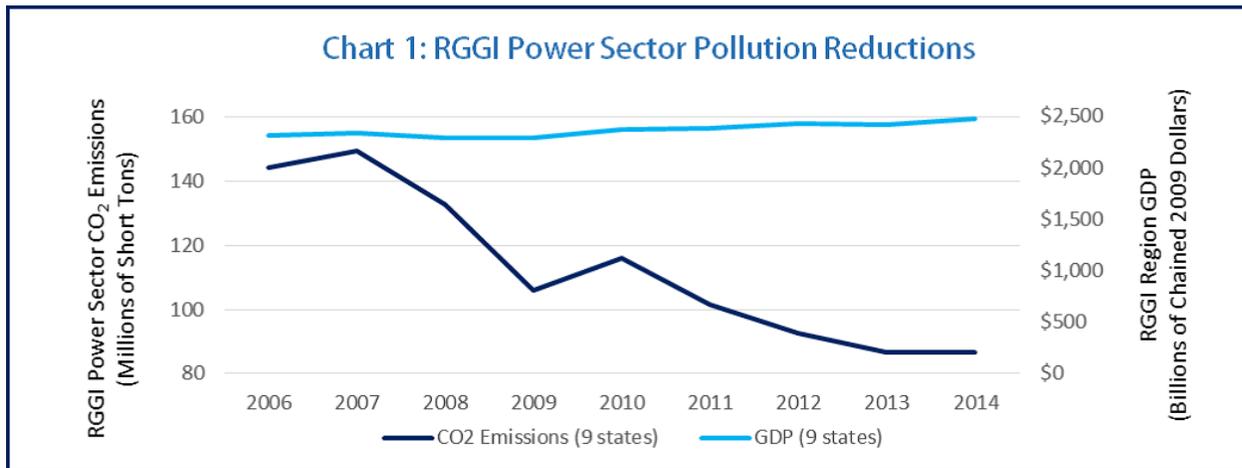


2017 marked the 30th anniversary of NHDES. Much has changed in the last 30 years to help sustain a high quality of life for all citizens by protecting and restoring public health and our beloved environment. While the work is not complete, NHDES took time this year to recognize 30 accomplishments and achievements that have impacted our environment and public health for the better over the past 30 years. Each of the six issues of our Environmental News newsletter in 2017 contained a description of five of these achievements, under a specific theme for each issue. In the July/August issue, it was:

Our Economy



1. Regional Greenhouse Gas Initiative (RGGI)

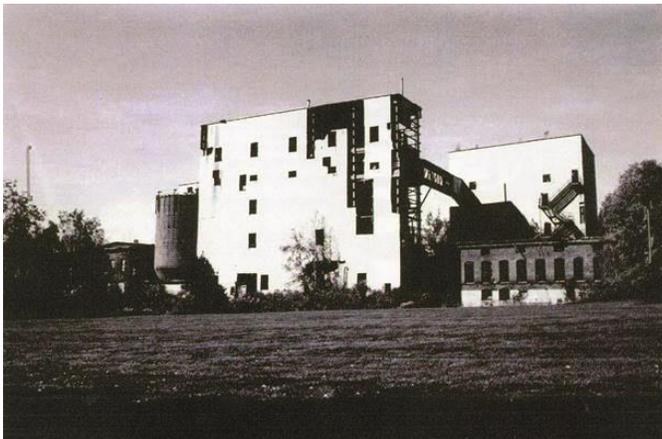
Why it matters: The climate is changing, both globally and here in New Hampshire. A recent climate assessment from the University of New Hampshire shows that the rate of change has increased significantly over the last four decades. Warmer winters (20-45 fewer days below 32°F) and hotter summers (10-47 days above 90°F compared to 3-7 currently) can be expected over the next 50-75 years. Both the frequency and magnitude of extreme precipitation events, like flooding, have increased and will continue to increase. Climate change not only reduces our quality of life, but it impacts tourism and the economy.

Progress in 30 years: Beginning in 2009, New Hampshire joined fellow Northeast and Mid-Atlantic states in implementing RGGI, the first mandatory market-based regulatory program in the United States to reduce greenhouse gas emissions. RGGI caps regional power plant carbon dioxide (CO₂) emissions, and the cap currently declines by 2.5% per year. A CO₂ allowance represents a limited authorization to emit one short ton of CO₂. A regulated power plant must hold CO₂ allowances equal to its emissions for each three-year control period. For more information, visit www.rggi.org. The RGGI states have witnessed a significant reduction in power sector CO₂ pollution, even as the regional economy has continued to grow, as shown in the graph below.



There are several additional significant benefits to implementing RGGI. An independent report by the Analysis Group found that the investment across the participating states of the first three years of RGGI proceeds generated \$1.6 billion in net economic benefit region-wide through the end of the decade; put \$1.1 billion in electricity bill savings back into the pockets of consumers in the region over the next decade; created 16,000 job-years in the region; and kept \$765 million in the local economy due to reduced fossil fuel demand. In short, as part of RGGI, little ol' New Hampshire is already doing a great deal to reduce the emissions that are contributing to climate change.

2. Brownfields



Why it matters: Brownfields are abandoned or underutilized properties where expansion, redevelopment or reuse is complicated by the presence or potential presence of environmental contamination. Historically, New Hampshire was fortunate to have a large manufacturing base with textile, pulp and paper, leather tanning and metal finishing industries throughout the state. Unfortunately, the overall decline of manufacturing during the latter part of the 20th century left a legacy of abandoned and contaminated mill and industrial properties. The consequences have been blight, depressed property values, increasing numbers of tax-delinquent properties, and sites that potentially pose a risk to public health and the environment. NHDES estimates that there are more than 400 such sites within the state where the presence of hazardous substances or petroleum is serving as a barrier to redevelopment. The majority of these sites, which are proportionately distributed among the urban and rural areas of our state, are located in or near town centers. In these locations, they have a maximum adverse impact on the local economy.

Progress in 30 years: New Hampshire's Brownfields Program was established in 1996 to encourage the voluntary investigation, cleanup and redevelopment of environmentally contaminated properties. NHDES' program is comprised of a Brownfields Covenant Program which provides liability protections for the voluntary cleanup of sites by persons who did not cause or contribute to the contamination; a Brownfields Assessment Program for providing site investigation and cleanup planning services for municipalities and non-profits; and a Brownfields Revolving Loan Fund, which provides low-interest loans to for-profit property owners and developers, and grants to municipalities and non-profits. Since



its inception, 35 Covenants Not to Sue have been issued, environmental site assessments have been completed at over 50 properties, and funding has been provided for the completion of cleanups at 18 contaminated properties. As a result of these efforts, 34 of the properties have been deemed “ready for reuse.”

3. Pollution Prevention

Why it matters: Pollution Prevention (P2), or source reduction, is the act of reducing or eliminating waste at the source instead of treating the waste after it has been generated. Reducing waste not only protects the environment and public health, but it also saves money. Businesses can realize significant cost savings by incorporating P2 techniques such as eliminating or reducing the use of toxic chemicals, reducing energy and water use, and looking at their processes to eliminate excess waste.

Progress in 30 years: Prior to the Pollution Prevention Act (P2 Act) of 1990, regulated industries were more concerned with treatment and disposal of wastes than trying to eliminate them upfront. The P2 Act was specifically designed to promote source reduction. The U.S. Environmental Protection Agency (EPA) was tasked with carrying out this national priority and mandated to provide financial assistance to states to promote source reduction by businesses. Thus, the New Hampshire Pollution Prevention Program (NHPPP) was funded and established in 1991. In 1996, the state Legislature passed a bill officially recognizing P2 as the environmental policy of first choice and reaffirmed its commitment to source reduction. NHPPP has provided free, P2 strategies and nonregulatory compliance assistance to over 225 New Hampshire businesses and organizations, saving them nearly \$5.5 million. Annually, NHPPP responds to over 200 information requests, conducts several P2 trainings and provides numerous individual site visits upon request. In 1993, the program partnered with the University of New Hampshire to create an internship program, which has placed 135 students in 75 facilities resulting in nearly \$2 million savings for participating businesses. NHPPP has received several awards from USEPA for its work, and continues to provide New Hampshire businesses with opportunities to reduce their impact on public health and the environment, while increasing their collective bottom line.

4. Management of State-Owned Lakes

Why it matters: According to the New Hampshire Lake Association’s 2003 Phase II Report on the Economic Value of New Hampshire’s Surface Waters, New Hampshire’s lakes provide up to \$1.5 billion annually of economic benefit to the state, and waterfront property owners pay nearly a quarter billion dollars annually in property taxes. Since the majority of New Hampshire’s surface waters are impounded by dams, the upkeep of these dams is important, not only to protect public safety and the environment, but also to maintain the substantial economic benefits they provide. The NHDES Dam Bureau also oversees the development of hydroelectric power generation at state-owned dams. This helps to expand New Hampshire’s clean renewable energy initiative.

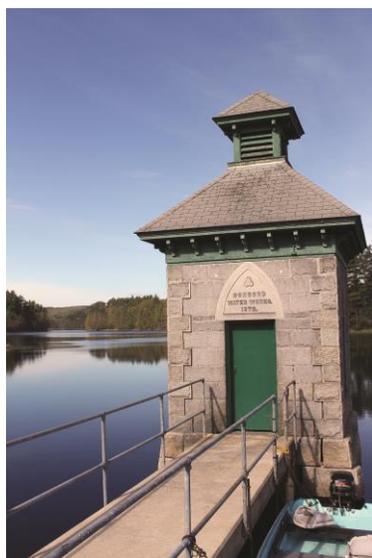
Progress in 30 years: The Dam Bureau Construction Crew has repaired or reconstructed many of the 276 state-owned dams, some of which were built in the 1800s, to bring them up to modern dam safety standards so that they can continue to provide recreational opportunities and economic benefits to the



state for many years to come. In addition, the Dam Bureau has modernized the operation of state-owned dams using the latest technologies. It has deployed electronic monitoring stations in river basins across the state in order to receive real-time data on lake levels, inflows into the lakes and flows in the rivers downstream. The data collected are automatically input into rainfall-runoff computer models developed by the Dam Bureau for the basins in which the state-owned dams are located. These models use forecasted rainfall from the National Weather Service, along with current soil moisture and vegetation conditions and snow melt projections, when appropriate, to forecast inflows into the lakes so that the dams can be more efficiently operated to protect public safety and maintain the public benefits provided by the lakes. Also, at some of the lakes that are prone to rapid rises in lake levels during storms, the Dam Bureau has installed automated dam gate control systems that can be remotely operated and allow for more rapid response to large flood events.

5. Water Infrastructure

Why it matters: Water infrastructure is critical and beneficial to New Hampshire's economy and quality of life. Water infrastructure systems – such as drinking water, municipal wastewater and stormwater –



benefit families, businesses and the environment by allowing clean water to be where it is needed, when it is needed. While most people take water infrastructure for granted, it is essential for public health and safety, and is one of the reasons that New Hampshire is a great place to live, work and visit.

Progress in 30 years: New Hampshire has over 700 community public water systems that are regulated under the state and federal Safe Drinking Water Acts, and there are nearly 100 regulated municipal wastewater systems that discharge treated wastewater to our state's surface water and groundwater. Community growth, prosperity and a high quality of life over the past century were made possible by major investments in water infrastructure systems. Since 1997, NHDES has provided \$272 million in loans to help NH communities build new or updated drinking water infrastructure through the Drinking Water

State Revolving Fund. Likewise, NHDES has provided \$845 million since 1989 for municipal wastewater infrastructure improvements through the Clean Water State Revolving Fund (CWSRF). Although over \$1 billion has been invested via the SRF loan programs over the last 30 years, much of the state's infrastructure is old, at capacity, or needs to modernize to meet new regulatory standards. According to a Joint Legislative Study Commission report issued in 2013, \$2.9 billion is needed for upgrades and improvements to drinking water, wastewater, stormwater and dam infrastructure over the next decade.

Since the commission's report was issued, little has changed in terms of investment in water infrastructure needs in New Hampshire. Inadequate funding for water infrastructure poses the risk of reversing decades of progress in public health, environmental protection and economic growth. Sufficient investment is a win-win, supporting tourism and manufacturing while creating jobs for NH.

