

Atlas of the Cold River

and the Cold River Watershed

Published by

The Cold River Local Advisory Committee

0 0.5 1 2 Miles

Scale= 1:90,000



- Legend**
- Cold River
 - Waterbody
 - Wetland
 - Intermittent Stream
 - River or Stream
 - Stratified Drift Aquifer
 - Town Boundary
 - Public or Protected Lands
 - Water Quality Monitoring Site
 - Church (Historic Register)
 - Covered Bridge
 - Mill Sites (see Mill Site Key)
 - Mine or Quarry
 - School
 - State Roads (Class I, II)
 - Other Roads (Class V)
 - Elevation Contours (100 Ft Intervals)

Mill Site Key

- 1- Jonathan Gove Mill
- 2- Keyes Brothers Mill
- 3- Wheeler Mill
- 4- Buss Mill
- 5- James M. Reed Mill
- 6- Jason M. Boynton Mill
- 7- Hemphill Mill
- 8- Nathaniel Adams Woolen Mill
- 9- Cummings Shoepeg Mill
- 10- Cook & Holt Mill
- 11- Alstead Paper Mill
- 12- Gorge Pillowbox Mill
- 13- Chase's Mill

*Note: Additional mill sites can be found in this watershed.

The Cold River flows 22 miles from its origin at Crescent Lake in Unity and Acworth through Lempster, Langdon and Alstead before joining the Connecticut River in Walpole, New Hampshire. The Cold River Watershed drains an area of approximately 102 square miles, including portions of Charlestown and Marlow. In 1999, the Cold River was accepted into the Rivers Management & Protection Program by the State due to its significant natural, cultural, scenic and scientific resources.

F Crescent Lake: This 60 acre lake, only 15 feet deep, is actively monitored to prevent the spread of invasive aquatic plants such as eurasian milfoil.



G Keyes Hollow: Large wetlands such as this form valuable wildlife habitat and hydraulic connections between streams and aquifers. Keyes Hollow is an important migratory bird area.



D Stratified Drift Aquifers (See Legend): Sand and gravel deposits form limited but potentially productive water supplies. The deposits also release groundwater to the river system during dry periods.

E Drinking Water (Throughout Watershed): Drinking water comes from deep drilled wells, shallow dug wells, and springs. These sources are replenished by rain that soaks into the ground and discharges to local streams.

H Maple Syrup: Home of the largest syrup producer in New England. Sugar maples pump water from the ground to make their sweet sap.



C McDermott Covered Bridge: Built in 1869, 81' long, Town Lattice Truss with light arches, foot traffic only, listed on the National Register of Historic Places, undergoing major restoration.



B Vilas Pool: Built and donated to the Town of Alstead by Charles N. Vilas in 1926. Facilities include a swimming beach, boat rentals, picnic and recreational areas, two pavilions, and a carillon tower.



A Fall Mountain State Forest: Created in 2005 on 950 acres donated by The Nature Conservancy to protect headwaters of Mountain Brook, a pristine ecosystem of statewide importance.

I Dodge Brook: Local streams also offer popular fishing holes for native brookies and stocked trout. The river and tributaries serve as vital rearing and spawning grounds for Atlantic Salmon.

J Deep Hole: A scenic waterfall and ledge outcroppings in a narrow gorge. The Deep Hole is reportedly 35 feet deep.

K Lake Warren: This 185 acre lake was first dammed in 1770 to provide a reservoir for downstream mills. Today it is a popular summer recreation spot and warm-water fishery.



P Prentiss Covered Bridge: Smallest covered bridge in NH, built in 1874, listed on the National Register of Historic Places, foot traffic only, restored in 2001.



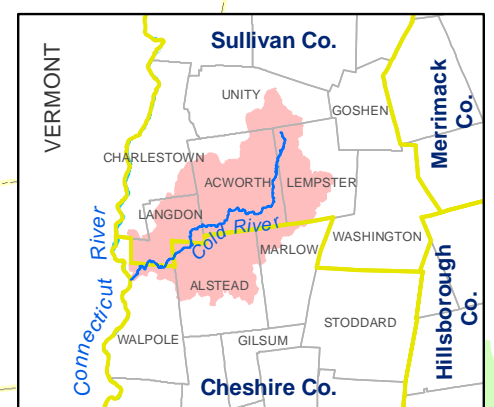
O Drewsville Gorge: Narrow rock gorge with spectacular staircase of small waterfalls. Former USGS gauging station. Measured flows range from 800 GPM to 10 million GPM.



N Cockhat Hill: Buried rock gorge with giant potholes in a former channel of the Cold River. Nearby are rare exposures of pre-glacial soil tens of thousands of years old.

L Warren Brook: Tributaries in the watershed are known to have flashy flows. Steep slopes, heavy rains, dense soils and man-made obstructions can exacerbate flooding.

M Conservation Focus Areas: Unfragmented lands bordering the Ashuelot River watershed have been identified as "exceptional habitat" for plants, wildlife and ecosystems by The Nature Conservancy.





ATLAS OF THE COLD RIVER

AND THE COLD RIVER WATERSHED

with assistance from the Southwest Region Planning Commission
and support from the New Hampshire Department of Environmental Services

WITHIN THE COLD RIVER WATERSHED THERE ARE APPROXIMATELY 4,000 PEOPLE AND EXACTLY NINETEEN BRIDGES, NINE ZIP CODES, EIGHT TOWNS, FOUR VILLAGE STORES, THREE GAS STATIONS, TWO PAY PHONES AND ZERO FAST FOOD ESTABLISHMENTS.

HISTORY

To travel the Cold River is to travel through time. With many steep drops and a narrow valley, the river was an ideal location for water-powered mills. By the late 1700's to the mid-1800s, Keyes Hollow, East Acworth, South Acworth, Alstead, Mill Hollow, and Drewsville had each grown into a population center around water powered industry. Though none of the mills remain operational today, at least two of them are still standing. Exports included lumber, wool, grain, apples, clay, paper, flax, butter, shoe pegs, shingles, maple sugar and syrup. Mining was an important industry as well. Large deposits of mica, feldspar and beryl were mined commercially from the mid 1800s to the mid 1900s. Town histories, found in local libraries, provide a fascinating chronicle of these industries and the comings-and-goings of individuals and families, many of whose decedents reside in the area today.



PLANT & ANIMAL HABITAT

Many of the plant and animal species found in the Cold River watershed are common throughout central New England. Bear, fisher and species of warblers and thrushes live along steep wooded slopes in the uppermost reaches of the watershed. Moose feed on aquatic vegetation in the marshes where swallows, herons, bittern and waterfowl also feed and nest. The border areas around marshes where alder, red osier, red maple, and aspen thrive, are ideal habitat for woodcock.

The watershed is covered with forest mainly composed of maple-beech-birch, white pine, or hemlock and host habitats uniquely suited to certain groups of plants and wildlife species. The NH Natural Heritage Inventory reports examples of three "exemplary natural ecological communities": Southern New England Acidic Rocky Summit/Rock Outcrop Community; Central New England Dry Transitional Forest on Acidic Bedrock and Till Community; and Southern New England Floodplain Forest Community. The Cold River and its tributaries provide pristine aquatic habitat and are part of the Atlantic Salmon Restoration Program through US Fish and Wildlife Service and NH Fish and Game.

Local animal species currently listed as either threatened or endangered at the state or national level are the bald eagle, peregrine falcon, northern harrier, cooper's hawk, osprey, sedge wren, and timber rattlesnake. The Warren Brook area has been monitored for breeding frogs since 1997 by FrogWatch volunteers as part of a nationwide study of declining frog populations. Sixteen plant species are listed as threatened or endangered. Non-native invasive plants such as Japanese knotweed, and purple loosestrife, among others, pose a serious threat to the watershed's ecology.

RECREATION

Recreational opportunities include fishing and swimming plus canoeing and kayaking during high water. Boating can be enjoyed at Lake Warren, Vilas Pool, Crescent Lake, Newell Pond, and Dodge Pond. Swimming holes are located throughout the watershed. The Cold River and its tributaries are stocked with trout and Atlantic salmon by NH Fish and Game. Hunting for turkey, deer, bear and moose remains popular in season. Winter activities include cross country skiing, snowmobiling, ice skating, ice fishing, and snowshoeing.

WATER RESOURCES

Activities such as swimming and boating and ecological functions associated with fisheries, wetlands and wildlife habitat are dependent on a sufficient flow of clean water in local streams. Sufficient flow in these streams is also necessary for commercial withdrawals and fire supply purposes as well as for public and private impoundments created by almost forty dams.

Approximately 50% of the flow in local streams comes from groundwater, especially during summer months. Groundwater is stored in spaces within bedrock (ledge) and sand and gravel deposits also known as aquifers. Groundwater is the primary source of drinking water in the watershed - there are no drinking water reservoirs. Wetlands and springs connect aquifers to local streams.

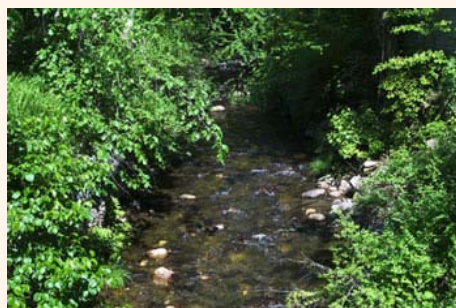
Sustaining the quality and flow of streams and aquifers to accommodate all local water uses presents a significant challenge. Natural processes such as dry summers and droughts limit flow, while bedrock and soil types can strongly influence water quality. At the same time, local land use choices and accidents can contaminate water supplies or impact neighboring water uses.

Despite these challenges, streams and aquifers within the watershed remain of good quality and water is plentiful for the most part. Local planning and conservation groups are actively seeking ways to sustain and protect water resources for the future. In addition, volunteer monitoring groups on the lakes and streams are producing valuable real-time data for maintaining the long-term health of the watershed.

FLOOD OF OCTOBER 2005

The Cold River Watershed was severely damaged during the 2005 Flood. Four lives were lost. Many homes, businesses, roads, bridges and utility lines were destroyed or damaged. The flood widened the banks of the Cold River and its tributaries, making them unstable and more susceptible to erosion and an increase in sediment load. Wildlife habitat within the corridor was washed away, exposing bedrock in many areas. Healthy populations of fish, frogs and other animals were reduced to just a few survivors.

While a flood of this magnitude is rare, the conditions that caused it (an undersized culvert, dense soils, narrow/steep valleys and heavy rains) are not. River corridor residents, towns and state and federal officials are currently completing the long-term planning, permitting and restoration work that is needed to bring this area back to health. The state recently completed a comprehensive assessment of stream bank stability and has initiated a stabilization project on Warren Brook as well as permanent road and bridge repairs. Federal officials are focusing on debris removal, protection of sensitive areas and re-vegetation.



View from the Warren Brook bridge before (left) and after (right) the flood

The Cold River Local Advisory Committee welcomes your participation at monthly meetings, on the water quality monitoring team, helping with grant applications, working on school projects and assisting with our annual workshop series. We all have a part in keeping the water clean and plentiful.

CONTACT INFORMATION:

1. COLD RIVER LOCAL ADVISORY COMMITTEE: PO BOX 68, S. ACWORTH, NH 03607 -- WWW.COLDRIVER.ORG
2. NH DEPARTMENT OF ENVIRONMENTAL SERVICES RIVERS COORDINATOR: 603-271-8801
3. YOUR TOWN CONSERVATION COMMISSION OR BOARD OF SELECTMEN