The United States commemorates the 50th anniversary of the Clean Water Act in 2022.

The Clean Water Act is a federal law passed in 1972, aimed at improving the nation’s water quality by regulating point and non-point sources of pollution. The Act established the framework for federal, state, and local governments to work together to protect and restore the nation’s waters. It has been a cornerstone of water quality protection and restoration for decades.

The Act includes several key provisions:
- The establishment of the National Pollutant Discharge Elimination System (NPDES), which regulates the discharge of pollutants from point sources into navigable waters.
- The creation of the National Pollutant Discharge Elimination System (NPDES) permit program, which requires a permit for discharge of pollutants into waters of the United States.
- The requirement for states to develop and implement Total Maximum Daily Load (TMDL) plans to address water quality impairments.
- The establishment of the Great Lakes Restoration Initiative, which focuses on restoring the health of the Great Lakes.

The Clean Water Act has had a significant impact on water quality in the United States, leading to improvements in water bodies across the country. It has also served as a model for water quality protection initiatives around the world.

As we commemorate the 50th anniversary of the Clean Water Act, we celebrate its achievements and the ongoing work needed to ensure clean, healthy waters for future generations.
“Water is life” is a term used worldwide. Water makes up more than 60 percent of the human body. Whether it fills oceans, lakes and ponds, or causes rivers and streams to flow, water—or the lack of it—defines ecosystems and life within them. Water is precious and requires our careful stewardship for future generations.

Ice Age Beginnings

Why does the Champlain Valley have such an abundance of fresh water? About 20,000 years ago, the glaciers of the Great Ice Age grew in mass, then melted high, completely covering the highest mountain peaks. These glaciers melted and reed to earth about 15,000 years ago, creating lake basins. The deep, deep freshwater lake boiled as the ice melted. Few thousand years later, evidence from the St. Lawrence Valley reveals that the glaciers receded even farther north. The Champlain Sea formed with marine life, including armadillos, Atlantic cod, baleen whales, and blue whales. Today, American eel, Atlantic salmon, and sturgeon are reminders that the Champlain Valley was once a part of the Atlantic Ocean.

With the continuous weight of the glacier removed, the earth’s crust rebounded over thousands of years. The ring land cut off the supply of water about 10,000 years ago. Rising ice and melt gradually transformed the Champlain Sea into a fresh water-lake Champlain.

Early Arrivals

As the glaciers receded, a tundra-like ecosystem formed here. The first inhabitants of this land were roaming people attracted by edible, caribou, and mammoth. The earliest known people, the Paleoindian Archaic, were larger hunters who lived around 10,000 B.C. The lake and its tributaries were pathways for travel and provided abundant food resources.

Chiefs and nations were established over thousands of years. The Iroquoians (Huron, Abenaki, and Mohican peoples) were here long before Samuel de Champlain first documented the lake in 1609. This lake was the entrance to the bay, which is of great talent, to 840 miles of a hundred leagues, where 640 miles of land, 400, 100 miles, 50, and 50 miles, etc.

How was it possible in the historical sense that it is part of their creative stories? The Abenaki believed that 800 people from the earth and the arms that formed Lake Champlain in its earliest long ago, the meaning of the earth: the earth is born from the water dancing on a swimming turtle’s back. The word Mohican means: the water of the waters that are seen well.

Waterways of War

The region’s waterways drew European—the French, Dutch, and English—to the Champlain Valley, which served as a strategic combat zone between the Hudson River and St. Lawrence. For two centuries, the Champlain Valley was a place where political and economic struggles that ended with American independence and major changes to its Native cultures and ways of life.

The Champlain valley is the homeland of the Abenaki Ancestry, Abenaki, and Mohican peoples. Lake Champlain was used for travel and commerce by these tribes long before the first arrival of Europeans. Source: StMP

The headquarters of the Lake Champlain Area Program is located an ancient Native American settlement site. The area of the Lake Champlain National Park is one of the most important sites in the United States and the world’s oldest. Source: StMP Consulting Archaeological Program

The St. Lawrence River runs from the head of the Lake of the Two Mountains, just north of Montreal, to the head of Lake Ontario, and the Great Lakes. Source: StMP Consulting Archaeological Program
The 1800s brought industrialization and pollution to the Champlain Basin, altering the landscape and polluting the water. These changes created concerns about the protection of the lake, launching an early conservation movement in the late 19th century.

Modern commerce began in earnest using Lake Champlain after trains exploded with the opening of the Champlain Canal in 1823. Nylon, glass, ironworks, and power mills were constructed on nearly every river flowing into the lakes. The anxious-looking Atlantic codfish and other fish species from surrounding waters to speak. The construction of dams on the Champlain Valley’s rivers created waterways, which incised sediment to streambeds and destroyed fish spawning habitat. The pollution and stress also polluted the waters with industrial waste. Trout accumulated in pools of the lake, exploited for sport. Near exhaustion, the fish were pursued directly into Lake Champlain and at Buffalo. The decades from human and water waste made this water dangerous to drink.

After the American Civil War, the loss of fish and all fish species, power, water, quality, and the danger of industrial plant setting, and pollution were all of increasing concern. Fishermen then observed the diminution of the lake’s fishery, interrupting commercial fishing practices. Trout began to be better understood the economic and environmental consequences of depleting the trout and polluting the waters. Starting in the 1880s, the early environmental conservationists in New York State also took notice of the changes and created agencies to protect the water. In 1892, the United States Fish Commission was created. A Commissioner of Fish and Wildlife was appointed by President Grover Cleveland in 1889. The new organization had the goals of fish and wildlife protection and restoration. It has since evolved into the Fish and Wildlife Service.

But in the early 1880s, as the fishing industry struggled to provide enough fish for the growing population, the pollution of the lake continued to worsen. The water was no longer fit for human consumption. The federal government, recognizing the need for action, established the United States Fish Commission. The commission was tasked with preserving the fisheries of the United States and protecting the aquatic environment. The commission took action to prevent the overfishing of the lake's fish populations and to improve the water quality. They worked to remove pollutants from the lake and to restore the natural balance of the ecosystem. The commission's efforts were crucial in the development of modern conservation practices and in the protection of the lake's fish populations. Today, the United States Fish Commission remains an important agency in the conservation of the nation's fisheries and aquatic resources.
"Watershed" Legislation: The Clean Water Act

A series of devastating environmental events in the mid-1900s exposed the need to protect the nation's waterways. People joined together at the local, state, and federal levels to push for new regulations to protect the environment, culminating with the passage of the Clean Water Act in 1972.

In March 1972, 50 years ago, the 92nd Congress considered the Clean Water Act, a federal initiative aimed at improving the nation's waterways and promoting environmental protection. The legislation was passed in the Senate and went on to the House of Representatives, where it was adopted in July 1972. The Clean Water Act established a framework for regulating pollution and protecting water quality. It became a cornerstone of environmental legislation in the United States, setting the stage for future efforts to safeguard our nation's water resources.
For three decades, the Lake Champlain Basin Program has worked with governments, citizens groups, and the people of the region to benefit the Lake Champlain Basin’s water quality, fisheries, wetlands, wildlife, recreation, and cultural resources.

The Lake Champlain Basin Program has a long-standing commitment to maintaining the Basin’s water quality, fisheries, and cultural resources. The Program works with governments, citizens groups, and the people of the region to benefit the Lake Champlain Basin’s water quality, fisheries, wetlands, wildlife, recreation, and cultural resources.

The U.S. Army Corps of Engineers has been working to restore and enhance the ecosystem of the Lake Champlain Basin since the 1970s. The Corps has completed numerous projects to improve water quality, including the construction of a stormwater treatment facility at the University of Vermont. The facility has treated more than 2 million gallons of stormwater runoff each year, improving the water quality of Lake Champlain.

Through partnerships with local and state government agencies, the Corps has been able to implement innovative solutions to improve water quality in the Basin. One example is the construction of a treatment facility at the University of Vermont that removes pollutants from stormwater runoff before it enters Lake Champlain.

The Lake Champlain Basin Program is committed to continuing this work and ensuring that the Basin’s water quality, fisheries, wetlands, wildlife, recreation, and cultural resources are protected for future generations.
The Fight for Clean Water Continues

Individuals play an important role in protecting water quality by engaging in sustainable practices and protective actions. Towns and municipalities are updating their infrastructure and development regulations to protect clean water. State and federal officials are elected to uphold and create new policies that ensure a healthy water future for everyone.

Challenges for the Lake Champlain Basin

- Water quality issues: Lake Champlain is a highly valued resource for recreation and tourism. However, there are challenges to maintaining its water quality, including nutrient runoff, algae blooms, and invasive species.
- Economic impact: The lake's ecosystem provides a significant economic benefit, supporting a variety of industries and businesses. The protection of the lake's health is crucial for maintaining this economic viability.

Lake Champlain is the 5th largest lake in the US and provides a unique ecosystem that is home to a diverse range of flora and fauna. The lake's water quality is a critical factor in maintaining this biodiversity and ensuring the health of the surrounding communities.

In addition, the lake provides recreational opportunities such as boating, fishing, and camping, which are important for the local economy. The protection of the lake's health is crucial for maintaining this economic viability.

Questions for the Clean Water Act

1. What are the key provisions of the Clean Water Act that protect Lake Champlain?
2. How do these provisions affect the interactions among various stakeholders in the Lake Champlain Basin?
3. What role do individuals play in protecting the lake's water quality?
4. How can the government and municipalities work together to address the challenges facing Lake Champlain?

For more information, visit the website of the Vermont Agency of Natural Resources (ANR) at www.anr.vt.gov or the Lake Champlain Basin Conservancy at www.lcb.org.

The Fight for Clean Water Act

The Clean Water Act (CWA) is a federal statute that protects the nation’s lakes, rivers, and coastal waters from pollution. The CWA was enacted in 1972 and is administered by the Environmental Protection Agency (EPA).

The CWA sets national standards for the protection and restoration of the nation’s waters. It prohibits discharges of pollutants into surface waters, and requires permits for discharges that do not meet the standards.

The CWA also establishes a framework for the development of state and local water quality standards, as well as for the development of plans for the protection and restoration of impaired waters.

The CWA provides a mechanism for the public to monitor and hold polluters accountable for their actions. The CWA also provides for the protection of wetlands, which are critical for maintaining water quality and supporting biodiversity.

The CWA has been a critical tool for protecting the nation’s waters, and has been instrumental in achieving significant improvements in water quality since its enactment.

For more information or to get involved in the fight for clean water, visit the Clean Water Act website at www.epa.gov/cleanwater.