLOOD HAZARD AREAS §§ 751 – 753
Chapter 33	SUPERVISORY UNIONS §§ 801 – 807
Chapter 34	CONSERVATION AND PRESERVATION RIGHTS AND INTERESTS §§ 821 – 823
Chapter 35	DRAINAGE OF LOW LANDS §§ 851 – 865
Chapter 37	WETLANDS PROTECTION AND WATER RESOURCES MANAGEMENT §§ 901 – 921
Chapter 39	WATERSHED PROTECTION AND FLOOD PREVENTION §§ 951 – 961
Chapter 41	REGULATION OF STREAM FLOW §§ 1001 – 1032
Chapter 43	DAMS §§ 1080 – 1106
Chapter 45	CONNECTICUT RIVER FLOOD CONTROL COMPACT §§ 1151 – 1198
Chapter 46	INTERSTATE WASTE COMPACT §§ 1201 – 1224
Chapter 46A	INTERSTATE PUBLIC WATER SUPPLY COMPACT §§ 1231 – 1235
Chapter 47	WATER POLLUTION CONTROL §§ 1250 – 1386
Chapter 48	GROUNDWATER PROTECTION §§ 1390 – 1419
Chapter 49	PROTECTION OF NAVIGABLE WATERS AND SHORELANDS §§ 1421 – 1427
Chapter 50	AQUATIC NUISANCE CONTROL §§ 1451 – 1460
Chapter 51	LICENSING OF WATER WELL DRILLERS §§ 1471 – 1471
Chapter 53	BEVERAGE CONTAINERS; DEPOSIT-REDEMPTION SYSTEM §§ 1521 – 1529
Chapter 55	AID TO MUNICIPALITIES FOR WATER SUPPLY, POLLUTION §§ 1571 – 1653
Chapter 56	PUBLIC WATER SUPPLY §§ 1671 – 1685

Chapter 57	VERMONT WHEY POLLUTION ABATEMENT AUTHORITY LAW §§ 1701 – 1891
Chapter 59	UNDERGROUND AND ABOVEGROUND LIQUID STORAGE TANKS §§ 2 – 1944
Chapter 61	WATER SUPPLY AND WASTEWATER PERMIT §§ 1951 – 1957
Chapter 63	VERMONT CITIZENS ADVISORY COMMITTEE ON LAKE CHAMPLAIN §§ 1960 – 1961
Chapter 64	POTABLE WATER SUPPLY AND WASTEWATER SYSTEM PERMIT §§ 1971 – 1980
Chapter 71	DEPARTMENT OF FORESTS AND PARKS §§ 2001 – 2001
Chapter 73	CONSERVATION AND MANAGEMENT OF FOREST LAND §§ 2051 – 2221
Chapter 75	STATE, NATIONAL AND MUNICIPAL FORESTS §§ 2251 – 2251
Chapter 77	CAMEL'S HUMP STATE PARK AND CAMEL'S HUMP FOREST RE §§ 2351 – 2354
Chapter 79	FOREST PEST CONTROL §§ 2401 – 2401
Chapter 81	NORTHEASTERN FOREST FIRE PROTECTION COMPACT §§ 2461 – 2514
Chapter 83	DEPARTMENT OF FORESTS, PARKS AND RECREATION §§ 2601 – 2676
Chapter 85	VALUE-ADDED FORESTRY AND FOREST PRODUCTS §§ 2701 – 2721
Chapter 101	DEFINITIONS §§ 4001 – 4001
Chapter 103	FISH AND WILDLIFE DEPARTMENT §§ 4041 – 4199
Chapter 105	LICENSES §§ 4251 – 4309
Chapter 107	SUSPENSION OF OPEN SEASON §§ 4401 – 4406
Chapter 109	PENALTIES AND ENFORCEMENT §§ 4501 – 4577
Chapter 111	FISH §§ 4601 – 4616
Chapter 112	COMPACT FOR STATE AND FEDERAL MEMBERSHIP IN THE CO §§ 4651 – 4662
Chapter 113	GAME §§ 4701 – 4909
Chapter 115	HUNTING DOGS §§ 5001 – 5007
Chapter 117	TRANSPORTATION §§ 5101 – 5106
Chapter 119	PRIVATE PRESERVES, PROPAGATION FARMS, PRIVATE POND §§ 5201 – 5228
Chapter 121	BOUNTY ON NOXIOUS ANIMALS §§ 5301 – 5301
Chapter 123	PROTECTION OF ENDANGERED SPECIES §§ 5401 – 5410
Chapter 151	STATE LAND USE AND DEVELOPMENT PLANS §§ 6001 – 6101
Chapter 153	MOBILE HOME PARKS §§ 6201 – 6266
Chapter 155	ACQUISITION OF INTERESTS IN LAND BY PUBLIC AGENCIES §§ 6301 – 6309
Chapter 156	CHAMPION LAND TRANSACTION CITIZEN ADVISORY COUNCIL §§ 6407 – 6409
Chapter 157	STORAGE OF RADIOACTIVE MATERIAL §§ 6501 – 6523
Chapter 158	FRAGILE AREAS REGISTRY §§ 6551 – 6556

- Chapter 159 WASTE MANAGEMENT §§ 6601 – 6656
- Chapter 161 DISPOSAL OF LOW-LEVEL RADIOACTIVE WASTE §§ 7000 – 7050
- Chapter 162 TEXAS LOW-LEVEL RADIOACTIVE WASTE DISPOSAL COMPACT §§ 7060 – 7069
- Chapter 164 COMPREHENSIVE MERCURY MANAGEMENT §§ 7101 – 7116
- Chapter 164A COLLECTION AND DISPOSAL OF MERCURY-CONTAINING LAMPS §§ 7151 – 7160
- Chapter 165 GENERAL PERMIT AUTHORITY §§ 7500 – 7505
- Chapter 166 COLLECTION AND RECYCLING OF ELECTRONIC DEVICES §§ 7551 – 7564
- Chapter 201 ADMINISTRATIVE ENVIRONMENTAL LAW ENFORCEMENT §§ 8001 – 8019
- Chapter 211 CIVIL ENFORCEMENT §§ 8221 – 8221
- Chapter 220 CONSOLIDATED ENVIRONMENTAL APPEALS §§ 8501 – 8506