Making Science The Centerpiece Of Our Work At ANR

- *By Deb Markowitz, Secretary, Vermont ANR*

Two years ago when the new leadership team took office at the Agency of Natural Resources (ANR), we devoted some time to developing our vision for the agency and decided that one of the most important contributions we could make as a team was to enhance the role, visibility and value of science at the agency. We knew that it was essential for us to provide sound data and analysis for Vermonters to use in exercising their shared ethic of responsibility for our natural environment. Vermonters understand that we are an integral part of the environment and are curious to know more about how we impact and are dependent upon our air, wildlife and water.

We can use science to help us protect our rivers, lakes and ponds, our farms and forests, the views from our Green Mountains, the air we breathe and the amazing diversity of life that lives on our beautiful landscapes.

Scientific knowledge is dynamic. Scientific inquiry and data collection are designed to reduce uncertainties and increase our understanding of complex systems. Research can change our assumptions about the impacts of environmental problems and how they should be addressed, and scientific information can lead to new strategies to prevent or mitigate pollution, direct conservation efforts and protect our natural environment. Of course, science is only one piece of the policy puzzle - but it can help to inform our actions.

At ANR we have been investing in developing scientific information and analysis for many decades. Over the past year we have added some great new tools to make this information broadly available. The Bedrock Geological Map of Vermont, the Biofinder, a map of Vermont's biodiversity and ANR's Environmental Atlas and all of the underlying datasets are available to the public, educational institutions and our partners. We also expanded partnerships with educational institutions and nonprofits to collect data that will allow us to better understand the impact of climate change on our natural resources. We participated in studies and provided grant dollars for research efforts that better focus our environmental remediation efforts, and we initiated a new effort within ANR to create long-term stability for our most important environmental monitoring programs.

Science is the centerpiece of our decisions as ANR. We use science to help us decide whether to issue or deny a permit, to allow a road or structure to be built in or near a wetland, or to give the little brown bat the protection of our endangered species law. Science also informs our stewardship team's approach to managing for multiple values, and benefits the nearly 400,000 acres of public land under our care. Science forms the basis of our technical assistance to private landowners and communities, and helps us develop basin plans that help Vermonters assess risk and guide actions to protect our watersheds.

Whenever I am with ANR staff discussing their areas of expertise I am struck with the thought that the enterprise of scientific inquiry is never complete. The more we learn, the more clearly we understand just how much we do not yet know. The complexity of scientific inquiry is infinite - as naturalist John Muir said, "When one tugs at a single thing in nature, he finds it attached to the rest of the world." The more we understand about how the natural world works, the better job we can do today to make decisions that will protect, preserve and enhance our environment for future generations.