Deerfield River Wild and Scenic Study and Management Plan

Adopted June 25, 2025

Prepared for the Deerfield River Watershed Association and
the National Park Service

under a MA Executive Office of Energy and Environmental Affairs (EEA)
Woodlands Partnership Implementation Grant

Acknowledgements

Land Acknowledgement

We are living, working, and playing on the unceded ancestral homelands of Native American tribes, primarily the Pocumtuck nation, with a major focus in Deerfield, and, to a lesser extent, the Nipmuc nation, Mohican nation, and the Wabanaki nation, including the Squakeag band, who are the Indigenous peoples of this land. We pay honor and respect to their ancestors past and present as we commit to building a more inclusive and equitable space for all. We appreciate that Native Americans traveled, hunted, farmed, and lived primarily along the Deerfield River and its tributaries.

Project Funding

- MA Executive Office of Energy and Environmental Affairs (EEA) Woodlands Partnership Implementation Grant. EEA is not responsible for any errors and omissions.

Project Sponsors and Cooperators

- Deerfield River Wild and Scenic Study Committee
- The Towns of Ashfield, Buckland, Charlemont, Colrain, Conway, Deerfield, Florida, Leyden, Savoy, and Shelburne, and the City of Greenfield, Massachusetts
- Deerfield River Watershed Association (DRWA)
- Connecticut River Conservancy (CRC)
- Franklin Regional Council of Governments
- Deerfield River Watershed Chapter, Trout Unlimited
- Woodlands Partnership of Northwest Massachusetts
- Friends of the South River

Project Consultants

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Table of Contents

Acknowledgements 2
Section I. Summary 4
Section II. Overview: National Wild and Scenic Rivers 17
Section III. Description of Study Area 23
Section IV. Study Committee and Public Engagement 46
Section V. Evaluation of Eligibility and Classification 52
Section VI: Evaluation of Suitability 121
Section VII. Assessment of River Management Issues and Strategies 131
Appendix 1. References 143
Appendix 2. Deerfield River Wild and Scenic Act of 2025 149
Appendix 3. National Park Service and Other Letters 150

Section I. Summary

A. Brief History

Since 2020, the Deerfield River Watershed Association has been engaged in a watershed-wide campaign of public outreach to communities, organizations, agencies and businesses to inform, educate and seek support for the Wild and Scenic Rivers initiative. To date, DRWA has contacted every community in the Deerfield River watershed, and has secured letters of support or other forms of support for this initiative from 19 municipalities in the watershed (11 in Massachusetts and 7 in Vermont). These include the Massachusetts municipalities of Ashfield, Buckland, Charlemont, Colrain, Conway, Deerfield, Greenfield, Monroe, Rowe, Savoy, and Shelburne, as well as the Vermont municipalities of Dover, Guilford, Halifax, Marlboro, Stratton, Whitingham and Wilmington. In addition, the towns of Florida, Leyden, and Heath expressed support for this initiative via participation in grants to complete the Wild and Scenic Study and in the Wild and Scenic Study Committee. Four communities (Adams, North Adams, Goshen, and Plainfield) have just a very few acres within the watershed, located some distance from any major tributary, and did not participate in the process.

DRWA has also secured letters of support from 12 organizations, agencies and businesses. These supporting groups include Windham Regional Commission; Berkshire Regional Planning Commission; Vermont Natural Resources Council; Green River Watershed Association; Connecticut River Conservancy; Trout Unlimited, Deerfield River Chapter; Trout Unlimited, Connecticut River Valley Chapter; Deerfield River Watershed Association; Elnu Abenaki Tribe; Friends of South River; Franklin Regional Council of Governments; Vermont Agency for Natural Resources, Department of Environmental Conservation; and Crabapple Whitewater Rafting.

DRWA has met with the Congressional aides for the four U.S. Senators and three U.S. Representatives that encompass the Deerfield watershed and have received expressions of support from all seven. They include Congressman Jim McGovern (MA) (lead); Senator Edward Markey (MA) (lead); Congressman Richard Neal (MA); Representative Becca Balint (VT); Senator Peter Welch (VT); Senator Bernie Sanders (VT); and Senator Elizabeth Warren (MA).

Federal legislation to authorize a study bill for Deerfield River Wild and Scenic designation was drafted and initially filed in June, 2022 and re-filed in 2023 and 2025.

B. Summary of Principal Findings

1. Overall Findings

The Deerfield River is an exceptional river resource for many reasons. To summarize briefly, these are the key Outstandingly Remarkable Values for the Deerfield River that make this river worthy of National Wild and Scenic River designation:

- With rapids from Class II-V, the Deerfield River offers perhaps the best whitewater boating and rafting in Massachusetts.
- It is an excellent trout fishery, with some of the best dry-fly fishing for wild trout in the East. It is one of the three best coldwater fisheries in all of New England.
- The Deerfield River harbors a large portion of Massachusetts' trout population, and the upper Deerfield River is arguably the premier wild trout stream in Massachusetts.
- The historically significant Mohawk Trail ran along the river and was a principal Native American travel route, and the modern Mahican Mohawk hiking trail parallels some of this route.
- Historic New England villages are strung along the river, including Historic Deerfield, one of the few authentic colonial villages in the US, preserving a 330-year-old western Massachusetts village with 18th and 19th-century houses and a nationally significant collection of artifacts.
- The watershed near the Deerfield River hosts old growth forest, including the tallest tree in Massachusetts and the largest collection of tall white pines in New England.
- Several tributaries, such as Cold River and Bog and Gulf Brooks, are wild free-flowing rivers, rare in New England.
- Multiple segments of the Deerfield River were identified on the National Rivers Inventory as having "outstandingly remarkable" values, and eligible for National Wild and Scenic Rivers designation.
- There are important and unique geological features that attract students and professional and amateur geologists.

Segment by Segment Study Area Description and Summary of Outstandingly Remarkable Values (ORVs)

Eligible areas, based on the guidance from the National Park Service, are all free-flowing, eliminating all the areas from mill races below dams and impoundments, the dams themselves, and any pool above a dam created by dams, impoundments, and raceways (Kevin Mendyk, National Park Service, 2025).

River Segment 1: Deerfield River Mainstem, Reach #1
Reach: Dam #2 to Confluence with Connecticut River, Deerfield/Greenfield
Eligibility for Designation: Eligible

River Miles: 13.92 miles eligible of 14.05 total miles
Potential Classification: Recreational
Outstandingly Remarkable Values:

- Recreation: Very popular reach for kayaking/tubing and fishing, Mahican Mohawk hiking trail, South River State Forest.
- Scenery: Scenic river gorge near Bardwell's Ferry.
- Fish: this is a regionally significant trout stream and an historic Atlantic Salmon Fishery.
- History: Historic Deerfield village and homes, historic Bardwell's Ferry iron truss bridge, numerous Native American archaeological sites and Pocumtuck history adjacent to and near the river.

River Segment 2: Deerfield River Mainstem, Reach #2
Reach: Gardners Falls Dam to Dam #2
Eligibility for Designation: Eligible
River Miles: 0.65 miles eligible of 1.95 total miles
Potential Classification: Recreational
Outstandingly Remarkable Values:

- Scenery: Wilcox Hollow scenic river area.
- Recreation: Popular swimming and fishing area, Mahican Mohawk hiking trail

River Segment 3: Deerfield River Mainstem, Reach #3
Reach: , Dam #3 to Gardners Falls Dam
Eligibility for Designation: Not eligible
River Miles: 1.06
Potential Classification: not eligible
Outstandingly Remarkable Values:

- Scenery: Salmon Falls, Glacial Potholes, and Bridge of Flowers, Shelburne Falls.
- History: Historic Shelburne Falls town center

River Segment 4: Deerfield River Mainstem, Reach #4
Reach: , Dam #4 to Dam #3
Eligibility for Designation: Eligible
River Miles: 0.6 eligible of 2.86 total miles
Potential Classification: Recreational
Outstandingly Remarkable Values:

- Recreation: Sunburn Beach swimming and fishing area.
- Scenery: Scenic river gorge and rock formations at Sunburn Beach

River Segment 5: Deerfield River Mainstem, Reach #5
Reach: Bear Swamp Dam/ Fife Brook to Dam #4
Eligibility for Designation: Eligible
River Miles: 16 miles eligible of 18.26 total miles

Potential Classification: Recreational
Outstandingly Remarkable Values:

- Recreation: Highly popular reach for whitewater boating and tubing, including Zoar Gap, Whirly Baths swimming hole, hiking including Mahican Mohawk Trail, Mohawk Trail State Forest trails, scenic Negus Mountain Trail, Zoar and Shunpike Picnic Areas.
- Fish: This river reach is the premier wild trout stream in Massachusetts, and an historic Atlantic Salmon fishery.
- History: This segment parallels the Mohawk Trail, the principal route for expeditions against English settlements during French and Indian Wars, historic Hoosac Tunnel for rail use, and numerous Native American archaeological sites adjacent to and near the river.
- Scenery: Mohawk Trail State Forest, including old growth forests, tallest trees in New England and scenic trails.

River Segment 6: Deerfield River Mainstem, Reach #6
Reach: Dam #5 to Bear Swamp Dam/ Fife Brook
Eligibility for Designation: Eligible
River Miles: 2 miles eligible of 4.58 total miles
Potential Classification: Recreational
Outstandingly Remarkable Values:

- Recreation: Whitewater boating on the "Dryway."
- Fish: A regionally significant trout stream and an historic Atlantic Salmon Fishery.
- Scenery: Highly scenic river gorge

River Segment 7: Deerfield River Mainstem, Reach #7
Reach: Sherman Reservoir to Dam #5
Eligibility for Designation: Not eligible
River Miles: 0.73
Potential Classification: not eligible, all impounded
Outstandingly Remarkable Values: not applicable

River Segment 8: Cold River
Reach: Very scenic tributary of Deerfield River, runs from headwaters in Florida, MA to confluence with the Deerfield River
Eligibility for Designation: Eligible
River Miles: All 13.32 miles are eligible
Potential Classification: Wild
Outstandingly Remarkable Values:

- Scenery: Very scenic river gorge with mountain views
- Recreation: Historic Mahican Mohawk Trail and many other trails, Whirley Baths are a popular swimming area, Mohawk Trail State Forest, one of best whitewater paddling runs in the watershed.
- Natural: Old growth forest including Massachusetts' tallest tree.

- Wild: An excellent example of an undeveloped free flowing, low order river system which is one of the few remaining examples of this type, south of Vermont.
- History: Mohawk Trail National Register of Historic Places District

River Segment 9: Green River
Reach: Very scenic tributary of Deerfield River, runs from Vermont border to confluence with the Deerfield River in Greenfield
Eligibility for Designation: Partially Eligible
River Miles: 14.77 miles eligible of 17.25 total miles
Potential Classification: Scenic, for segment upstream from Greenfield dams
Outstandingly Remarkable Values:
- Fish: A wild trout stream
- Scenic: Very scenic, with pools and small waterfalls
- History: Two historic covered bridges (one in Vermont)
- Recreation: Multiple swimming holes and fishing locations, and a popular biking route on Green River Road along the river.

River Segment 10: South River
Reach: From headwaters to confluence with Deerfield River
Eligibility for Designation: Eligible
River Miles: 14.98 miles eligible of 15.73 total miles
Potential Classification: Scenic
Outstandingly Remarkable Values:
- Wildlife and Fisheries: a regionally significant wild trout stream and an historic Atlantic Salmon Fishery, Audubon Conway Hills Wildlife Sanctuary.
- History: A segment parallels the Mohawk Trail, the principal route for expeditions against English settlements during French and Indian Wars, along the Mahican Mohawk Trail. Burkeville Historic Covered Bridge, historic Conway Center.
- Recreation: Multiple swimming holes, South River State Forest, Mahican Mohawk hiking trail, Conway trails, South River Meadows
- Scenery: Reeds Bridge Falls, Conway Station Falls

River Segment 11: North River
Reach: Confluence of North River, East and West Branches to confluence with the Deerfield River
Eligibility for Designation: Eligible
River Miles: 3.01 miles eligible of 3.32 total miles
Potential Classification: Recreational
Outstandingly Remarkable Values:
- Recreation: Sunburn Beach swimming and scenic area.
- Natural: Catamount State Forest.

River Segment 12: North River, West Branch
Reach: Headwaters to confluence with the North River, East Branch
Eligibility for Designation: Eligible
River Miles: 12.64 miles eligible of 12.83 total miles
Potential Classification: Recreational
Outstandingly Remarkable Values:

- Natural: Crowingshield Conservation Area, Cook State Forest.

River Segment 13: North River, East Branch
Reach: Headwaters to confluence with the North River, West Branch
Eligibility for Designation: Eligible
River Miles: 7.39 miles eligible of 7.58 total miles
Potential Classification: Recreational
Outstandingly Remarkable Values:

- History: Arthur Smith Historic Covered Bridge, Colrain Center National Register District.

River Segment 14: Pelham Brook
Reach: Headwaters to confluence with the Deerfield River
Eligibility for Designation: Eligible
River Miles: 4.26 miles eligible of 6.46 total miles
Potential Classification: Recreational
Outstandingly Remarkable Values:

- Fisheries: A rare wild rainbow trout population, and the brook includes all three wild trout species
- Scenic: Pelham Brook cascades

River Segment 15: Dunbar Brook
Reach: Headwaters to confluence with the Deerfield River
Eligibility for Designation: Eligible
River Miles: 5.34 miles eligible of 5.5 total miles
Potential Classification: Scenic
Outstandingly Remarkable Values:

- Recreation: Scenic Dunbar Brook Trail, challenging paddling opportunities.
- Natural: Old growth forest in Monroe State Forest.
- Scenic: Dunbar Brook cascades

River Segment 16: Bear River
Reach: Headwaters to confluence with the Deerfield River
Eligibility for Designation: Eligible
River Miles: All 8.37 miles are eligible
Potential Classification: Scenic
Outstandingly Remarkable Values:

- Fisheries: A rare wild rainbow trout population.

- Natural: Unique geologic formations.
- Recreational: A swimming hole.

River Segment 17: Clesson Brook
Reach: Headwaters to confluence with the Deerfield River
Eligibility for Designation: Eligible
River Miles: 9.66
Potential Classification: Recreational
Outstandingly Remarkable Values:
- Fisheries and Wildlife: A rare reproducing wild rainbow trout population, wild brook trout, and the state listed Spring Salamander.

River Segment 18: Chickley River
Reach: Headwaters to confluence with the Deerfield River
Eligibility for Designation: Eligible
River Miles: All 10.7 miles are eligible.
Potential Classification: Recreational
Outstandingly Remarkable Values:
- Recreational: Fishing for trout, paddling opportunities.
- Geologic: Pillow lava formations

River Segment 19: Gulf Brook
Reach: Headwaters to confluence with the Cold River
Eligibility for Designation: Eligible
River Miles: 3.33 miles are eligible of 3.43 total miles
Potential Classification: Wild
Outstandingly Remarkable Values:
- Wild: an excellent example of an undeveloped free flowing, low order river system which is one of the few remaining examples of this type, south of Vermont.
- Scenic: Tannery Falls and Balance Rock are located on a tributary, Tannery Brook.
- Recreation: Tannery Falls Trail
- Natural: Located within Savoy Mountain State Forest, old growth forest
- History: Historic Shaker Trail

River Segment 20: Bog Brook
Reach: From headwaters at Bog Pond to confluence with the Cold River (there is a small impoundment that enlarged Bog Pond, but it is not on the brook itself).
Eligibility for Designation: Eligible
River Miles: 1.25 miles are eligible of 1.48 total miles
Potential Classification: Wild
Outstandingly Remarkable Values:
- Wild: an excellent example of an undeveloped free flowing, low order river system which is one of the few remaining examples of this type, south of Vermont.

- Natural: Located within Savoy Mountain State Forest

River Segment 21: Rice Brook
Reach: Headwaters to confluence with the Deerfield River
Eligibility for Designation: Not eligible
River Miles: 4.07 miles
Potential Classification: Not eligible
Outstandingly Remarkable Values:
- Fisheries: A rare wild rainbow trout population.

River Segment 22: Mill Brook
Reach: Headwaters to confluence with the Deerfield River
Eligibility for Designation: Eligible
River Miles: 9.93 miles are eligible of 13.97 total miles
Potential Classification: Recreational
Outstandingly Remarkable Values:
- Historic: Bissell covered bridge, one of few remaining in state and the former Davis Pyrite Mine, an important historic ORV for the historic extraction patterns.
- Scenic: Waterfall at covered bridge. The waterfall itself is over a dam, but there is no significant water impoundment behind the dam.

River Segment 23: Chapel Brook
Reach: Headwaters to confluence with South River
Eligibility for Designation: Eligible
River Miles: All 6.06 miles are eligible
Potential Classification: Scenic
Outstandingly Remarkable Values:
- **Natural:** Poland Brook Wildlife Management Area, Trustees of Reservations' Chapel Brook Reservation
- **Scenic:** Several scenic falls and rapids, including Chapel Falls
- **Recreation:** Chapel Ledge Trail and Two Bridges Trail, popular swimming hole at Chapel Falls, and rock climbing.

2. Eligibility

This study found that 5 segments and 15 tributaries of the Deerfield River are eligible for designation into the National Wild and Scenic Rivers System based on their free-flowing condition and the presence of one or more Outstandingly Remarkable Values, including:

- River Segment 1: Deerfield River Mainstem, Reach #1: Deerfield River between Deerfield Station and Dam #2 and the Connecticut River confluence, 13.92 miles;

- River Segment 2: Deerfield River Mainstem, Reach #2: Deerfield River between Gardners Falls Dam and Deerfield Station and Dam #2, 0.65 miles;
- River Segment 4: Deerfield River Mainstem, Reach #4: Deerfield River between Deerfield Station and Dam #4 and Deerfield Station and Dam #3, 0.6 miles;
- River Segment 5: Deerfield River Mainstem, Reach #5: Deerfield River between Bear Swamp Dam and Deerfield Station and Dam #4, 16 miles;
- River Segment 6: Deerfield River Mainstem, Reach #6: Deerfield River between Deerfield Station and Dam #5 and Bear Swamp Dam, 2 miles;
- River Segment 8: Cold River: headwaters to confluence with Deerfield River, 13.3 miles;
- River Segment 9: Green River: Vermont Border to confluence with the Deerfield River, 14.77 miles are found eligible for designation;
- River Segment 10: South River: headwaters to the confluence with Deerfield River, 14.98 miles;
- River Segment 11: North River: confluence of North River, West Branch and North River, East Branch, to its confluence with the Deerfield River, 3.02 miles;
- River Segment 12: North River, West Branch: headwaters to the confluence with North River, 12.64 miles;
- River Segment 13: North River, East Branch: between the Vermont border and the confluence with the North River, 7.39 miles;
- River Segment 14: Pelham Brook: headwaters to the confluence with the Deerfield River, 4.26 miles;
- River Segment 15: Dunbar Brook: headwaters to the confluence with the Deerfield River, 5.34 miles;
- River Segment 16: Bear River: the entire 8.37 miles of the Bear River between its headwaters and the confluence with the Deerfield River are eligible for designation.
- River Segment 17: Clesson Brook: headwaters to the confluence with the Deerfield River, 9.63 miles;
- River Segment 18: Chickley River: the entire 10.7 miles of the Chickley River between its headwaters and the confluence with the Deerfield River are eligible for designation.
- River Segment 19: Gulf Brook: headwaters to the confluence with the Cold River, 3.33 miles;
- River Segment 20: Bog Brook: headwaters to the confluence with the Cold River, 1.25 miles;
- River Segment 22: Mill Brook: headwaters to the confluence with the Deerfield River, 9.93 miles;
- River Segment 23: Chapel Brook: headwaters to the confluence with the Deerfield River, 6.06 miles.

Short segments of the Deerfield River and its tributaries are found to be ineligible due to their lack of free-flowing character due to hydroelectric facilities. The Outstandingly Remarkable Values (ORVs) described in this Study Report are Scenic and Recreational,

Natural Resource, and Historic and Cultural, all of which are supported by healthy water quality in the watershed.

3. Classification

The Wild and Scenic Rivers Act provides for three possible classifications of eligible river segments: wild, scenic and recreational. The criteria distinguishing these classifications are based on the degree of human influence and access to these rivers.

Based on applicable criteria, this study assigned the following preliminary classifications to the segments of the Deerfield River and its tributaries that are eligible for designation:

- River Segment 1: Deerfield River Mainstem, Reach #1: Recreational
- River Segment 2: Deerfield River Mainstem, Reach #2: Recreational
- River Segment 4: Deerfield River Mainstem, Reach #4: Recreational
- River Segment 5: Deerfield River Mainstem, Reach #5: Recreational
- River Segment 6: Deerfield River Mainstem, Reach #6: Recreational
- River Segment 8: Cold River: Wild
- River Segment 9: Green River: Scenic
- River Segment 10: South River: Scenic
- River Segment 11: North River: Recreational
- River Segment 12: North River, West Branch: Recreational
- River Segment 13: North River, East Branch: Recreational
- River Segment 14: Pelham Brook: Recreational
- River Segment 15: Dunbar Brook: Scenic
- River Segment 16: Bear River: Scenic
- River Segment 17: Clesson Brook: Recreational
- River Segment 18: Chickley River: Recreational
- River Segment 19: Gulf Brook: Wild
- River Segment 20: Bog Brook: Wild
- River Segment 22: Mill Brook: Recreational
- River Segment 23: Chapel Brook: Scenic

4. Suitability

This study concludes that approximately 33.17 miles of the Deerfield River mainstem and 114.55 miles of Deerfield River tributaries are currently eligible and suitable for designation.

The communities of Ashfield, Buckland, Charlemont, Colrain, Conway, Deerfield, Greenfield, Monroe, Rowe, Savoy, and Shelburne have previously provided letters of

support and will meet in mid-2025 to vote on endorsing these segments for designation.

Additional findings of suitability include:

- Existing local, state, and federal regulatory and non-regulatory protections applicable to the Deerfield River and its tributaries are found to adequately protect the rivers consistent with the purposes of the Wild and Scenic Rivers Act. The Deerfield River Wild and Scenic Study and Management Plan provides an appropriate management framework for the long term management and protection of the waterways.
- Based upon the official record of endorsement from local citizens, local governing bodies, and local and regional organizations in the Ashfield, Buckland, Charlemont, Colrain, Conway, Deerfield, Greenfield, Monroe, Rowe, Savoy and Shelburne municipalities, it is concluded that there is substantial support for designation under the Wild and Scenic Rivers Act based on the Partnership Wild and Scenic Rivers model.

5. Alternatives Considered

This Study Report evaluates one Wild and Scenic River designation alternative in addition to the 'no action' Alternative A.

Alternative B: Full Designation. This alternative would designate segments of the Deerfield River and its tributaries found to meet the criteria for eligibility and suitability. This total designation length would be 33.17 miles of the Deerfield River mainstem and 114.55 miles of the tributaries.

This alternative is identified as the preferable alternative based on eligibility, suitability, provisions for the maximum protection to free-flowing rivers values consistent with the purposes of the Wild and Scenic Rivers Act, and based on the documented support of local citizens, organizations and state river management stakeholders.

6. River Management Strategies

Development of Deerfield River management strategies has been one of the primary tasks of the Deerfield River Wild and Scenic Study Committee (Study Committee). The management strategies in this study are intended for protecting and enhancing the Wild and Scenic River values identified as important at the local, regional, state or national level. If the Deerfield River and its tributaries are designated, the management strategies in this study would serve as the comprehensive rivers management plan required under Sec on 3(d)(1) of the Wild and Scenic Rivers Act

(WSRA). If the rivers are not added to the National Wild and Scenic Rivers System, the management strategies will still serve to provide insight for state and local partners working to manage and protect the special values of the Deerfield River and its tributaries.

Key river management strategies for the Deerfield River include:

- Advance appropriate State/federal designations for the Deerfield River and its tributaries:
  - Seek state scenic river designation, using either legislative designation of State Scenic River or administrative designation of Local Scenic River under Scenic Rivers Act.
  - Explore Massachusetts designation as Outstanding National Resource Waters and as Areas of Critical Environmental Concern.
- Collaborate with Woodlands Partnership seeking federal designation as a National Heritage Area to complement a future National Wild and Scenic River designation.
- Advance recreation management strategies to promote, enhance, and conserve recreation in rivers and adjacent areas.
- Advance and refine appropriate regulatory models for the Deerfield River watershed towns and engage with municipal Planning Boards:
  - River protection zoning or bylaws with stronger protections than those in the MA Wetlands Protection Act (200' wide river resource area buffer).
  - Enhanced floodplain protection zoning.
  - River channel or effluvial erosion protection.

7. Support for Designation

As noted above, there is broad local and regional support for designation of the Deerfield River and its tributaries. DRWA contacted every community in the Deerfield River watershed and secured letters of support and related support for this initiative from 21 communities in the watershed (14 in Massachusetts and 7 in Vermont). Supporting Massachusetts towns include Ashfield, Buckland, Charlemont, Colrain, Conway, Deerfield, Greenfield, Monroe, Rowe, Savoy and Shelburne. Supporting Vermont towns include Dover, Guilford, Halifax, Marlboro, Stratton, Whitingham and Wilmington. In addition, the towns of Florida, Leyden and Heath expressed support for this initiative via participation in grants to complete the Wild and Scenic Study and in the Wild and Scenic Study Committee.

DRWA has also secured letters of support from 12 organizations, agencies and businesses. These supporting groups include: Windham Regional Commission; Berkshire Regional Planning Commission; Vermont Natural Resources Council; Green River Watershed Association; Connecticut River Conservancy; Trout

Unlimited, Deerfield River Chapter; Trout Unlimited, Connecticut River Valley Chapter; Deerfield River Watershed Association; Elnu Abenaki Tribe; Franklin Regional Council of Governments; Vermont Agency for Natural Resources, Department of Environmental Conservation; and Crabapple Whitewater Rafting.

8. Partnership Wild and Scenic River Designation

The Deerfield River Wild and Scenic Study was conducted based on the established model of the Partnership Wild and Scenic Rivers. All members of the Study Committee thought that this model would work best in their communities. The Study Committee confirmed its preference for the Partnership model and rejected any alternative model which increased federal management or acquisition of lands or created a National Park.

Section II. Overview: National Wild and Scenic Rivers

National Wild and Scenic Rivers System

The National Wild and Scenic Rivers System was established by Congress in 1968 through the Wild and Scenic Rivers Act (WSRA) to protect outstanding rivers from harmful effects of new federally assisted projects such as dams and hydroelectric facilities. To be considered eligible for inclusion in the System, a river or river segment must be free-flowing and exhibit/support at least one Outstandingly Remarkable Value (ORV). The ORV must be natural, cultural or recreational in character, river-dependent, and have unique, rare or exemplary qualities on a regional or national scale. The most common way for an eligible river to be added to the System is through federal legislation. Each river that is designated into the national system receives permanent protection from development of federal water resource projects that would have an adverse effect on its free-flowing condition, water quality, and ORVs. In addition, the Federal Energy Regulatory Commission (FERC) may not license the construction of any dam or associated project works on a designated segment of river.

A. Congressionally Authorized Wild and Scenic River Studies

To determine whether a river is both eligible and suitable to be included in the National Wild and Scenic Rivers System, a Wild and Scenic River Study (Study) is conducted. Congress authorizes studies based on Section 5(a) of the WSRA. Eligibility is based on the presence of a free-flowing river condition and the presence of at least one ORV.

A Study assesses the potential ORVs through objective analysis of known data by resource experts using professional judgment. The Study process provides ample time for extensive education and broad participation in the process. This extensive public process is critical to ultimate determination of suitability for inclusion in the System. Congress generally directs that Wild and Scenic River Studies be concluded within three years from the initial funding.

According to Section 5(c) of the WSRA, the Study should be pursued in close cooperation with the appropriate agencies of the state or its political subdivisions and shall include a determination of the degree to which the state might participate in the preservation and administration of the river should it be proposed for inclusion in the National Wild and Scenic Rivers System.

Section 6(c) states that federal condemnation of lands to achieve WSR protection goals cannot be used in towns that have zoning ordinances in force that are consistent with the purposes of the WSRA.

Section 3(d)(1) requires that a comprehensive management plan address resource protection, development of lands and facilities, user capacities, and other management practices necessary or desirable to achieve the purposes of the WSRA.

B. Two Methods for Wild and Scenic River Designation

There are two ways a river can be designated as a National Wild and Scenic River:

1. Congressional Designation: Rivers can be designated by an Act of Congress, under Section 3(a) of the Act, and consequently are sometimes referred to as "3(a) rivers". On Congressionally-designated rivers, the federal government usually assumes primary management responsibility, and many of these rivers lie wholly or partially within federal lands;
2. State-administered Designation: The Secretary of the Interior has authority under Section 2(aii) of the Act to designate rivers nominated by states, which are to be administered by state agencies and/or locally. There are 13 state-administered rivers in the National System, all of which lie within a mix of public and privately-owned lands. Some examples are the Westfield River in Massachusetts and the Allagash River in Maine.

There are currently 228 National Wild and Scenic Rivers (NWSRs) designated in the United States, most of them Congressional designations, with less than 10% of the total being State-administered designations. There are four NWSRs in Massachusetts, including the Sudbury/Assabet/Concord Rivers, Westfield River, Taunton River, and Nashua/Squannacook/Nissitissit Rivers. Vermont has one designation, the Trout & Missisquoi Rivers.

C. Eligibility and Suitability Criteria

Eligibility

To be eligible for designation, a river must be free-flowing and possess at least one river-dependent Outstandingly Remarkable Value (ORV). Free-flowing is defined by the Wild and Scenic Rivers Act (WSRA) Section 16(b) as, "existing or flowing in a natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway. The existence, however, of low dams, diversion works and other minor structures at the time any river is proposed for inclusion in the national wild and scenic rivers system shall not automatically bar its consideration for such inclusion, provided that this shall not be construed to authorize, intend, or encourage future construction of such structures in components of the national wild and scenic rivers system." See eligible areas, above, for how this is calculated.

The WSRA defines an ORV as a scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar value. An ORV must be a river-related unique, rare or exemplary feature on a regional or national scale of comparison.

Suitability

Suitability is an assessment of factors to provide the basis for determining whether to recommend a river for addition to the National Wild and Scenic Rivers System. The Interagency Wild and Scenic Rivers Coordinating Council (IWSRCC) developed the following questions that can assist with the determination:

1. Should the river's free-flowing character, water quality and ORVs be protected, or are one or more other uses important enough to warrant doing otherwise?
2. Will the river's free-flowing character, water quality, and ORVs be protected through designation? Is it the best method for protecting the river corridor? In answering these questions, the benefits and impacts of Wild and Scenic River designation must be evaluated, and alternative protection methods considered.
3. Is there a demonstrated commitment to protect the river by non-federal entities that may be partially responsible for implementing the management plan?

Determining a river's suitability for a Wild and Scenic designation is uniquely based on the specific characteristics and conditions of an individual river based on a wide range of considerations including evaluating any potential threats to the free-flowing condition or resources in a region with some development pressure.

D. Partnership Wild and Scenic Rivers Model

The Partnership Wild and Scenic River model was developed in response to the need for a Wild and Scenic River designation model tailored to rivers that meet the Wild and Scenic River criteria and that are characterized by community-based settings, extensive private land ownership along the river, non-federal lands, and well-established traditions of local governance. This model has a proven track record of effectively creating river protection strategies that bring communities together in protecting, enhancing and managing local river resources, while focusing federal involvement on technical assistance rather than direct land or resource management. With the exception of the Allagash River in Maine and the Westfield River in Massachusetts, all of the other Wild and Scenic Rivers in New England have been designated through the Partnership Wild and Scenic River model.

For more than 20 years, the NPS has taken advantage of this direction when conducting Studies of rivers bordered by predominantly private and non-federal lands by encouraging formation of informal Study Committees based around state and local representation. Such committees have become an integral part of the Study approach and ensure active local participation in the process. Local and state knowledge is often critical to effective and efficient research regarding potential ORVs of the Study area and is absolutely essential to the development of local and state-based management strategies for protection of such values.

Locally-based Management Plan

Since it is a central tenet of such studies that land-based resource protection must be primarily accomplished through local, state, and non-governmental action, it is therefore a central task of the Study committee to develop a locally-based management plan to protect the important river values being researched and documented. Adoption of the plan by state and local governments prior to designation provides evidence of local commitment to protecting Wild and Scenic River values without the need for direct federal management, a major factor in determining whether the Partnership model is suitable for the river. This Plan can serve the river, local communities, state agencies and other stakeholders regardless of whether Wild and Scenic River status is achieved as a result of the Study.

During a Partnership Wild and Scenic Rivers Study the suitability determination is based on factors such as:

1. Public support and evidence of commitment by non-federal entities that will be partially responsible for implementing a plan for protection;
2. Evidence of existing resource protection to meet the requirements of Section 6(c)2 of the WSRA; and
3. Lasting protection measures set forth in a non-regulatory, locally-developed comprehensive management plan as required under Section 3(d)(1)3 of the WSRA.

Partnership Wild and Scenic Rivers (PWSRs) is a unique category of designated rivers managed through long-term partnerships between the National Park Service and local, regional and state stakeholders. This locally-driven, collaborative planning and management approach to river conservation is an effective alternative to direct federal management and administration. Nationally-designated river protection, anchored by federal funding, leverages substantial additional state, local, and private funding.

PWSRs and the land surrounding them benefit from the hundreds of committed people contributing thousands of their volunteer hours and donating professional and other in-kind services to protect, manage and enhance our national Outstandingly Remarkable Values: scenic, recreational, geologic, fish and wildlife, historic, and cultural.

PWSRs have a 20+ year track record of successful partnerships, with 13 designated rivers in 8 states covering more than 700 river miles. In 2007, PWSRs were named by the Ash Institute for Democratic Governance and Innovation at Harvard University's John F. Kennedy School of Government as among the country's best examples of programs that innovatively link government and citizens. Congress continues to add new rivers and appropriates the funding necessary to support them. This publication is a testament to, and highlights the important achievements made on and along, the nation's Partnership Wild and Scenic Rivers.

Status of Deerfield River in Designation Process

In 2021, the Deerfield River Watershed Association began the process of building local support for protecting the Deerfield River as a National Wild and Scenic River. DRWA engaged in a watershed-wide campaign of public outreach to communities, organizations, agencies and businesses to inform, educate and seek support for our Wild and Scenic Rivers initiative. DRWA contacted every community in the Deerfield River watershed and secured letters of support for this initiative or related support from 21 communities in the watershed (14 in Massachusetts and 7 in Vermont). DRWA has also secured letters of support from 12 organizations, agencies and businesses. These supporting groups are listed below.

Municipal, Organization, Agency, and Business Support

Massachusetts towns (14)	**Vermont Towns (7)**	**Organizations, Agencies, Businesses (12)**
• Ashfield • Buckland • Charlemont • Colrain • Conway • Deerfield • Greenfield • Monroe • Rowe • Savoy • Shelburne	• Dover • Guilford • Halifax • Marlboro • Stratton • Whitingham • Wilmington	• Windham Regional Commission • Berkshire Regional Planning Commission • Vermont Natural Resources Council • Green River Watershed Association • Connecticut River Conservancy • Trout Unlimited, Deerfield River Chapter • Trout Unlimited, Conn. River Valley Chapter • Deerfield River Watershed Association • Elnu Abenaki Tribe • Franklin Regional Council of Governments • Vermont Agency for Natural Resources, Dept. of Environmental Conservation • Crabapple Whitewater Rafting

In addition, the towns of Florida, Leyden and Heath have expressed support for this initiative via participation in grants to complete the Wild and Scenic Study and participation in the Wild and Scenic Study Committee. The municipalities of Adams, North Adams, Goshen, and Plainfield have just a few acres within the watershed, at some distance from any of the major tributaries, and did not participate in the planning process.

To date, there are no communities that have expressed opposition to this initiative.

In 2022, with its supporting partner in Vermont, the Windham Regional Commission, DRWA began the process of seeking Congressional approval of a study bill to assess whether segments of the Deerfield River could be designated as a National Wild and Scenic River.

DRWA has met with the Congressional aides for the four U.S. Senators and three U.S. Representatives that encompass the Deerfield watershed and has received expressions of support from all seven. Legislation to authorize a study bill for Deerfield River Wild and

Scenic designation was drafted and initially filed in June, 2022 and 2023 (S.608, 118th Congress). In 2024, the bill received approval from the Senate Energy and Natural Resources Committee (ENR) and the unanimous consent of the Senate. However, it did not come to a vote in the House of Representatives before the 118th Congressed adjourned.

The Deerfield River Wild and Scenic Act of 2025 (S.1187 and H.R. 2451) was reintroduced in March 2025 (see Appendix for copy of bill). The sponsors include Congressman Jim McGovern (MA) (lead); Senator Edward Markey (MA) (lead); Congressman Richard Neal (MA); Representative Becca Balint (VT); Senator Peter Welch (VT); Senator Bernie Sanders (VT); and Senator Elizabeth Warren (MA).

DRWA feels the Deerfield River is well qualified for consideration for Wild and Scenic River status. The Deerfield River is a unique recreational and natural resource that runs for 76 miles from southern Vermont through northwestern Massachusetts to the Connecticut River, traversing the beautiful Green Mountain National Forest, Berkshire Mountains, and the Hilltowns above the Pioneer Valley. With rapids from Class II-V, it offers perhaps the best whitewater boating and rafting in Massachusetts. It is also an excellent trout fishery, with some of the best dry-fly fishing for wild trout in the East. The historically significant Mohawk Trail ran along the river and was a principal Native American travel route. Several tributaries, such as Cold River and Bog and Gulf Brooks, are wild free-flowing rivers. Multiple segments of the Deerfield River were identified on the National Rivers Inventory as having “outstandingly remarkable” values, and eligible for National Wild and Scenic Rivers designation.

Section III. Description of Study Area

A. Study Area

The Deerfield River watershed is located in northwest Massachusetts and southern Vermont within 36 communities, 20 in Massachusetts and 16 in Vermont. It flows southeast and joins the Connecticut River in Greenfield/Deerfield, MA.

The Deerfield River includes the North, South, East and West Branches in Vermont and its mainstem in Massachusetts, from its headwaters in Vermont to its confluence with the Connecticut River. The Deerfield River's major tributaries include the Green River, South River, Bear River, North River, Clesson Brook, Chickley River, Cold River, Gulf Brook, Bog Brook, Rice Brook, Dunbar Brook and Cold Brook.

B. Regional Setting

From Stratton Mountain in Southern Vermont to Greenfield in Massachusetts, the Deerfield River watershed typifies rural New England at its best. The rugged topography boasts spectacular scenic settings and exciting recreational opportunities. This topography has also attracted large electric utilities and their accompanying dams: the Deerfield River has ten hydroelectric developments on the mainstem, some built as far back as 1911. One of the coldest and cleanest rivers in the region, the Deerfield River is home to native, naturalized, and stocked trout. 78± percent of the basin is forested. Only 3± percent of the watershed is urbanized.

C. Hydrology

1. Drainage area: about 665 square miles (347 in MA)
2. Mainstem miles: 70.2 (44 in MA)
3. River and stream miles: 649.7
4. Perennial river miles: 589.3
5. Lakes in the watershed: 49 (7023.3 watershed acres)
6. Major tributaries: North Branch, South Branch, East Branch and West Branch in Vermont; Cold, Chickley, Bear, South, and Green Rivers in Massachusetts (North and Green originate in VT)
7. Perimeter: 130.74 mi

D. Topography

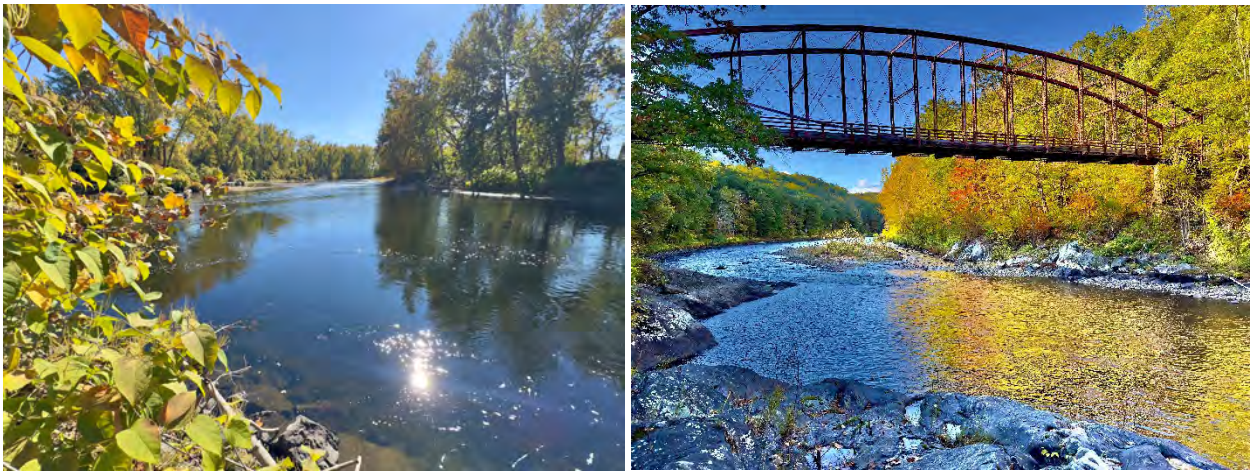
- River elevation: drops approximately 2000 feet from the headwaters in southern Vermont to the confluence with the Connecticut River in Greenfield, Massachusetts.
- Altitudes: range from 2,841 to 120 ft above sea level

The river flows southeastward at the edge of the Berkshire Hills of Massachusetts in a narrow valley bordered by steep slopes that rise, in some places, more than 1,000 feet

above the river. Near the Connecticut River, the terrain is much flatter. Overall, the gradient of the Deerfield River is quite steep, averaging 46.8 ft/mi from its headwaters to the USGS streamflow gage near West Deerfield, a distance of about 69.5 river miles.

E. Study Area

This study focuses on the river segments identified in the proposed Deerfield River Study Bill, all within the State of Massachusetts, that include the Deerfield River mainstem in Massachusetts, from the Vermont state line to its confluence with the Connecticut River, excluding all impounded segments of the river, and the Deerfield River's major tributaries, including the Green River, South River, Bear River, North River, Clesson Brook, Chapel Brook, Chickley River, Cold River, Gulf Brook, Bog Brook, Rice Brook, Mill Brook, Pelham Brook, Dunbar Brook and Cold Brook.



The many faces of the Deerfield River. Clockwise from upper left: Deerfield River and Deerfield Academy, at Bardwell's Ferry, at Gardners Falls, and at the glacial potholes in Shelburne Falls.

F. Segment by Segment Study Area Description and Summary of Outstandingly Remarkable Values (ORVs)

River Segment 1: Deerfield River Mainstem, Reach #1
Reach: Dam #2 to Confluence with Connecticut River, Deerfield/Greenfield
Eligibility for Designation: Eligible
River Miles: 13.92 miles eligible of 14.05 total miles
Potential Classification: Recreational
Outstandingly Remarkable Values:

- Recreation: Very popular reach for kayaking/tubing and fishing, Mahican Mohawk hiking trail, South River State Forest.
- Scenery: Scenic river gorge near Bardwell's Ferry.
- Fish: this is a regionally significant trout stream and an historic Atlantic Salmon Fishery.
- History: Historic Deerfield village and homes, historic Bardwell's Ferry iron truss bridge, Cheapside railroad bridge, numerous Native American archaeological sites and Pocumtuck history adjacent to and near the river.

River Segment 2: Deerfield River Mainstem, Reach #2
Reach: Gardners Falls Dam to Dam #2
Eligibility for Designation: Eligible
River Miles: 0.65 miles eligible of 1.95 total miles
Potential Classification: Recreational
Outstandingly Remarkable Values:

- Scenery: Wilcox Hollow scenic river area.
- Recreation: Popular swimming and fishing area, Mahican Mohawk hiking trail.

River Segment 3: Deerfield River Mainstem, Reach #3
Reach: , Dam #3 to Gardners Falls Dam
Eligibility for Designation: Not eligible
River Miles: 1.06
Potential Classification: Not eligible
Outstandingly Remarkable Values:

- Scenery: Salmon Falls, Glacial Potholes, and Bridge of Flowers, Shelburne Falls
- History: Historic Shelburne Falls town center

River Segment 4: Deerfield River Mainstem, Reach #4
Reach: , Dam #4 to Dam #3
Eligibility for Designation: Eligible
River Miles: 0.6 eligible of 2.86 total miles
Potential Classification: Recreational
Outstandingly Remarkable Values:

- Recreation: Sunburn Beach swimming and fishing area.
- Scenery: Scenic river gorge and rock formations at Sunburn Beach

River Segment 5: Deerfield River Mainstem, Reach #5
Reach: Bear Swamp Dam/ Fife Brook to Dam #4
Eligibility for Designation: Eligible
River Miles: 16 miles eligible of 18.26 total miles
Potential Classification: Recreational
Outstandingly Remarkable Values:

- Recreation: Highly popular reach for whitewater boating and tubing, including Zoar Gap, hiking including Mahican Mohawk Trail, Mohawk Trail State Forest trails, scenic Negus Mountain Trail, Zoar and Shunpike Picnic Areas.
- Fish: This river reach is the premier wild trout stream in Massachusetts, and an historic Atlantic Salmon fishery.
- History: This segment parallels the Mohawk Trail, the principal route for longtime native American nomadic travel and for expeditions against English settlements during French and Indian Wars, historic Hoosac Tunnel and railroad spurs for rail use, national register historic districts, numerous Native American archaeological sites adjacent to and near the river.
- Scenery: Mohawk Trail State Forest, including old growth forests, tallest trees in New England and scenic trails.

River Segment 6: Deerfield River Mainstem, Reach #6
Reach: , Dam #5 to Bear Swamp Dam/ Fife Brook
Eligibility for Designation: Eligible
River Miles: 2 miles eligible of 4.58 total miles
Potential Classification: Recreational
Outstandingly Remarkable Values:

- Recreation: Whitewater boating on the "Dryway."
- Fish: A regionally significant trout stream and an historic Atlantic Salmon Fishery.
- Scenery: Highly scenic river gorge

River Segment 7: Deerfield River Mainstem, Reach #7
Reach: Sherman Reservoir to Dam #5
Eligibility for Designation: Not eligible
River Miles: 0.73
Potential Classification: not eligible, all impounded
Outstandingly Remarkable Values: not applicable

River Segment 8: Cold River
Reach: Very scenic tributary of Deerfield River, runs from headwaters in Florida, MA to confluence with the Deerfield River
Eligibility for Designation: Eligible
River Miles: All 13.32 miles are eligible
Potential Classification: Wild
Outstandingly Remarkable Values:

- Scenery: Very scenic river gorge with mountain views
- Recreation: Historic Mahican Mohawk Trail and many other trails, Whirley Baths are a popular swimming area, Mohawk Trail State Forest, one of best whitewater paddling runs in the watershed.
- Natural: Old growth forest including Massachusetts' tallest tree.
- Wild: An excellent example of an undeveloped free flowing, low order river system which is one of the few remaining examples of this type, south of Vermont.
- History: Mohawk Trail National Register of Historic Places District including Civilian Conservation Corps history.

River Segment 9: Green River
Reach: Very scenic tributary of Deerfield River, runs from Vermont border to confluence with the Deerfield River in Greenfield
Eligibility for Designation: Partially Eligible
River Miles: 14.77 miles eligible of 17.25 total miles
Potential Classification: Scenic, for segment upstream from Greenfield dams
Outstandingly Remarkable Values:

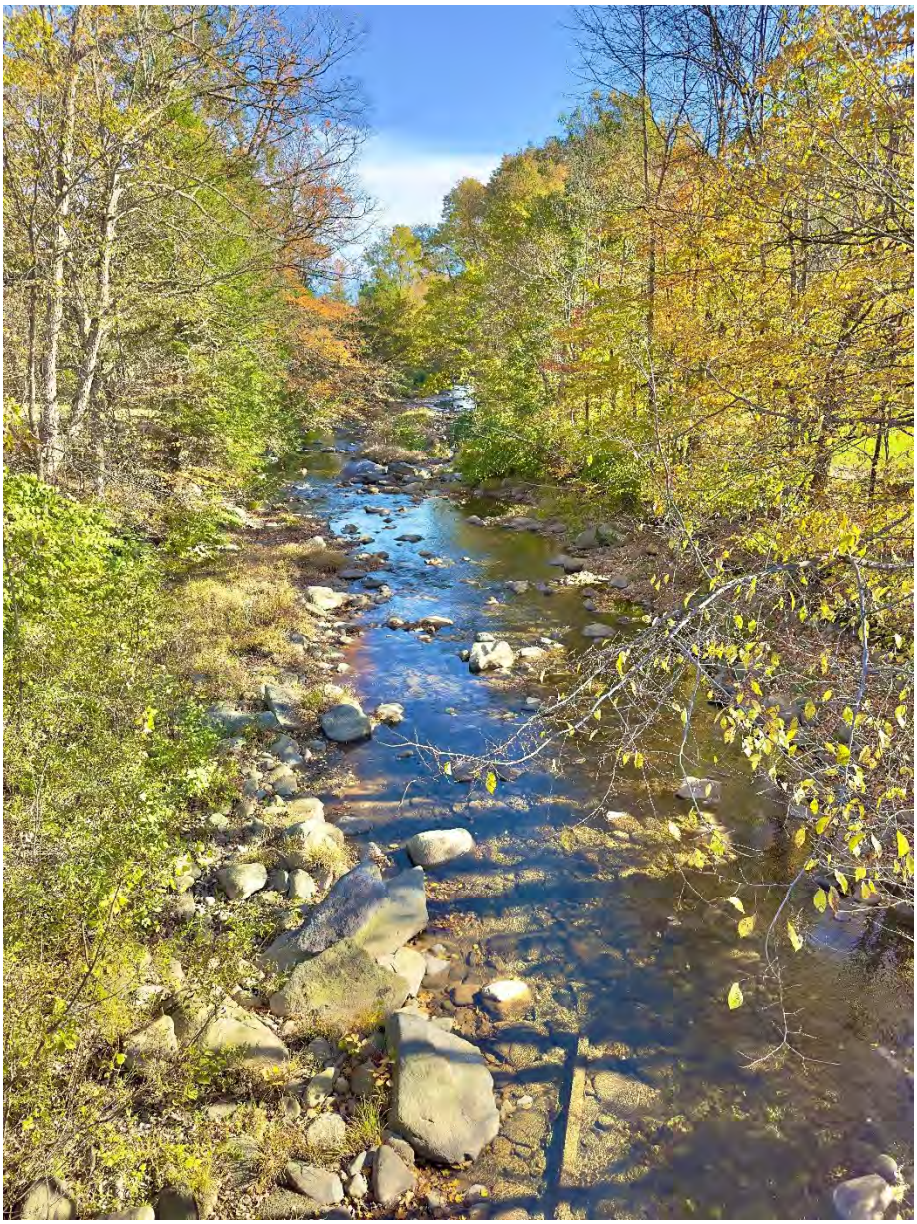
- Fish: A wild trout stream
- Scenic: Very scenic, with pools and small waterfalls
- History: Two historic covered bridges (one in Vermont)
- Recreation: Multiple swimming holes and fishing locations, and a popular biking route on Green River Road along the river.

River Segment 10: South River
Reach: From headwaters to confluence with Deerfield River
Eligibility for Designation: Eligible
River Miles: 14.98 miles eligible of 15.73 total miles
Potential Classification: Scenic
Outstandingly Remarkable Values:

- Wildlife and Fisheries: a regionally significant wild trout stream and an historic Atlantic Salmon Fishery, Audubon Conway Hills Wildlife Sanctuary.
- History: A segment parallels the Mohawk Trail, the principal route for expeditions against English settlements during French and Indian Wars, along the Mahican Mohawk Trail. Burkeville Historic Covered Bridge, historic Conway Center.
- Recreation: Multiple swimming holes, South River State Forest, Mahican Mohawk hiking trail, Conway trails, South River Meadows
- Scenery: Reeds Bridge Falls, Conway Station Falls

River Segment 11: North River
Reach: Confluence of North River, East and West Branches to confluence with the Deerfield River
Eligibility for Designation: Eligible
River Miles: 3.01 miles eligible of 3.32 total miles
Potential Classification: Recreational
Outstandingly Remarkable Values:

- Recreation: Sunburn Beach swimming and scenic area.
- Natural: Catamount State Forest.



River Segment 12: North River, West Branch
Reach: Headwaters to confluence with the North River, East Branch
Eligibility for Designation: Eligible
River Miles: 12.64 miles eligible of 12.83 total miles
Potential Classification: Recreational
Outstandingly Remarkable Values:

- Natural: Crowingshield Conservation Area, Cook State Forest.

River Segment 13: North River, East Branch
Reach: Headwaters to confluence with the North River, West Branch
Eligibility for Designation: Eligible
River Miles: 7.39 miles eligible of 7.58 total miles
Potential Classification: Recreational
Outstandingly Remarkable Values:

- History: Arthur Smith Historic Covered Bridge, Colrain Center National Register District.

River Segment 14: Pelham Brook
Reach: Headwaters to confluence with the Deerfield River
Eligibility for Designation: Eligible
River Miles: 4.26 miles eligible of 6.46 total miles
Potential Classification: Recreational
Outstandingly Remarkable Values:

- Fisheries: A rare wild rainbow trout population, and the brook includes all three wild trout species
- Scenic: Pelham Brook cascades

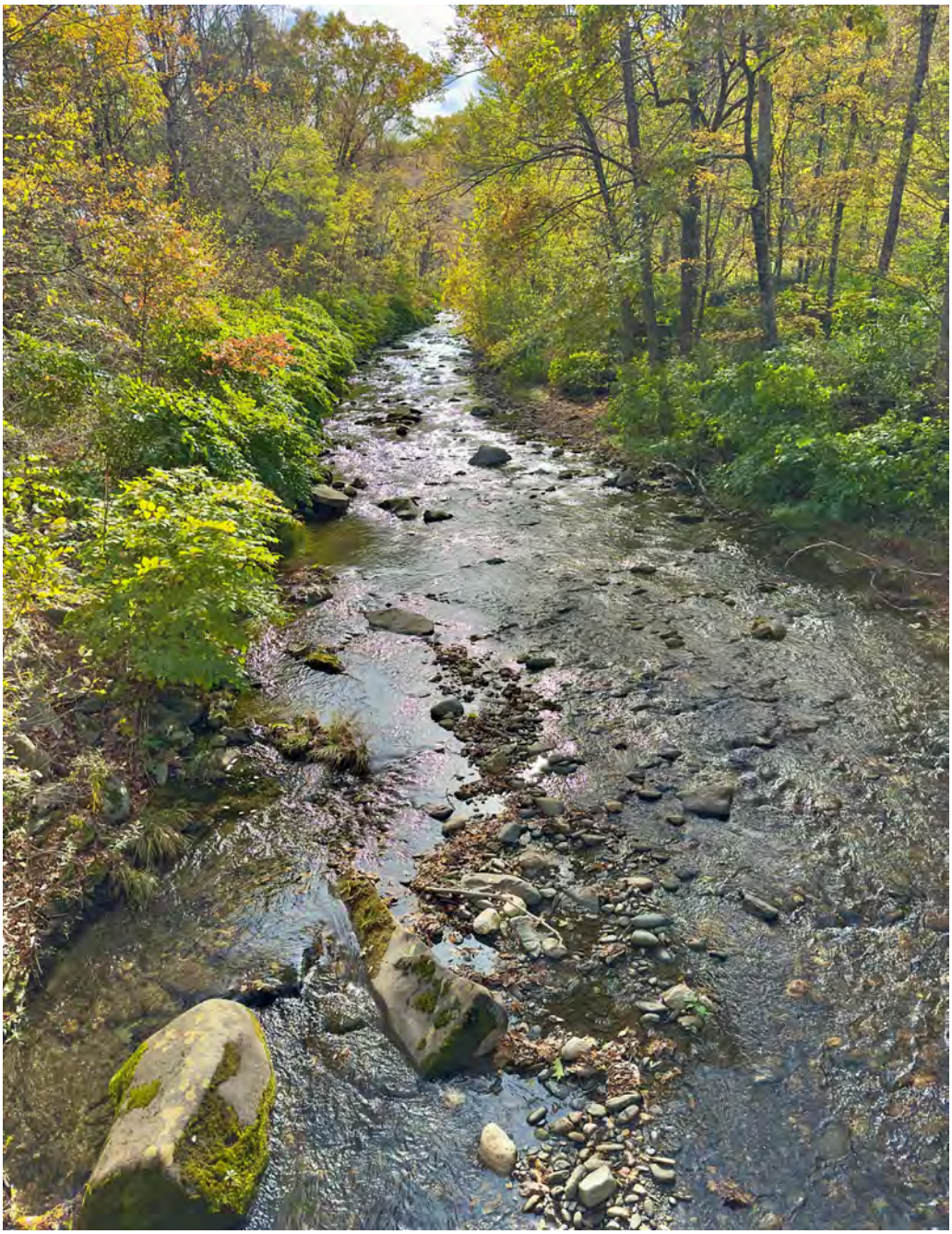
River Segment 15: Dunbar Brook
Reach: Headwaters to confluence with the Deerfield River
Eligibility for Designation: Eligible
River Miles: 5.34 miles eligible of 5.5 total miles
Potential Classification: Scenic
Outstandingly Remarkable Values:

- Recreation: Scenic Dunbar Brook Trail, challenging paddling opportunities.
- Natural: Old growth forest in Monroe State Forest.
- Scenic: Dunbar Brook cascades

River Segment 16: Bear River

Reach: Headwaters to confluence with the Deerfield River
Eligibility for Designation: Eligible
River Miles: All 8.37 miles are eligible
Potential Classification: Scenic
Outstandingly Remarkable Values:

- Fisheries: A rare wild rainbow trout population.
- Natural: Unique geologic formations.
- Recreational: A swimming hole.



River Segment 17: Clesson Brook
Reach: Headwaters to confluence with the Deerfield River
Eligibility for Designation: Eligible
River Miles: 9.66
Potential Classification: Recreational
Outstandingly Remarkable Values:

- Fisheries and Wildlife: A rare reproducing wild rainbow trout population, wild brook trout, and the state listed Spring Salamander.

River Segment 18: Chickley River
Reach: Headwaters to confluence with the Deerfield River
Eligibility for Designation: Eligible
River Miles: All 10.7 miles are eligible.
Potential Classification: Recreational
Outstandingly Remarkable Values:

- Recreational: Fishing for trout, paddling opportunities.
- Geologic: Pillow lava formations

River Segment 19: Gulf Brook
Reach: Headwaters to confluence with the Cold River
Eligibility for Designation: Eligible
River Miles: 3.33 miles are eligible of 3.43 total miles
Potential Classification: Wild
Outstandingly Remarkable Values:

- Wild: an excellent example of an undeveloped free flowing, low order river system which is one of the few remaining examples of this type, south of Vermont.
- Scenic: Tannery Falls and Balance Rock are located on a tributary, Tannery Brook.
- Recreation: Tannery Falls Trail.
- Natural: Located within Savoy Mountain State Forest, old growth forest.
- History: Historic Shaker Trail and New States Cemetery with Shaker graves.

River Segment 20: Bog Brook
Reach: From headwaters at Bog Pond to confluence with the Cold River (there is a small impoundment that enlarged Bog Pond, but it is not on the brook itself).
Eligibility for Designation: Eligible
River Miles: 1.25 miles are eligible of 1.48 total miles
Potential Classification: Wild
Outstandingly Remarkable Values:

- Wild: an excellent example of an undeveloped free flowing, low order river system which is one of the few remaining examples of this type, south of Vermont.
- Natural: Located within Savoy Mountain State Forest

River Segment 21: Rice Brook
Reach: Headwaters to confluence with the Deerfield River
Eligibility for Designation: Not eligible
River Miles: 4.07 miles
Potential Classification: Not eligible
Outstandingly Remarkable Values: Not relevant (A rare wild rainbow trout population)

River Segment 22: Mill Brook
Reach: Headwaters to confluence with the Deerfield River
Eligibility for Designation: Eligible
River Miles: 9.93 miles are eligible of 13.97 total miles
Potential Classification: Recreational
Outstandingly Remarkable Values:

- Historic: Bissell covered bridge, one of few remaining in state, historic Davis Pyrite Mine
- Scenic: Waterfall at covered bridge.

River Segment 23: Chapel Brook
Reach: Headwaters to confluence with South River
Eligibility for Designation: Eligible
River Miles: All 6.06 miles are eligible
Potential Classification: Scenic
Outstandingly Remarkable Values:

- **Natural:** Poland Brook Wildlife Management Area, Trustees of Reservations' Chapel Brook Reservation
- **Scenic:** Several scenic falls and rapids, including Chapel Falls
- **Recreation:** Chapel Ledge Trail and Two Bridges Trail, popular swimming hole at Chapel Falls

G. Municipalities in Study Area

- 16 cities or towns in 2 Vermont counties (Bennington, Windham)
    - Brattleboro, Dover, Glastonbury, Guilford, Halifax, Marlboro, Readsboro, Searsburg, Somerset, Stamford, Stratton, Sunderland, Wardsboro, Whitingham, Wilmington, Woodford
- 20 cities or towns in 3 Massachusetts counties (Berkshire, Franklin, Hampshire)
    - Adams, Ashfield, Bernardston, Buckland, Charlemont, Colrain, Conway, Deerfield, Florida, Goshen, Greenfield, Hawley, Heath, Leyden, Monroe, North Adams, Plainfield, Rowe, Savoy, Shelburne
- Low density, ranging from 10 (in Vermont) and 22 (in Massachusetts) up to 160 persons per square mile in Massachusetts, with the overall area significantly below 50 persons per square mile (U.S Census 2020).

Section IV. Study Committee and Public Engagement

This study, with funding from the Massachusetts Woodland Partnership, followed the methodology of studies created with a cooperative agreement with the National Park Service. The study was designed and executed in partnership with the Deerfield River Wild and Scenic Study Committee, the Deerfield River Watershed Association (DRWA), and the Connecticut River Conservancy (CRC).

The committee consists of members appointed by the chief executive or chief executive body in each municipality and appointed members from relevant regional entities. The study committee is an advisory group and is not designed to speak for or represent each community but rather to support the consultants, the Deerfield River Watershed Association, and the Connecticut River Conservancy in creating this study. The final study will be sent to each community for their consideration.

Study Committee Membership and Ex Officio

Member	**Representing**
Julie Caswell	Town of Deerfield
Steven Gougeon	Town of Ashfield, MA
John Organ	Town of Buckland, MA
Ashley Sparks	Town of Charlemont, MA
Bill Dornbusch	Town of Colrain, MA
Janet Chayes	Town of Conway, MA
Sheila Kelliher	Town of Florida, MA
Wisty Rorabacher	City of Greenfield, MA
Liz Kidder (former member) Don Sandowsky and Arthur Tuttle	Town of Leyden, MA
Melissa Vanek and Melanie Glynn	Town of Savoy, MA
Joan Lapierre	Town of Shelburne, MA
Chris Bathurst	Deerfield River Watershed Association (DRWA)
Matthew Chipman	Deerfield River Watershed Chapter, Trout Unlimited
Kimberly MacPhee	Franklin Regional Council of Governments, MA
Kate Conlin (former non-voting)	Woodland Partnership of Northwest Massachusetts
Chris Curtis (non-voting)	consultant
Wayne Feiden (non-voting)	consultant

The Study Committee sharing local knowledge

Study Committee Meetings

The municipalities and regional planning agencies in the Deerfield River watershed, the Deerfield River Watershed Association, the Connecticut River Conservancy, the Massachusetts and Vermont Congressional delegations, and the relevant state and federal agencies have been working together since 2021 to collect data on the Deerfield River watershed and explore the feasibility and desirability Wild and Scenic River designation.

Many of the Study Committee members have been involved in those investigations and discussions. The first step in the Study Committee process was to build a shared understanding of the body of work that is available to support this study process.

The Study Committee generally met monthly at central locations (in Shelburne Falls and in Greenfield) during the *Deerfield River Wild and Scenic River Study* process, providing informal advice and information to the consultants, the DRWA and the CRC. All meetings were run by consensus with no formal votes. Formal actions, following the consensus *Deerfield River Wild and Scenic River Study*, are reserved for the member municipalities in duly advertised public meetings and regional entities in accordance with their own processes.

<u>The study committee's charge was:</u>

- Identify the best options to celebrate, protect, and enhance the character of the Deerfield River and its tributaries.
- Crowdsource information gathering for this study.
- Support the research and analysis of potential Outstandingly Remarkable Values (ORVs).
- Coordinate the outreach and engagement of residents and stakeholders in each of the members' municipalities and organizations.
- Support building cooperative partnerships to manage the Deerfield River and its tributaries with:
    - Private property owners and hydroelectric facility operators, who hold the primary rights to manage their own property.
    - Municipal governments, who provide much of the on-the-ground land use and environmental regulations and connections to their constituencies.
    - Regional planning agencies and other regional quasi-public partners.
    - Watershed associations, environmental groups, stakeholder groups.
    - State and federal government land management, regulatory, and funding agencies.
- Remain engaged after the completion of this report and adoption by municipalities with education and outreach, watershed planning, and building on the Management Plan.

The consultants compiled information from various sources including the study committee, and then shared it with the study committee, DRWA, and CRC to build a consensus *Deerfield River Wild and Scenic River Study*.

At the completion of the initial study, the Study Committee members took the report back to their towns and organizations and requested their support.

Management Plan Development

The framework for a future management plan, specifically the Assessment of River Management Issues and Strategies in this study, was developed during the study process, but builds on nearly a decade of engagement and consensus building with the municipalities and regional entities which led to the filing of the first Deerfield River Wild and Scenic River Study Act on July 27, 2022 and its refiling in 2025.

The management plan framework uses past field work, detailed studies and assistance from the steering committee, watershed associations and other regional agencies, the Franklin Regional Council of Governments, and the University of Massachusetts-Amherst, with technical and/or financial assistance from the MA Executive Office of Energy and Environmental Affairs (EEA) Woodlands Partnership Implementation Grant and the National Park Service.

The partners involved with this study, with the active engagement of the study committee and assistance from all of those entities above, identified the potential Outstandingly Remarkable Values (ORVs) important to the municipalities and the region. Once the draft study identified initial ORVs and potential management practices, the steering committee actively engaged the public to solicit input and revise the management plan accordingly, with the technical assistance from the National Park Service.

The identified ORVs are discussed in detail in the following section, ***Evaluation of Eligibility and Classification***. The NPS will be reviewing the findings on potential ORVs in the free-flowing sections of the Deerfield River and its tributaries.

Those ORVs are the focus on the ***Assessment of River Management Issues and Strategies*** in this study. The Management Plan is a roadmap for the residents, and local, regional and state stakeholders, agencies, and partners to enhance existing measures. These measures were identified by the local community and stakeholders through the study.

Study Committee Outreach and Education

The Study Committee's initial findings were included in this report, shared with all the municipalities and engaged stakeholders and posted on the project website, https://deerfieldriver.org/wild-and-scenic.

Outreach activities include:

- Monthly Study Committee meetings.
- Study Committee members reporting back to their municipalities and organizations.
- Presenting initial published findings at the Fabos Conference on Landscape and Greenways Planning (Feiden and Curtis, 2025).
- Executive summary of the draft report distributed to public libraries in the Massachusetts portions of the Deerfield River watershed.
- Newspaper coverage.
- A PowerPoint presentation available for presentation in local forums.
- Presentations offered to towns in each of the communities with proposed Wild and Scenic River segments.
- Presentations to other interested groups (e.g., Deerfield River Watershed Chapter of Trout Unlimited, Deerfield River Watershed Association, and Woodlands Partnership of Northwest Massachusetts).

Study Committee Meetings

Date	Guest Speakers and Summary
11/20/24	No speakers. Introduction and review committee charge . Committee workshoped segment eligibility and ORVs.
12/18/24	Kate Conlin, Woodlands Partnership. Committee workshoped ORVs and management issues.
2/05/25	No speakers. Committee workshoped mapping & resource locations.
3/12/25	Kevin Mendyk, NPS: Dams & Free-flowing rivers. Committee workshopped ORVs, dams, free-flowing segments.
4/02/25	Adam Kautza PhD., Coldwater Fisheries Project Leader, Mass. Fisheries & Wildlife and Erin Rogers, DFG Erin Rodgers, Ph.D., VT/MA Program Manager, Trout Unlimited, Northeast Coldwater Habitat Restoration Program. Committee workshopped ORVs, especially fisheries, natural resources
5/14/25	Ryan O'Donnell, Connecticut River Conservancy, water quality monitoring. Committee workshopped water quality and river management and initial study recommendations.
6/25/25	Andrew Petitdemange, National Park Service. Committee made their final edits and changes, adopted the study, and recommended that the municipalities make the motion, below.

Study Committee Recommends Designation

On June 25, 2025, at the closeout meeting of the MA Executive Office of Energy and Environmental Affairs (EEA) Woodlands Partnership Implementation Grant funding the initial *Deerfield River Wild and Scenic River Study* for the Massachusetts portion of the watershed, the Study Committee agreed by unanimous consent to recommend the designation of the Deerfield River and its tributaries in Massachusetts in the National Wild and Scenic Rivers system and to recommend that their municipalities endorse that designation.

The Study Committee supported the designation as a Partnership Wild and Scenic River, with the implementation of a management plan through a locally-based Wild and Scenic Committee representing municipalities and stakeholders in the watershed. The committee noted that this Partnership approach has proven successful for various other Wild and Scenic Rivers in Massachusetts and Vermont and elsewhere in New England with no evidence of an unwanted or heavy federal presence.

Municipal Support

The Deerfield River Wild and Scenic Study Committee endorses the Deerfield River Wild and Scenic Study and Management Plan. The Committee further supports the designation of Deerfield River main stem reaches and tributaries as recommended in the Study as components of the National Wild and Scenic Rivers System. The Committee

recommends that participating communities approve the following motion through votes of their Select Board or City Council, as appropriate

"The Town [or City] of _____ hereby petitions
the Congress of the United States of America, the Massachusetts Governor and the U.S. Secretary of the Interior that the Deerfield River and its tributaries be designated as components of the National Wild and Scenic Rivers System, with the understanding that such designation would be based on the locally-developed Deerfield River Wild and Scenic Study and Management Plan and would not involve federal acquisition or management of lands."

Section V. Evaluation of Eligibility and Classification

The purpose of this Chapter is to document findings related to:

1) the "outstandingly remarkable" natural and cultural resource values associated with the Deerfield River Study Area;
2) the "free-flowing character" of the study segments; and
3) the preliminary "classifications" which would be appropriate if the segments are included in the National Wild and Scenic Rivers System.

A. Eligibility Criteria

The subsections below describe the relevant eligibility (free-flowing and ORVs) and classification criteria as set forth in the Wild and Scenic Rivers Act, in the USDA/USDI Interagency Guidelines for Eligibility, Classification, and Management of River Areas as published in the Federal Register on September 7, 1982, and in the Technical Report of the Interagency Wild and Scenic Rivers Coordinating Council on the Wild & Scenic Rivers Study Process, IWSRCC, December 1999.

A-1. Free-flowing Character

The National Wild and Scenic Rivers System is designed to protect eligible "free-flowing" rivers and sections of rivers that support significant resource values from the adverse impacts of federally-assisted water resource projects, such as construction of new dams. The Act's definition of "free-flowing" is outlined in Section 16:

> *"Free-flowing," as applied to any river or section of a river, means existing or flowing in natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway. The existence, however, of low dams, diversion works, and other minor structures at the time any river is proposed for inclusion in the national wild and scenic rivers system shall not automatically bar its consideration for such inclusion: Provided that this shall not be construed to authorize, intend, or encourage future construction of such structures within components of the national wild and scenic rivers system.*

A river or river segment can be considered for designation if it is above or below a dam or is dependent on releases from a dam. Any section of river with flowing water, even if impounded upstream meets the definition of free-flowing, as long as existing flows are sufficient to support flow-dependent ORVs and water quality.

A-2. Outstandingly Remarkable Values

To be considered eligible for inclusion in the National Wild and Scenic Rivers System a river segment, together with its adjacent lands, must support one or more "outstandingly remarkable" natural, cultural, or recreational resource values. Such resource values must be directly related to, or dependent upon, the river and its adjacent lands. In order to

demonstrate that a resource is river related, they are generally within ¼ mile of the river, or within another geographic area as defined by the Study Committee.

The descriptions below provide examples to help interpret this "outstandingly remarkable" eligibility requirement.

- Nationally Significant Values: Resource values which are nationally significant clearly meet the "outstandingly remarkable" threshold. A nationally significant resource would be rare, unique, or exemplary at a national scale. For example, a recreational boating experience that draws visitors from all over the nation would qualify as a nationally significant recreational resource.
- Regionally Significant Values: Based upon the desirability of protecting a regional diversity of rivers through the national system, a river segment may qualify based on regionally rare, unique or exemplary resource values. The area, region, or scale of comparison is not fixed, and should be defined as that which serves as a basis for meaningful comparative analysis; it may vary depending on the value being considered. For example, physiographic regions are appropriate for geologic and biologic resources, while the region occupied by a particular culture is appropriate for archaeological resources.
- Values Significant in Aggregate: A river may qualify for a given resource value based upon an aggregate of important values. For example, a series of unusual and distinctive river- related geologic features may together qualify a segment as exhibiting an "outstandingly remarkable geologic value" even though no one element meets the criteria alone.

The Interagency Wild and Scenic Rivers Coordinating Council (IWSRCC) has characterized the determination as to whether a given resource value is river-related as based on three criteria. To be river-related a resource value should:

1. Be located in the river or in its immediate shorelands (generally within ¼ mile on either side of the river)
2. Contribute substantially to the functioning of the river ecosystem
3. Owe their location or existence to the presence of the river

For the purposes of the Deerfield River Wild and Scenic Study, the Study Committee and consultants explored all the locally recognized river values and used the above criteria to determine which would qualify as Outstandingly Remarkable Values within the Deerfield River watershed, including the mainstem Deerfield River, and major tributaries, the Bear River, Chickley River, Clesson Brook, Cold River, Dunbar Brook, Green River, Gulf Brook, Mill Brook, North River, North River East Branch, North River West Branch, and South River.

A-3. Classification

The Wild and Scenic Rivers Act requires that all eligible or designated river segments be classified as wild, scenic, or recreational. These classifications are based on the amount of human impact (degree of human influence and access to these rivers) and dependent on the water quality present at the time of classification.

The WSR Act defines these classifications as follows.

- Rivers classified as **wild** have pristine water quality. They are those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.
- Rivers classified as **scenic** are those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.
- Rivers classified as **recreational** are those rivers or sections of rivers that are readily accessible by road or railroad, which may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

Recommended Wild and Scenic classifications for eligible Deerfield River segments and tributaries are contained in Section V-K.

B. Deerfield River Eligibility Findings

The sections below describe study findings specific to the Deerfield River and its tributaries on eligibility.

River Segment 1: Deerfield River Mainstem, Reach #1: Deerfield River between Deerfield Station and Dam #2 and the Connecticut River confluence. Of the 14.05-mile segment of the Deerfield River from its Deerfield Station and Dam #2 to the Connecticut River confluence, 13.92 miles are found to be eligible for designation.

River Segment 2: Deerfield River Mainstem, Reach #2: Deerfield River between Gardners Falls Dam and Deerfield Station and Dam #2. Of the 1.95-mile segment of the Deerfield River from Gardners Falls Dam to Deerfield Station and Dam #2, 0.65 miles are found eligible for designation. The hydroelectric facilities at the Deerfield Station and Dam #2 on the Deerfield River (1.3 miles) make these portions of the river ineligible due to their lack of free-flowing character.

River Segment 3: Deerfield River Mainstem, Reach #3: Deerfield River between Deerfield Station and Dam #3 and Gardners Falls Dam. Of the 1.06-mile segment of the Deerfield River from Deerfield Station and Dam #3 to Gardners Falls Dam, 0.4 miles are found eligible for designation, but this segment is too short for designation. The hydroelectric facilities at Gardners Falls Dam on the Deerfield River make 0.6 miles of the river ineligible due to their lack of free-flowing character.

River Segment 4: Deerfield River Mainstem, Reach #4: Deerfield River between Deerfield Station and Dam #4 and Deerfield Station and Dam #3. Of the 2.86-mile segment of the Deerfield River from Deerfield Station and Dam #4 to Deerfield Station and Dam #3, 0.6 miles are found eligible for designation. The hydroelectric facilities at the Deerfield Station and Dam #3 on the Deerfield River make 2.2 miles of the river ineligible due to their lack of free-flowing character.

River Segment 5: Deerfield River Mainstem, Reach #5: Deerfield River from Bear Swamp Dam and Deerfield Station and Dam #4. Of the 18.2-mile segment of the Deerfield River from Bear Swamp Dam to Deerfield Station and Dam #4, 16 miles are found eligible for designation. The hydroelectric facilities at the Deerfield Station and Dam #4 on the Deerfield River make 2.2 miles of the river ineligible due to their lack of free-flowing character.

River Segment 6: Deerfield River Mainstem, Reach #6: Deerfield River between Deerfield Station and Dam #5 and Bear Swamp Dam. Of the 4.58-mile segment of the Deerfield River from Deerfield Station and Dam #5 to Bear Swamp Dam, 2 miles are found eligible for designation. The hydroelectric facilities at the Bear Swamp Dam on the Deerfield River make 2.5 miles of the river ineligible due to their lack of free-flowing character.

River Segment 7: Deerfield River Mainstem, Reach #7: the 0.73 miles of the Deerfield River between Sherman Reservoir and Deerfield Station and Dam #5 are fully impounded and not eligible for designation due to their lack of free-flowing character.

Tributaries

The tributaries listed below were studied in more detail, are free flowing and contain ORVs which make them eligible for designation.

River Segment 8: Cold River: headwaters to confluence with Deerfield River. The entire 13.3 miles of the Cold River between its headwaters and the confluence with the Deerfield River are eligible for designation.

River Segment 9: Green River: Vermont Border to confluence with the Deerfield River**.** Of the 17.25 miles of the Green River between the Vermont Border and the confluence with the Deerfield River, 14.77 miles are found eligible for designation.

The upper Green River is eligible, including the river miles upstream of the Greenfield Electric Light and Power Dam in Greenfield. There are three dams in this upstream section of the Green River which reduce the total eligible miles from 15.6 total miles to 14.77 eligible miles. The hydroelectric facilities at the C.A. Denison Dam in Leyden on the Green River (0.14 miles impounded and ineligible) the Pumping Station Dam at Eunice Williams Drive in Greenfield on the Green River (0.37 miles impounded and ineligible), the Swimming Pool Dam in Greenfield on the Green River (0.32 miles impounded and ineligible) reduce the eligible miles to 14.77 on the upper Green River.

The lower Green River (a total of 1.62 miles) is ineligible. The hydroelectric facilities at the Greenfield Electric Light and Power Dam and the Wiley and Russell Dam in Greenfield make these portions of the river ineligible due to their lack of free-flowing character, and there are significant water quality concerns in this section of the Green.

River Segment 10: South River: headwaters to the confluence with Deerfield River. Of the 15.73 miles of the South River between the headwaters and the confluence with the Deerfield River, 14.98 miles are found eligible for designation. The eligible reach is the South River downstream from the Ashfield Pond Dam in Ashfield. This eligible reach excludes two short segments for the dams and impoundments at the hydroelectric facilities at the Conway Electric Dam in Conway on the South River (0.17 miles), and the Flagg Dam in Conway on the South River (0.12 miles).

River Segment 11: North River: confluence of North River, West Branch and North River, East Branch, to its confluence with the Deerfield River. Of the 3.32 miles of the North River between the confluence of North River, West Branch and North River, East Branch, and its confluence with the Deerfield River 3.02 miles are found eligible for designation. The hydroelectric facilities at the Kendall Company Dam in Griswoldville (Colrain) on the North River (0.3 miles) make this portion of the river ineligible due to their lack of free-flowing character.

River Segment 12: North River, West Branch: headwaters to the confluence with North River. Of the 12.83 miles of the North River, West Branch between its headwaters and the confluence with the North River, West Branch and North River, East Branch 12.64 miles are found eligible for designation. The hydroelectric facilities at Bolton Pond Dam in the Adamsville section of Colrain on the North River, West Branch (0.19 miles) make this portion of the river ineligible due to their lack of free-flowing character.

River Segment 13: North River, East Branch: between the Vermont border and the confluence with the North River. Of the 7.58 miles of North River, East Branch between the Vermont border and the confluence with the North River, 7.39 miles are found eligible for designation. The hydroelectric facilities at the Kendall Company No. 1 Dam in Colrain (0.19 miles) make this portion of the river ineligible due to their lack of free-flowing character.

River Segment 14: Pelham Brook: headwaters to the confluence with the Deerfield River. The entire 4.26 miles of Pelham Brook between the Pelham Lake and Mill Pond Dam in Rowe and the confluence with the Deerfield River are found eligible for designation. The hydroelectric facilities at the Pelham Lake Dam in Rowe and the Mill Pond Dam in Rowe on Pelham Brook make the upper 2.2 miles of the river ineligible due to their lack of free-flowing character and are not included.

River Segment 15: Dunbar Brook: headwaters to the confluence with the Deerfield River. Of the 5.5 miles of Dunbar Brook between the headwaters and the confluence with the Deerfield River, 5.34 miles are found eligible for designation. The hydroelectric facilities at the Dunbar Brook Dam in Florida on Dunbar Brook (0.16 miles) make this portion of the river ineligible due to their lack of free-flowing character.

River Segment 16: Bear River: the entire 8.37 miles of the Bear River between its headwaters and the confluence with the Deerfield River are eligible for designation.

River Segment 17: Clesson Brook: headwaters to the confluence with the Deerfield River. Of the 9.66 miles of Clesson Brook between the headwaters and the confluence with the Deerfield River, 9.63 miles are found eligible for designation. The hydroelectric facilities at the Cox Pond Dam in Hawley on Clesson Brook (0.03 miles) make this portion of the river ineligible due to their lack of free-flowing character.

River Segment 18: Chickley River: the entire 10.7 miles of the Chickley River between its headwaters and the confluence with the Deerfield River are eligible for designation.

River Segment 19: Gulf Brook: headwaters to the confluence with the Cold River. Of the 3.43 miles of Gulf Brook between the headwaters and the confluence with the Deerfield River, 3.33 miles are found eligible for designation. The hydroelectric facilities at the Burnett Pond Dam in Savoy on Gulf Brook (0.1 miles) make this portion of the river ineligible due to their lack of free-flowing character.

River Segment 20: Bog Brook: headwaters to the confluence with the Cold River. Of the 1.48 miles of Bog Brook between the headwaters and the confluence with the Deerfield River, 1.25 miles are found eligible for designation. The hydroelectric facilities at the Bog Pond Dam in Savoy on Bog Brook (0.23 miles) make these portions of the river ineligible due to their lack of free-flowing character.

River Segment 22: Mill Brook: headwaters to the confluence with the Deerfield River. Of the 10.22 miles of Mill Brook between the headwaters and the confluence with the Deerfield River, 9.93 miles are found eligible for designation. The hydroelectric facilities at the J.A. Wells Upper Dam in Charlemont on Mill Brook (0.29 miles) and Reverend Gilbert Dam #2 in Heath on Mill Brook make these portions of the river ineligible due to their lack of free-flowing character.

River Segment 23: Chapel Brook: headwaters to the confluence with the Deerfield River. Of the 6.06 miles of Chapel Brook between the headwaters and the confluence with the South River, all the miles are found eligible for designation.

See ***Summary of Deerfield River Segment Eligibility***.

C. Free-flowing Character on the Deerfield River and Tributaries

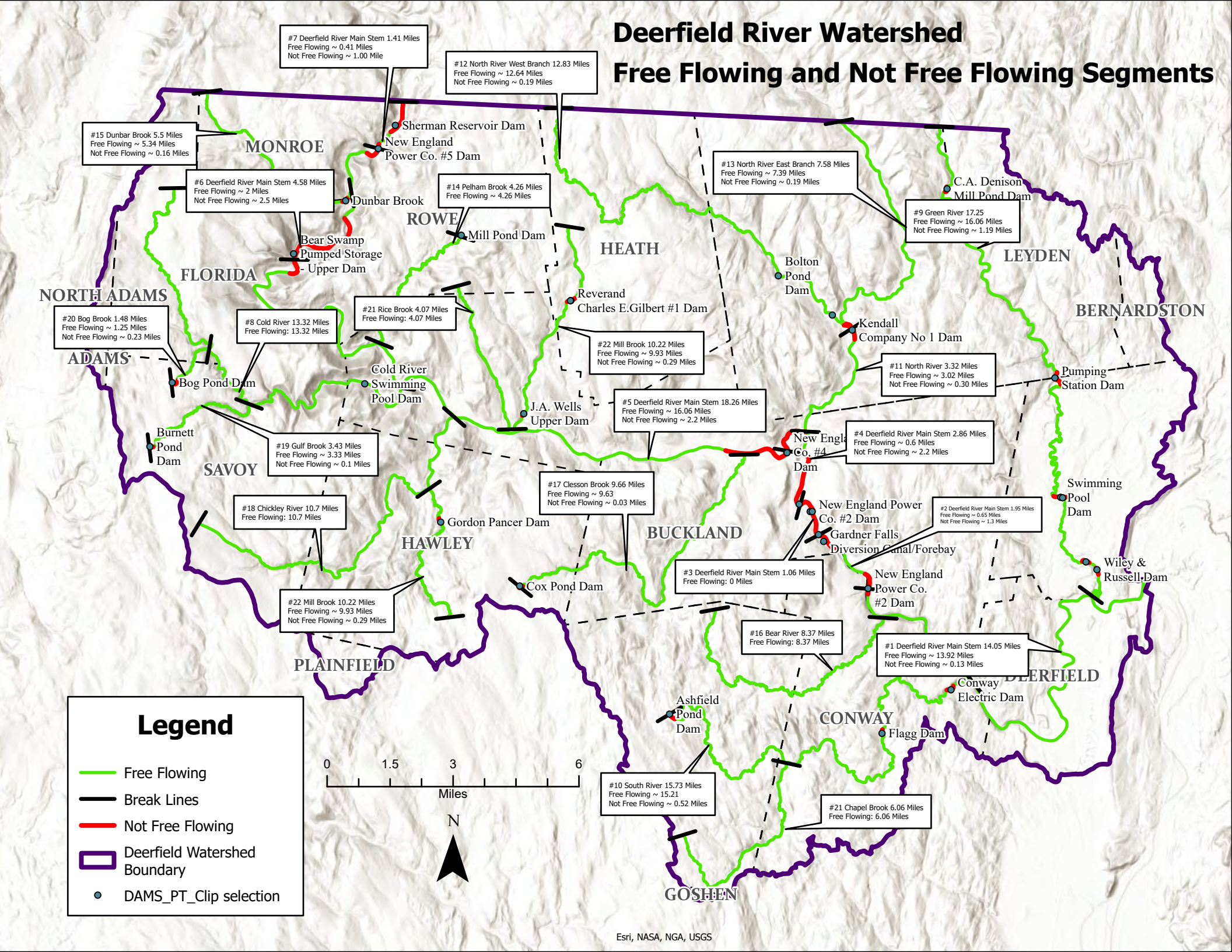
The study area reaches of the Cold, Bear and Chickley Rivers, Rice Brook and North River, East Branch are essentially natural from a free-flowing perspective. There is no flood control, and dams are run-of-river with no major dams that control flow through storage and release. Existing dams maintain general river-like characteristics rather than creating large, lake-like impoundments.

Current river flows are adequate to support the in- stream values for which the rivers are being considered for designation. River flows are typically unaltered on the sections under consideration for designation, and areas where flow is altered, such as dams, are excluded from the section proposed for designation.

The Study assessed the existing dams on the rivers to see if they are compatible with the free-flowing river conditions necessary for designation. There are numerous segments of the Deerfield River Mainstem and its tributaries where dams are present, but the dams and their upstream impoundment areas have been excluded from consideration for designation.

On the mainstem of the Deerfield River there are ten dams, and a limited number of bridges.

See **Deerfield River Watershed Free Flowing and Not Free Flowing Segments** map on the next page.


Deerfield River Watershed
Free Flowing and Not Free Flowing Segments
#7 Deerfield River Main Stem 1.41 Miles
Free Flowing ~ 0.41 Miles
Not Free Flowing ~ 1.00 Mile
#12 North River West Branch 12.83 Miles
Free Flowing ~ 12.64 Miles
Not Free Flowing ~ 0.19 Miles
#15 Dunbar Brook 5.5 Miles
Free Flowing ~ 5.34 Miles
Not Free Flowing ~ 0.16 Miles
MONROE
Sherman Reservoir Dam
New England
Power Co. #5 Dam
#6 Deerfield River Main Stem 4.58 Miles
Free Flowing ~ 2 Miles
Not Free Flowing ~ 2.5 Miles
Dunbar Brook
#14 Pelham Brook 4.26 Miles
Free Flowing ~ 4.26 Miles
ROWE
Mill Pond Dam
#13 North River East Branch 7.58 Miles
Free Flowing ~ 7.39 Miles
Not Free Flowing ~ 0.19 Miles
C.A. Denison
Mill Pond Dam
#9 Green River 17.25
Free Flowing ~ 16.06 Miles
Not Free Flowing ~ 1.19 Miles
Bear Swamp
Pumped Storage
Upper Dam
FLORIDA
HEATH
LEYDEN
Bolton
Pond
Dam
NORTH ADAMS
#20 Bog Brook 1.48 Miles
Free Flowing ~ 1.25 Miles
Not Free Flowing ~ 0.23 Miles
#8 Cold River 13.32 Miles
Free Flowing: 13.32 Miles
#21 Rice Brook 4.07 Miles
Free Flowing: 4.07 Miles
Reverand
Charles E.Gilbert #1 Dam
#22 Mill Brook 10.22 Miles
Free Flowing ~ 9.93 Miles
Not Free Flowing ~ 0.29 Miles
Kendall
Company No 1 Dam
BERNARDSTON
ADAMS
Bog Pond Dam
Cold River
Swimming
Pool Dam
#11 North River 3.32 Miles
Free Flowing ~ 3.02 Miles
Not Free Flowing ~ 0.30 Miles
Pumping
Station Dam
J.A. Wells
Upper Dam
#5 Deerfield River Main Stem 18.26 Miles
Free Flowing ~ 16.06 Miles
Not Free Flowing ~ 2.2 Miles
Burnett
Pond
Dam
#19 Gulf Brook 3.43 Miles
Free Flowing ~ 3.33 Miles
Not Free Flowing ~ 0.1 Miles
New Engla
Co. #4
Dam
#4 Deerfield River Main Stem 2.86 Miles
Free Flowing ~ 0.6 Miles
Not Free Flowing ~ 2.2 Miles
SAVOY
#17 Clesson Brook 9.66 Miles
Free Flowing ~ 9.63
Not Free Flowing ~ 0.03 Miles
Swimming
Pool
Dam
#18 Chickley River 10.7 Miles
Free Flowing: 10.7 Miles
Gordon Pancer Dam
New England Power
Co. #2 Dam
#2 Deerfield River Main Stem 1.95 Miles
Free Flowing ~ 0.65 Miles
Not Free Flowing ~ 1.3 Miles
HAWLEY
BUCKLAND
Gardner Falls
Diversion Canal/Forebay
Wiley &
Russell Dam
#3 Deerfield River Main Stem 1.06 Miles
Free Flowing: 0 Miles
New England
Power Co.
#2 Dam
Cox Pond Dam
#22 Mill Brook 10.22 Miles
Free Flowing ~ 9.93 Miles
Not Free Flowing ~ 0.29 Miles
#16 Bear River 8.37 Miles
Free Flowing: 8.37 Miles
#1 Deerfield River Main Stem 14.05 Miles
Free Flowing ~ 13.92 Miles
Not Free Flowing ~ 0.13 Miles
DEERFIELD
Conway
Electric Dam
PLAINFIELD
Ashfield
Pond
Dam
CONWAY
Flagg Dam
#10 South River 15.73 Miles
Free Flowing ~ 15.21
Not Free Flowing ~ 0.52 Miles
#21 Chapel Brook 6.06 Miles
Free Flowing: 6.06 Miles
GOSHEN
Legend
Free Flowing
Break Lines
Not Free Flowing
Deerfield Watershed Boundary
DAMS_PT_Clip selection
0
1.5
3
6
Miles
N
Esri, NASA, NGA, USGS

Free-flowing Condition by Segment

River Segment 1: Deerfield River Mainstem, Reach #1: the 13.92 miles of the Deerfield River between Deerfield Station and Dam #2 and the Connecticut River confluence are generally free- flowing and eligible for designation.

River Segment 2: Deerfield River Mainstem, Reach #2: the 1.95 miles of the Deerfield River between Gardners Falls Dam and Deerfield Station and Dam #2 are partially impounded, but include a 0.65 mile free-flowing, highly scenic river section at Wilcox Hollow, which is heavily used for swimming and fishing. The following section of the Deerfield River is ineligible for designation due to the lack of free-flowing character.

- The Deerfield Station and Dam #2 on the Deerfield River make 1.3 miles of the Deerfield River ineligible due to lack of free- flowing character.

River Segment 3: Deerfield River Mainstem, Reach #3: the 1.06 miles of the Deerfield River between Deerfield Station and Dam #3 and Gardners Falls Dam are partially impounded, but include a scenic river section below Shelburne Falls center that includes the glacial potholes and Salmon Falls. This section is not eligible due to the short free-flowing segment (0.46 miles).

- The Gardners Falls Dam on the Deerfield River makes 0.6 miles of the Deerfield River ineligible due to lack of free- flowing character.

River Segment 4: Deerfield River Mainstem, Reach #4: the 2.86 miles of the Deerfield River between Deerfield Station and Dam #4 and Deerfield Station and Dam #3 are partially impounded, but include a 0.6 mile scenic river section above Shelburne Falls that includes the famous Bridge of Flowers. The following section of the Deerfield River is ineligible for designation due to lack of free-flowing character.

- Deerfield Station and Dam #3 make 2.2 miles of the Deerfield River ineligible due to lack of free- flowing character.

River Segment 5: Deerfield River Mainstem, Reach #5: the 18.26 miles of the Deerfield River between Bear Swamp Dam and Deerfield Station and Dam #4 are generally free-flowing below Bear Swamp Dam until reaching the impoundment area for Deerfield Station and Dam #4. This area includes the famous Zoar Gap and is extremely popular for whitewater rafting, tubing, swimming and fishing. The following short section of the Deerfield River is ineligible for designation due to the lack of free-flowing character.

- The impoundment area for Deerfield Station and Dam #4 on the Deerfield River makes 2.2 miles of the Deerfield River ineligible due to lack of free- flowing character. This impoundment reservoir ends at the so-called “Knotweed Island” near the Deerfield River Route 2 Rest Area/Picnic Area.

River Segment 6: Deerfield River Mainstem, Reach #6: the 4.58 miles of the Deerfield River between Deerfield Station and Dam #5 and Fife Brook/Bear Swamp Dam are generally free- flowing are generally free- flowing below Deerfield Station and Dam #5 until

reaching the impoundment area for Bear Swamp Dam. This 2-mile free-flowing section includes the famous "Dryway" whitewater boating area. The following short section of the Deerfield River is ineligible for designation due to the lack of free-flowing character.

- The impoundment area for Fife Brook/Bear Swamp Dam on the Deerfield River makes 2.5 miles of the Deerfield River ineligible due to lack of free- flowing character.

River Segment 7: Deerfield River Mainstem, Reach #7: the 0.73 miles of the Deerfield River between Sherman Reservoir and Deerfield Station and Dam #5 are fully impounded and not eligible for designation due to their lack of free-flowing character.

River Segment 8: Cold River: the entire 13.3 miles of the Cold River between its headwaters and the confluence with the Deerfield River are undammed, free- flowing and eligible for designation.

River Segment 9: Green River: the 17.25 miles of the Green River are generally free-flowing in many sections, however there are five dams on the river in Massachusetts, including:

- The C.A. Denison Dam in Leyden on the Green River makes 0.14 miles of the Green River ineligible due to lack of free- flowing character.
- The Pumping Station Dam at Eunice Williams Drive in Greenfield on the Green River makes 0.37 miles of the Green River ineligible due to lack of free- flowing character.
- The Swimming Pool Dam in Greenfield on the Green River makes 0.32 miles of the Green River ineligible due to lack of free- flowing character.
- Greenfield Electric Light and Power Dam and the Wiley and Russell Dam in Greenfield on the lower Green River near its confluence with the Deerfield River make 1.62 miles of the Green River ineligible due to lack of free- flowing character. However, both of these dams are slated for removal.

River Segment 10: South River: the 15.73 miles of the South River are generally free-flowing below the Ashfield Pond Dam, with the exception of two short segments in the immediate vicinity of two dams. The following short sections of the South River are ineligible for designation due to their lack of free-flowing character:

- The Conway Electric Dam in Conway on the South River makes 0.17 miles of the South River ineligible due to lack of free- flowing character.
- The Flagg Dam in Conway on the South River makes 0.12 miles of the South River ineligible due to lack of free- flowing character.
- The Ashfield Pond Dam in Ashfield at the headwaters on the South River makes 0.8 miles of the South River ineligible due to lack of free- flowing character.

River Segment 11: North River: the 3.32 miles of the North River between the confluence of North River, West Branch and North River, East Branch, and its confluence with the Deerfield River are generally free- flowing with the exception of a short segment in the immediate vicinity of Kendall Company Dam in Griswoldville (Colrain). The following short

section of the North River is ineligible for designation due to the lack of free-flowing character.

- The Kendall Company Dam in Griswoldville (Colrain) on the North River makes 0.3 miles of the North River ineligible due to lack of free- flowing character.

River Segment 12: North River, West Branch: the 12.83 miles of the North River, West Branch between its headwaters and the confluence of North River, West Branch and North River, East Branch are generally free- flowing, with the exception of a short segment in the immediate vicinity of Bolton Pond Dam in Colrain. The following short section of the North River, West Branch is ineligible for designation due to its lack of free-flowing character.

- The Bolton Pond Dam in Colrain on the North River, West Branch makes 0.19 miles of the North River, West Branch ineligible due to lack of free- flowing character.

River Segment 13: North River, East Branch: the 7.58 miles of the North River, East Branch between the Vermont border and the confluence with the North River, West Branch are generally free- flowing, with the exception of a 0.19 mile segment in the immediate vicinity of Kendall Company Dam No. 1 in Colrain.

River Segment 14: Pelham Brook: the 4.26 miles of Pelham Brook between Mill Pond Dam and the confluence with the Deerfield River are generally free- flowing and eligible. The upper 2.2-mile section of Pelham Brook is ineligible for designation due to its lack of free-flowing character, impeded by the Pelham Lake Dam in Rowe and the Mill Pond Dam in Rowe on Pelham Brook.

River Segment 15: Dunbar Brook: the 5.5 miles of Dunbar Brook between its headwaters and the confluence with the Deerfield River are generally free- flowing, with the exception of the impoundment area for the Dunbar Brook Dam near the confluence. The following short section of the Dunbar Brook are ineligible for designation due to the lack of free-flowing character:

- The Dunbar Brook Dam in Florida on Dunbar Brook makes 0.16 miles of the Dunbar Brook ineligible due to lack of free- flowing character.

River Segment 16: Bear River: the entire 8.37 miles of the Bear River between its headwaters and the confluence with the Deerfield River are undammed, free- flowing and eligible for designation.

River Segment 17: Clesson Brook: the 9.66 miles of Clesson Brook between headwaters and the confluence with the Deerfield River are generally free- flowing, with the exception of Cox Pond Dam at the headwaters. The following short section of Clesson Brook is ineligible for designation due to the lack of free-flowing character.

- The Cox Pond Dam in Hawley on Clesson Brook makes .03 miles of Clesson Brook at the headwaters ineligible due to lack of free- flowing character.

River Segment 18: Chickley River: the entire 10.7 miles of the Chickley River between its headwaters and the confluence with the Deerfield River are undammed, free- flowing and eligible for designation.

River Segment 19: Gulf Brook: the 3.43 miles of Gulf Brook between headwaters and the confluence with the Cold River are generally free- flowing, with the exception of Burnett Pond Dam at the headwaters. The following short section of Gulf Brook is ineligible for designation due to the lack of free-flowing character.

- The Burnett Pond Dam in Savoy on Gulf Brook makes 0.1 miles of Gulf Brook ineligible due to lack of free- flowing character.

River Segment 20: Bog Brook: the 1.48 miles of Bog Brook between headwaters and the confluence with the Cold River are generally free- flowing, with the exception of Bog Pond Dam at the headwaters. The following short sections of Bog Brook is ineligible for designation due to the lack of free-flowing character.

- The Bog Pond Dam in Savoy on Bog Brook makes 0.23 miles of Bog Brook ineligible due to lack of free- flowing character.

River Segment 21: Rice Brook

The entire 4.07 miles of Rice Brook between its headwaters and the confluence with the Deerfield River are undammed and free- flowing, but the urban channelization in Charlemont makes it ineligible, with only a relatively small watershed above the urbanized area.

River Segment 22: Mill Brook: The 10.22 miles of Mill Brook between the Reverend Gilbert Dam #2 in Heath and the Deerfield River confluence are generally free- flowing with the exception of one short segment in the immediate vicinity of the J.A. Wells Upper Dam in Charlemont on Mill Brook makes 0.29 miles of Mill Brook ineligible due to lack of free-flowing character.

River Segment 23: Chapel Brook: The entire 6.06 miles of Chapel Brook between its headwaters and the confluence with the South River are undammed, free- flowing and eligible for designation.

Summary of Deerfield River Segment Eligibility

#	Deerfield River and Tributaries segment	Total	Free Flowing	Not Free Flowing	Overall Eligibility
		in miles			
1	Deerfield River Mainstem, Reach #1	14.05	13.92	0.13	Eligible
2	Deerfield River Mainstem, Reach #2	1.95	0.65	1.3	Partially Eligible
3	Deerfield River Mainstem, Reach #3	1.06	0	1.06	Not Eligible
4	Deerfield River Mainstem, Reach #4	2.86	0.6	2.2	Partially Eligible
5	Deerfield River Mainstem, Reach #5	18.2	16.0	2.2	Eligible
6	Deerfield River Mainstem, Reach #6	4.58	2	2.5	Partially Eligible
7	Deerfield River Mainstem, Reach #7	0.73	0	0.73	Not Eligible
8	Cold River	13.3	13.3	0	Eligible
9	Green River (total, see below for sections)	17.25	16.06	1.19	Eligible
9a	Green River (N to S)-Free Flow	1.71	1.71	0	Eligible
9a	Green River (N to S)-Impeded at CA Dennison Dam	0.41	0	0.14	Not Eligible
9b	Green River (N to S)-Free Flow	6.56	6.56	0	Eligible
9b	Green River (N to S)-Impeded at Pumping Station Dam	0.37	0	0.37	Not Eligible
9c	Green River (N to S)-Free Flow	4.45	4.45	0	Eligible
9c	Green River (N to S)-Impeded at Swimming Pool Dam	0.32	0	0.32	Not Eligible
9d	Green River (N to S)-Free Flow	2.05	2.05	0	Eligible
9d	Green River (N to S)-Impeded at Electric Light Dam	0.19	0	0.19	Not Eligible
9e	Green River (N to S)-Free Flow	0.21	0.21	0	Not Eligible
9e	Green River (N to S) Impeded at Whitney and Russell Dam	0.17	0	0.17	Not Eligible
9f	Green River (N to S)-Free Flow	1.05	1.05	0	Not Eligible
10	South River (total, see below for sections)	15.73	15.21	0.52	Eligible
10a	South River (N to S)-Impeded at Ashfield Pond Dam			0.17	Not Eligible
10b	South River (N to S) -Free Flow		10.9		Eligible
10b	South River (N to S)-Impeded at Flagg Dam			0.12	Not Eligible

#	Deerfield River and Tributaries segment	Total	Free Flowing	Not Free Flowing	Overall Eligibility
		in miles			
10c	South River (N to S) -Free Flow		3.7		Eligible
10c	South River (N to S)- Impeded at Conway Electric Dam			0.23	Not Eligible
10d	South River (N to S) -Free Flow 3		0.57		Eligible
11	North River	3.32	3.02	0.3	Eligible
12	North River, West Branch	12.83	12.64	0.19	Eligible
13	North River, East Branch	7.58	7.39	0.19	Eligible
14	Pelham Brook	4.26	4.26	0	Eligible
14	Dunbar Brook	5.5	5.34	0.16	Eligible
16	Bear River	8.37	8.37	0	Eligible
17	Clesson Brook	9.66	9.63	0.03	Eligible
18	Chickley River	10.7	10.7	0	Eligible
19	Gulf Brook	3.43	3.33	0.1	Eligible
20	Bog Brook	1.48	1.25	0.23	Eligible
21	Rice Brook	4.07	4.07	0	Eligible
22	Mill Brook	10.22	9.93	0.29	Eligible
23	Chapel Brook	6.06	6.06	0	Eligible
	Totals	**144.21**	**162.66**	**13.32**	

Dams on the Deerfield River

There are 10 dams on the Deerfield River mainstem, owned by three different electric utilities:

- Great River Hydro LLC purchased from the TransCanada Corporation in 2017 the Somerset, Searsburg, Harriman, Sherman, Deerfield #2, #3, #4 and #5 hydroelectric generating stations and dams;
- Brookfield Renewable U.S. owns the Bear Swamp Pump Storage project and Fife Brook dam;
- Central Rivers Power MA, LLC , owns the relatively small Gardner Falls Dam.

The various hydroelectric facilities were purchased from National Energy & Gas Transmission, Inc. (NEGT) subsidiary USGen New England, Inc. at the conclusion of NEGT's Chapter 11 bankruptcy and liquidation of the assets of the USGen subsidiary in 2005.

In 1994, an agreement on relicensing the various dams with the Federal Energy Regulatory Commission (FERC) and the Massachusetts and Vermont state authorities that regulate water quality led to comprehensive coordinated water release and power generation schedules to enable more recreational use of the river, with minimum water flow measures to mitigate the dam impact on riverine habitat.

A 260-foot-tall (79 m) dam was proposed for the Stillwater section of the river in Deerfield in the mid to late twentieth century. Local opposition helped to defeat the proposal.

The hydroelectric development of the Deerfield River began in 1910 when the New England Power Company was formed to acquire water rights on the Deerfield and construct dams. The largest dam, Harriman, was built in the early 1920s and has an unusual overflow structure known as the "Glory Hole." This structure is a funnel-like concrete tube that leads to a tunnel under the earthen dam and prevents high flows from overtopping the dam.

The last dam built on the Deerfield was Fife Brook Dam, which was built in the early 1970s in conjunction with the development of the Bear Swamp Pumped Storage facility. This facility acts as a battery for power generated during times of low demand. By using excess electricity to pump water to the top of the mountain, where a reservoir was created by building levees around an existing high swamp, energy is stored. When electrical demand is higher (usually midday or afternoon/evening) the water from the upper reservoir can be released through the turbines (which act as pumps in reverse) to meet demand.

Massachusetts Dams on Deerfield River Mainstem

Sherman Dam

Owner: Great River Hydro LLC (www.greatriverhydro.com/facilities)

Sherman Dam and Station, located on the Deerfield River in Rowe and Monroe, Massachusetts, are managed as part of the Deerfield River Hydroelectric Project (FERC License No. P-2323).

- 217-acre, 2.0-mile long reservoir at 1,107.66 feet above sea level, which extends into Whitingham, Vermont
- 8.00 feet of useable storage managed seasonally
- Entire undeveloped shoreline owned by Great River Hydro and protected by conservation easement
- 6 megawatts of generation capacity with 1 Westinghouse generator with a Francis waterwheel
- FERC License No. P-2323, issued April 4, 1997, expires March 31, 2037 (40 years)
- Certified as Low Impact Hydropower by Low Impact Hydropower Institute

Fife Brook Dam: Also known as "The Zoar Gap Section"

Owner: Brookfield Renewable U.S.

The Fife Brook Dam is located on the Deerfield River in Florida, Massachusetts. This dam was built in the early 1970s. It provides access for launching rafts and other small watercraft. The existing Fife Brook Hydroelectric Development consists of:

- An 890-footlong, 130-foot-high earthen rock-fill dam that includes a 90-foot-long concrete spillway;

- A 152-acre impoundment with a gross storage capacity of 6,900 acre-feet at a normal maximum water surface elevation of 870 feet NGVD. The existing project boundary around the Bear Swamp Project extends approximately 2.5 miles upstream of the Fife Brook dam and includes lands around the upper and lower reservoirs.

Unimpeded Segment: The longest stretch of the Deerfield River without a dam on the main river, downstream from Fife Brook Dam, is 17.6 miles.

Deerfield No. 5 Station

Owner: Great River Hydro LLC (www.greatriverhydro.com/facilities)

Deerfield #5 Dam, located on the Deerfield River in Rowe and Monroe, Massachusetts, and Deerfield #5 Station, located downstream in Florida, Massachusetts, are managed as part of the Deerfield River Hydroelectric Project (FERC License No. P-2323).

- 38-acre, 0.6-mile long reservoir at 1,026.66 feet above sea level, located immediately downstream of Sherman Station
- 8.00 feet of useable storage managed seasonally
- Reservoir connected to station via 2.8-mile long series of concrete tunnels and canals
- Mostly undeveloped shoreline principally owned by Great River Hydro and protected by conservation easement
- 14 megawatts of generation capacity with 1 Westinghouse generator with a Francis waterwheel
- A new 230 kilowatt unit at the dam will generate power while providing conservation flows downstream
- FERC License No. P-2323, issued April 4, 1997, expires March 31, 2037 (40 years)
- Certified as Low Impact Hydropower by Low Impact Hydropower Institute

Deerfield No. 4 Station

Owner: Great River Hydro LLC (www.greatriverhydro.com/facilities)

Deerfield No. 4 Station and Dam, located on the Deerfield River in Buckland and Shelburne, Massachusetts, are managed as part of the Deerfield River Hydroelectric Project (FERC License No. P-2323).

- 75-acre, 2.2-mile long reservoir at 469.66 feet above sea level
- 5.00 feet of usable storage managed seasonally
- A 1,500-foot long concrete lined tunnel connects the dam to the forebay at the station
- 6 megawatts of generation capacity with 3 General Electric generators with Francis waterwheels
- FERC License No. P-2323, issued April 4, 1997, expires March 31, 2037 (40 years)

- Certified as Low Impact Hydropower by Low Impact Hydropower Institute

Deerfield No. 3 Station

Owner: Great River Hydro LLC (www.greatriverhydro.com/facilities)
Deerfield No. 3 Station and Dam, located on the Deerfield River in Buckland and Shelburne, Massachusetts, are managed as part of the Deerfield River Hydroelectric Project (FERC License No. P-2323).

- 42-acre, 2.2-mile long reservoir at 402.66 feet above sea level
- 6.00 feet of useable storage managed seasonally
- A 600-foot long concrete lined tunnel and 900-foot long forebay canal connects the dam to the station
- 7 megawatts of generation capacity with 3 General Electric generators with Francis waterwheels
- FERC License No. P-2323, issued April 4, 1997, expires March 31, 2037 (40 years)
- Certified as Low Impact Hydropower by Low Impact Hydropower Institute

Gardners Falls Project

Owner: Central Rivers Power MA, LLC, a subsidiary of LS Power/Patriot Hydro, LLC.

The Gardners Falls Project is located on the Deerfield River in the towns of Buckland and Shelburne Falls in Franklin County, Massachusetts. The project is situated downstream of the Bear Swamp Pumped Storage Project, FERC No. 2669) and between the Deerfield No. 3

and Deerfield No. 2 developments of the Deerfield River Project (LIHI #90). The project was originally constructed in 1904.

Project works consisting of:

- A concrete gravity dam, 337 feet long with a maximum height of 30 feet at permanent crest elevation 332.79 feet mean sea level (msl) and flashboard elevation 334.79 feet msl,
- An impoundment 3,200 feet long, with a surface area of 21 acres, 190 acre-feet gross storage, and 37.2 acre-feet usable storage,
- A brick and concrete powerhouse equipped with four turbine-generator units with total capacity 3.58 MW, (4) a 1300-foot power canal 31 feet wide and 15 feet deep, and
- A double circuit 13.8 kV transmission line connecting the Gardners Falls project to the Montague substation.

Flows into the project, which is located between the Deerfield #3 and Deerfield #2 developments, are dependent upon flow releases from the upstream projects. The Project provides a 150-CFS minimum flow and limits fluctuations to no more than 1.8 feet below the crest of the dam. This flow regime was developed in consultation with the Massachusetts Division of Fisheries and Wildlife (MDFW) to protect and enhance fish resources in the river. The state impaired waters list notes that the waters above and below the dam are considered Category 5 waters, impaired with E. coli bacteria. Potential causes include municipal discharges, sewer overflows, waterfowl, and introduction of non-native organisms. The impairment appears to begin at the Buckland wastewater treatment plant. There is no indication that the project adversely affects water quality.

Deerfield No. 2 Station

Owner: Great River Hydro LLC (www.greatriverhydro.com/facilities)

Deerfield No. 2 Station and Dam, located on the Deerfield River in Shelburne and Conway, Massachusetts, are managed as part of the Deerfield River Hydroelectric Project (FERC License No. P-2323).

- 64-acre, 1.3-mile long reservoir at 294.66 feet above sea level
- 11.00 feet of useable storage managed seasonally
- 7 megawatts of generation capacity with 3 General Electric generators with Francis waterwheels
- FERC License No. P-2323, issued April 4, 1997, expires March 31, 2037 (40 years)
- Certified as Low Impact Hydropower by Low Impact Hydropower Institute

Vermont Dams on Deerfield River Mainstem

Somerset Reservoir

Owner: Great River Hydro LLC (www.greatriverhydro.com/facilities)

Somerset Reservoir is located at the headwaters of the Deerfield River in Stratton and Somerset, Vermont, and is managed as part of the Deerfield River Hydroelectric Project (FERC License No. P-2323).

- 1,623-acre, 5.6-mile long reservoir at 2,133.58 feet above sea level
- 26.58 feet of storage managed seasonally
- Entire undeveloped shoreline owned by Great River Hydro and protected by conservation easement in the heart of Green Mountain National Forest
- FERC License No. P-2323, issued April 4, 1997, expires March 31, 2037 (40 years)
- Certified as Low Impact Hydropower by Low Impact Hydropower Institute

Searsburg Station

Owner: Great River Hydro LLC (www.greatriverhydro.com/facilities)
Searsburg Reservoir and Station, located on the Deerfield River in Searsburg, Vermont, are managed as part of the Deerfield River Hydroelectric Project (FERC License No. P-2323).

- 30-acre, 1.0-mile long reservoir at 1,754.66 feet above sea level
- 8.5 feet of useable storage managed seasonally
- Reservoir connected to station via 3.5-mile long, 8-foot diameter wood stave conduit pipe
- 5 megawatts of generation capacity with one General Electric generator with a Francis waterwheel
- Entire undeveloped shoreline owned by Great River Hydro and protected by conservation easement in the heart of Green Mountain National Forest
- FERC License No. P-2323, issued April 4, 1997, expires March 31, 2037 (40 years)
- Certified as Low Impact Hydropower by Low Impact Hydropower Institute

Harriman Station and Reservoir

Owner: Great River Hydro LLC (www.greatriverhydro.com/facilities)

Harriman Station and Harriman Reservoir, located on the Deerfield River in Wilmington, Whitingham, and Readsboro, Vermont, are managed as part of the Deerfield River Hydroelectric Project (FERC License No. P-2323).

- 2,184-acre, 8.0-mile long reservoir at 1,480.66 feet above sea level
- 57.66 feet of useable storage managed seasonally

- Uncommon “Morning Glory” style spillway tunnel at dam
- Reservoir connected to station via a2.5-mile long, 14-foot diameter concrete-lined tunnel
- Entire undeveloped shoreline owned by Great River Hydro and protected by conservation easement in the heart of Green Mountain National Forest
- 41 megawatts of generation capacity with 3 General Electric generators with a Francis waterwheel
- FERC License No. P-2323, issued April 4, 1997, expires March 31, 2037 (40 years)
- Certified as Low Impact Hydropower by Low Impact Hydropower Institute

Dams on Deerfield River Tributaries

Bear River

The Bear River is undammed along its entire length.

Bog Brook

Bog Brook has a single dam at the headwaters, namely the Bog Pond Dam. It is undammed for its entire length below this dam.

Chickley River

The Chickley River is undammed along its entire length.

Clesson Brook

Clesson Brook is undammed its entire length.

Cold River

The Cold River is undammed along its entire length.

Dunbar Brook

Great River Hydro operates a dam on Dunbar Brook near its confluence with the Deerfield River.

Green River Dams

There are four dams on the Green River within the City of Greenfield and one in Leyden. A recent study, conducted for the U.S. Army Corps of Engineers, concluded that two of the dams should be removed, and the two others should get fish ladders so migrating or spawning fish can get past them on their way upstream.

The study determined that neither the Meridian Street nor the Mill Street Dam served any useful public purpose. Their removal could improve the river's ecological health and restore habitat. Both the Meridian and Mill dams will be removed. Greenfield Swimming and Recreation Area's dam appears to allow fish passage during critical periods, as the stop logs are installed during the summer. The Recreation Area Dam and the farther-upstream Pumping Station Dam will get fish ladders that give fish water-filled steps up and over them. The measures will create fish navigability north to Guilford, Vt., where the only other dam on the river is located. That dam was rebuilt nearly 10 years ago and equipped with a fish ladder. The five Green River dams include:

- Wiley/Russell Dam
- The Wiley/Russell Dam is a historic dam located on the Green River in Greenfield, Massachusetts. It is a timber crib structure which has been severely compromised. Its name comes from the "Wiley & Russell Manufacturing Company" which once operated mills powered by the dam. The City of Greenfield has agreed to the removal of this dam. The Connecticut River Conservancy (CRC) is seeking funding for that project.
- Mill Street Dam (Greenfield Electric Light and Power Dam)
- A power company purchased the site of the Green River Dam and built a non-attended hydroelectric station that generated electricity until the 1950s. Complete removal of the dam may expose utilities upstream, which would be costly to fix. The City of Greenfield has agreed to the partial removal of this dam. CRC is seeking funding for that project.
- The C.A. Denison Dam in Leyden.

- •The Pumping Station Dam at Eunice Williams Drive in Greenfield: This dam was an important water supply dam on the Green River. It was in the path of Tropical Storm Irene in 2011 and was washed out. The dam is being restored.
- •The Swimming Pool Dam in Greenfield on the Green River makes miles (feet) of the Green River ineligible due to lack of free- flowing character.

There is also one dam on the Green River in Vermont, near the state border with Massachusetts:

- Timber Crib Dam at Green River, VT

Gulf Brook

Gulf Brook has a single dam at the headwaters, namely the Burnett Pond Dam. It is undammed for its entire length below this dam.

Mill Brook

Mill Brook has two dams, the J.A. Wells Upper Dam in the Town of Charlemont and the Reverend Gilbert Dam #2.

North River

The North River has a single dam, the Kendall Company Dam in the Griswoldville section of Colrain. The North River has only one dam but has significant modifications to its channel due to its industrial history. The fluvial geomorphic assessment study reports:

> *A fluvial geomorphology assessment was conducted on North River in Franklin County, Massachusetts to determine the causes of channel instability and identify restoration options to better manage riverine problems. The North River watershed has a long history of human land use, including significant manipulation of the river channel itself. Numerous mills were active in the watershed during the 18th and 19th century with many associated with dams built across the river to provide water for powering the structures. Considerable lengths of the channel were also straightened and cleared of boulders and wood as part of this process and associated with efforts to reduce flooding. While these numerous mills, cornerstones of the watershed's proud history, are no longer in use today, save one, the legacy of this period continues to impact river function, habitat, and public safety in at least three important ways. First, the erosion of silt- and clay-rich impoundment sediments accumulated behind the now breached mill dams increases downstream sediment delivery to water bodies already impaired by excess sediment loading. Second, damaging flood flows passing through previously straightened water courses are unable to spread out across adjacent floodplains due to channel incision or confining berms, further enhancing downstream sediment transport. Finally, the quality of aquatic habitat is poor for great lengths of*

the river, because the river channel remains largely devoid of the pools, cover, and flow complexity created when large boulders and wood are present in the channel. River restoration efforts that simultaneously address these issues of increased sediment loading, exacerbated flooding and erosion, and degraded aquatic habitat have the greatest chance of long-term success (Field 2015).

North River, East Branch

The North River, East Branch is undammed along its entire length to the Vermont border.

North River, West Branch

The North River, West Branch has a single dam near its confluence, the Bolton Pond Dam in Colrain. It is undammed its entire length above this dam.

Pelham Brook

Pelham Brook is undammed along its entire length, with the exception of two dams at the headwaters, the Pelham Lake Dam and the Mill Pond Dam**.**

Rice Brook

Rice Brook is undammed its entire length. It is channelized, however, in Charlemont.

South River

The South River has three dams, including:

- The Ashfield Pond Dam at the headwaters: a 16-foot tall earthen dam;
- The Conway Electric Dam: a large 70-foot tall dam, rated in poor condition, that originally powered the Conway Electric Street Railway;
- The Flagg Dam: a small dam built for the historic Flagg Mill.

D. Identification of Outstandingly Remarkable Values in the Deerfield River Watershed

The following describes the resources supported by the Deerfield River watershed that are deemed to meet the "Outstandingly Remarkable" threshold for Wild and Scenic designation. All of the resources cited contribute to the overall eligibility of the Deerfield River and tributaries for designation.

The resources fall within the following categories: Scenic and Recreational, Natural Resource and Historic and Cultural.

E. Scenic and Recreational ORVs

Scenic and recreational Outstandingly Remarkable Values abound in the Deerfield River watershed.

Recreational Features

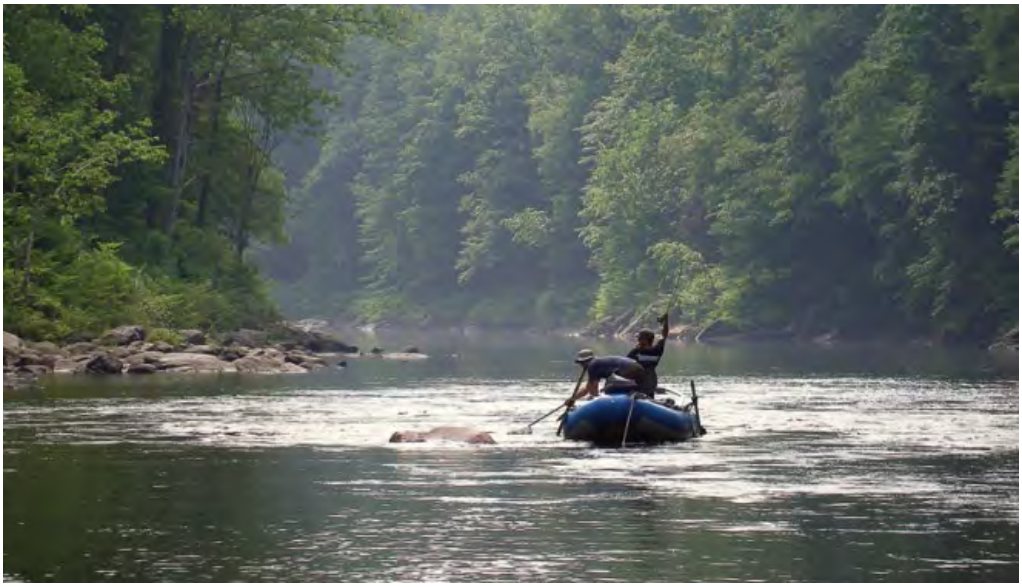
Activities on and around the Deerfield River and its tributaries include hiking, mountain biking, whitewater kayaking, canoeing, tubing, fishing, swimming, and camping.

Swimming Holes

The numerous swimming holes in the Study area are a popular destination for locals and visitors alike. Collectively they are certainly an important ORV of regional significance.

- Zoar Picnic Area, Charlemont
- Sunburn Beach, Charlemont
- Whirley Baths , Charlemont
- Wilcox Hollow, Shelburne
- Shunpike Rest Area, Charlemont
- Whirley Baths, Mohawk State Forest
- Mohawk Park near the Route 2 bridge, Charlemont
- Stillwater, Deerfield: A popular swimming area by the Stillwater Bridge in Deerfield has waterside cliffs up to forty feet high that swimmers jump from; this activity is tolerated but not condoned.
- Conway Station Falls, Conway on the South River

Fishing



The Deerfield River is perhaps the best coldwater fishery in the state, offering excellent trout fishing all year round due to cold water releases from the bottom of dams along the river. In addition, several tributaries, such as the North River, Chickley River and others

offer excellent fishing for native and stocked fish. The lower reaches of the river downstream of Old Deerfield have great bass fishing and shad fishing in the spring. Fishers can access the river at several pull-offs along Rt 2 and Zoar Rd in Massachusetts and along the lower Deerfield river in Shelburne Falls, Conway and Deerfield (Deerfield River Watershed Association).

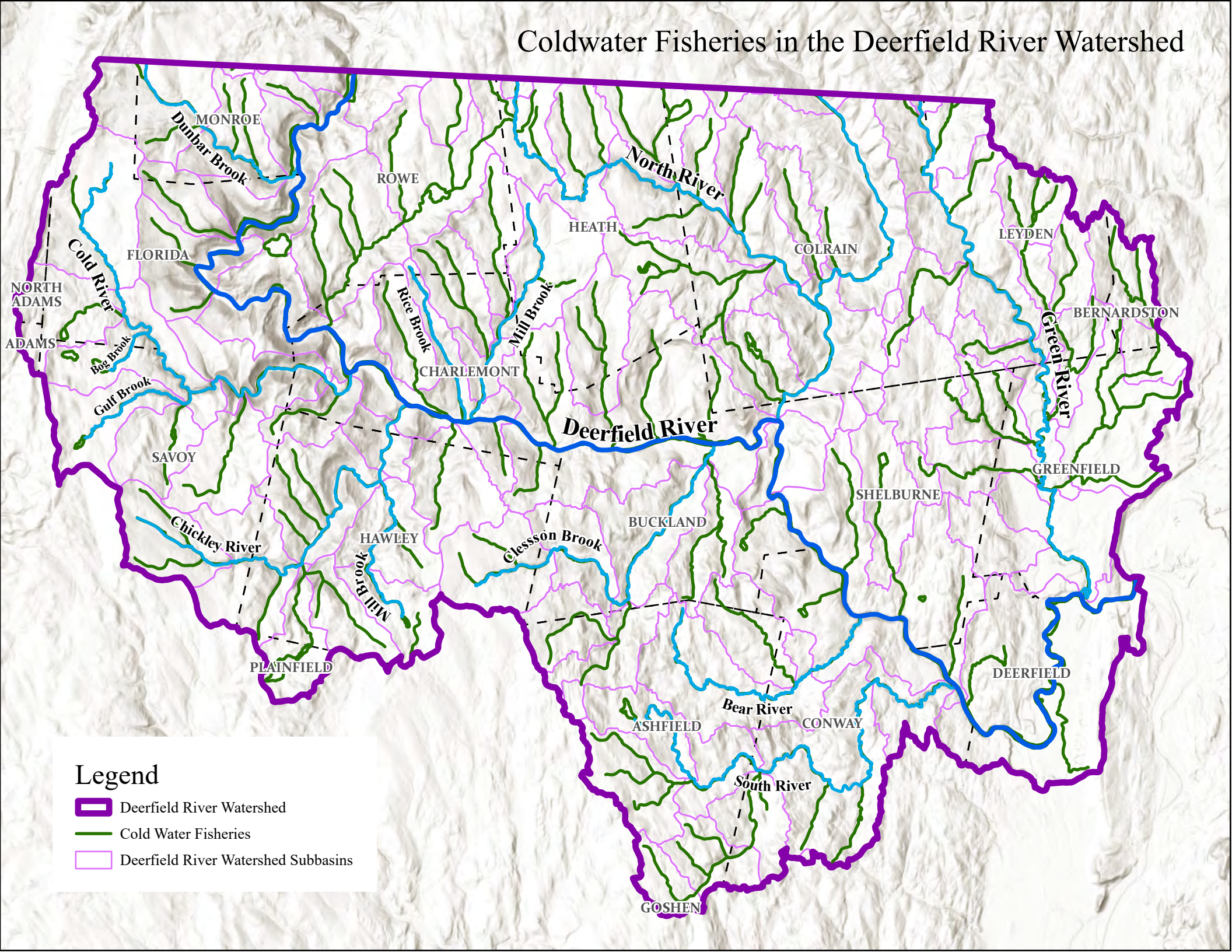
Fly Fisherman magazine referred to the Deerfield River as "*New England's dry-fly diamond." Thanks to cold daily hydropower releases from upriver dams, fly fishers now enjoy cool water temperatures on the Deerfield right through September, and some of the best spring and summer dry-fly fishing for wild trout in the East. The best Deerfield trout water consists of two floatable stretches. The upper reach, from Fife Brook Dam to the Number 4 Dam, has 17 miles of fast riffle water, undercut banks, and the occasional deep pool, where 14- to 18-inch brown, rainbow, and brook trout congregate to feed on steady streams of mayflies, caddis, and stoneflies throughout the year. The lower river, from Shelburne Falls downstream, has a mix of wild and stocked browns and 'bows, with long, technical slicks, and excellent wade fishing with delicate presentations and hatch-matching on long leaders tapered down to 6X tippets* (Harrison 2014).

Rugged terrain and a focus on wild fish make the Deerfield River a must-visit destination for New England trout anglers. The Deerfield River winds through the scenic foothills and steep ravines of southern Vermont and western Massachusetts before eventually flowing into the rich farmland of the Pioneer Valley and the Connecticut River. Along its 70-mile length, 10 hydroelectric dams take advantage of the steep elevation change caused by the rugged terrain. This creates unique tailwater conditions with timed release schedules that can fluctuate the flow from 800 to 80 cubic feet per second (CFS) each day. The river is divided into sections based on these dams, with each section having its own release schedule and flow. Despite the prolific hydroelectric development, trout populations in the Deerfield are thriving. Steep mountain ravines and regular water releases help keep large sections of the river cool and oxygenated most of the year.

Mass Wildlife has recently concluded a comprehensive 4-year study of the brown trout population from the Fife Brook Dam to the Route 2 bridge in Charlemont, a section of the river heavily used for both whitewater rafting and catch-and-release fly fishing. Their mark-recapture study sought to investigate the proliferation of wild trout in this section. They found that 80% of the brown trout sampled were wild, a finding that spurred the decision to stop stocking this area with hatchery-raised trout. It was a huge win for groups such as Deerfield River Trout Unlimited and Mass Wildlife, who have worked tirelessly to maintain this beautiful section of the river through strict regulation, community outreach, and scientific study. Fly anglers should be equally excited at the prospect of a wild trout fishery in the foothills of western Massachusetts since it's an area accessible to most fishers in central and southern New England within a two-hour drive (Donahue 2024).

See **Coldwater Fisheries** map on the next page.

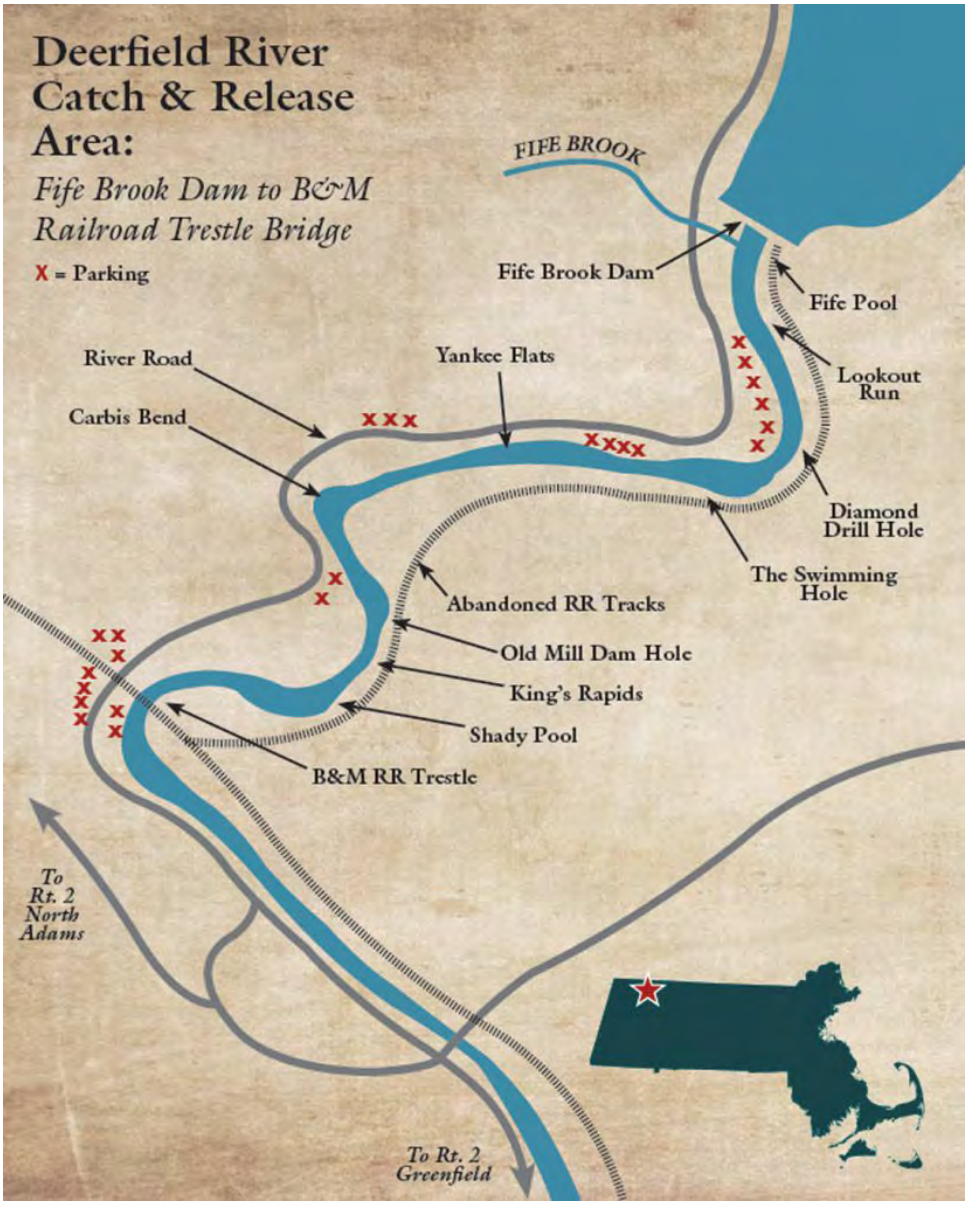
Coldwater Fisheries in the Deerfield River Watershed



On the Deerfield River mainstem, there are two important catch and release fishing areas on the Massachusetts portion:

- The upper section is from immediately below the Fife Brook Dam to the Hoosac Tunnel Railroad bridge.
- The lower section is from the mouth of Pelham Brook to the Route 2.

These areas receive a large amount of recreational use, with anglers travelling from out of state to fish here. The attraction is naturalized (wild) brown and rainbow trout.



Source: Devons, 2024

Other important fishing areas in the Deerfield River watershed include:

- The North River from the confluence with the Deerfield to the dam in Griswoldville (Shelburne/Colrain) is stocked but also some wild rainbows. Above dam is relatively sterile.
- Green River is very popular.
- Upper West Branch of the North River into Heath. Wild rainbows and brook trout. That entire area around Crowningshield property into Cook State forest is a good area.
- Clesson Brook in Buckland.
- Chickley River, Charlemont/Hawley, has wild rainbows and brook trout in upper sections.
- Avery Brook, Heath to Charlemont, has wild rainbows and brook trout way up.
- Cold River, and the tributary that goes along side Route 2 to the Florida border is pretty good. Rare wild brook trout strain apparently in that section.
- Fisk River in Shelburne is good - wild brook trout.
- Bear River, Conway in upper sections, wild rainbows from South Shirkshire down to the confluence with Deerfield.
- South River, Conway, popular with some access. Wild rainbows and wild brook trout closer to the Deerfield. Headwaters in Conway/Ashfield have wild brook trout.

Source: John Organ (personal communication)

Paddling

Canoeing, kayaking and tubing opportunities abound along the Deerfield River and its tributaries. The rivers offer unique experiences for all levels of paddling, from gentle meandering float trips to technical whitewater runs. There are two sections of the river for whitewater paddling: the Fife Brook section for class II and III paddlers, and the "Dryway" for class IV paddlers.

There are several tributaries of the Deerfield River that provide excellent whitewater creek runs, including the class IV-V West Branch of the Deerfield in Readsboro, Vermont, the class V Dunbar Brook in Monroe, Massachusetts, the class V Pelham Brook in Rowe, Massachusetts, the class IV Cold River in Florida and Charlemont, Massachusetts, and the class III Chickley River in Hawley, Massachusetts.

Source: Wikipedia

Key paddling areas include:

Zoar Picnic Area to East Charlemont

This 12-mile section of the Deerfield River has a number of Class I-II smaller rapids and riffles that make it a popular summer tubing float but also a good training ground for whitewater boaters. The river can be wide, shallow, and slow but it is a good reach for those seeking a fun float on a hot summer day and regularly enjoyed by groups that can

include families, scouts, and school groups. Good public access points include the put-in at Zoar Gap Picnic Area on river left, the intermediate access point at Shunpike Rest Area on river left, and the take-out at East Charlemont Boat Ramp on river left. There are a few roadside pullouts on the lower stretches of the run that also have good swimming holes. Great Outdoors maintains a private access that is popular with tubers but can also be used by boaters for a modest fee. Various outfitters serve tubers, whitewater boaters, and guests interested in an outfitted trip on this segment or more commonly one of the more challenging whitewater sections upstream.

The Dryway, Monroe Bridge to Bear Swamp

The 3-mile Monroe Bridge Section of the Deerfield (also known as 'The Dryway') is a popular class III-IV river for rafting and kayaking that can draw a rather sizable crowd on release days. The river generally starts out with easy flow then gets progressively harder as one paddles downstream. The Dryway is a premier destination for most northeastern paddlers. The water in this three-mile section of the Deerfield is usually bypassed by a diversion canal from Dam #5 all the way down to the reservoir behind Fife Brook Dam (which is where the nickname 'Dryway' comes from). Many raft companies offer guided trips down The Dryway (and its companion easier Fife Brook/Zoar Gap section downstream). These include Berkshire East, Crabapple Whitewater, Deerfield Fly Shop, the Great Outdoors, Zoar Outdoor. There are also fishing businesses that serve visitors.

Source: American Whitewater n.d.

Deerfield River, Bardwell's Ferry, Conway to Deerfield

This beautiful five-mile route on the lower Deerfield begins in a remote wilderness-like area at Bardwell's Ferry Bridge in Conway, although some paddlers begin further upstream at Wilcox Hollow. Downstream from the historic Bardwell's Ferry Bridge, the river enters a scenic gorge, which includes a waterfall and then numerous beautiful water rivulets cascading to the river along the way. Woodland forests line the banks of the Deerfield River and there are a few sections of fast-moving Class I rapids to add some excitement to this paddle. The South River with its 130-foot pedestrian bridge for the Mahican-Mohawk hiking trail is a scenic stop. Bald eagles frequent this area. Leaving the woodlands, the route arrives to the pastures of Deerfield, and the take out is in the heart of Deerfield's rich farm country.

Green (Deerfield River Trib.), W. Leyden to covered bridge

This 17.4 mile section of the Green River features Class II-III rapids. This route can only be paddled at high water levels, generally during spring runoff. There are two dams. The best section is from West Leyden to the Greenfield Water Supply Dam, but the sections above and below this section can be run as well.

Source: American Whitewater n.d.

Cold River

The Cold River is considered one of the best whitewater runs in the watershed. It is only runnable at spring melt-off or after a major rainstorm. The best reach is from "Deadman's Corner" to the confluence with the Deerfield River.

North River and East Branch

The North River can be paddled along its mainstem from Colrain Center to the confluence with the Deerfield River mainstem. The North River East Branch is runnable at spring runoff only from the MA/VT state line to the center of Colrain.

Other Tributaries

Pelham Brook is runnable but is not regularly run. Black Brook has steep rock slides that are used by paddlers for fun.

Hiking and Mountain Biking

Established trail Systems in the Study Area include:

- Mohican Mohawk (a/k/a Mahican Mohawk) Trail: This hiking trail is historically significant because it generally follows the path that was used by Native Americans to traverse from the Connecticut River valley to the Hudson River valley. It is ecologically significant because the trail passes through or near 50% of Massachusetts' known old growth forests. It is inspirational because it passes through the tallest forests in New England. There are currently multiple sections open in western Massachusetts, including one that follows the old New York, New Haven and Hartford Railroad grade. It is estimated that 35 miles of the planned 100-mile trail are currently open. A large portion of the open trail is located in Mohawk Trail State Forest and South River State Forest.
- Shelburne Fire Tower Trail in Shelburne provides spectacular views of the Deerfield River valley from high above Shelburne Falls.
- Wilcox Hollow Trail: This trail runs directly along and above the Deerfield River in Shelburne Falls, offering beautiful views of the river from above.
- Dunbar Brook Trail: This beautiful seven-mile loop trail in Monroe, MA follows Dunbar Brook.
- Negus Mountain Trail: This trail ascends the 1778-foot Negus Mountain in Charlemont and Rowe offers beautiful views of an undeveloped section of the Deerfield River valley, including Zoar Gap.
- Mohawk Trail State Forest: Features many trails including the Elder Grove Trail, Todd Mountain Lookout Trail, Mahican Mohawk Upper Trail and Totem Trail. Some of these trails traverse old growth forest and the tallest trees in New England.

- Thunder Mountain Bike Park: A downhill ski trail in the winter serves as a mountain biking park when the snow is gone at Berkshire East Ski Resort, with views of the Deerfield River valley.
- Savoy Mountain State Forest: Features many trails including North Pond Loop and Tannery Falls Trail.
- Tunnel Road Conservation Area: Tunnel Road Conservation Area is a nature reserve in Town of Rowe.
- Ashfield Trails: The town of Ashfield has created a network of trails that include the Bear Swamp Trail and Chapel Brook Trail. Ashfield also hosts three Trustees of Reservations properties in the Deerfield River watershed, which are: Chapel Brook, Bear Swamp and Bullitt Reservation

F. Natural Resource Outstandingly Remarkable Values

Rare, Threatened and Endangered (RTE) Species in the Deerfield Watershed

Common Name	Scientific Name	Status in Mass.	Source
Mammals			
Long-tailed shrew	*Sorex dispar*	Special Concern	MacPhee et al. 2017
Water shrew	*Sorex palustris*	Special Concern	
Northern long-eared bat	*Yotis keenii*	Endangered	
Small-footed myotis	*Myotis leibii*	Endangered	
Little brown bat	*Myotis lucifugus*	Endangered	
Indiana bat	*Myotis sodalist*	Endangered	
Tricolored bat	*Perimyotis sublavus*	Endangered	
Amphibians and Reptiles			
Jefferson Salamander	*Ambvstoma jeffersonianum*	Special Concern	MacPhee et al. 2017
Marbled Salamander	*Ambvstoma ovacum*	Threatened	
Eastern Spadefoot	*Scavhiovus holbrookii*	Threatened	
Wood Turtle	*Clemmvs insculvta*	Special Concern	
Eastern Box Turtle	*Terranene carolina*	Special Concern	

Blanding's Turtle	*Emvdoidea blandinaii*	Threatened	
Black Rat Snake	*Elanhe obsoleta*	Endangered	
Birds			
American bittern	*Botaurus lentiginosus*	Endangered	MacPhee et al. 2017
Bald Eagles	*Haliaeetus leucocephalus*	Bald and Golden Eagle Protection Act	U.S. Fish & Wildlife
Least bittern	*Ixobrychus exilis*	Endangered	MacPhee et al. 2017
Invertebrates and Bivalves			
A Noctuid Moth	*Rhodecia aurantiago*	Threatened	Charlemont Open Space and Recreation Planning Update Project Team 2024
Twelve-Spotted Tiger Beetle	*Cincindela duodecimguttata*	Special Concern	
Purple Tiger Beetle	*Cincindela purpurea*	Special Concern	
Dwarf Wedge mussels (May only be at mouth of Deerfield River)	*Alasmidonta heterodon*	Endangered	Biodrawversity 2012, Nedeau 2008

Segments 1 to 23 (all segments) Core Habitat and Critical Natural Landscapes

- Almost all of the segments contain **Core Habitat** "areas critical for the long-term persistence of rare species, exemplary natural communities, and resilient ecosystems" Every segment includes **Critical Natural Landscape** "large landscapes minimally impacted by development and buffers to core habitats and coastal areas, both of which enhance connectivity and resilience." The sub- watersheds to the north and west have the highest concentration of these areas. (Natural Heritage and Endangered Species Program and The Nature Conservancy 2022)

Segments 1, 5, 6, 8, 9, 10, 11, 12, 16, 17, 18, and 20 Vernal Pools and Rare Wildlife Species

- Natural Heritage and Endangered Species Certified Vernal Pools and Estimated Habitats of Rare Wildlife show the most sensitive estimated habitat of rare species. Certified vernal pools, home to amphibians that are increasingly rare, and estimated habitat for rare wildlife species are among the most critical current habitat.
- To avoid the risk of collectors, the estimated rare wildlife species layer does not identify the specific species those layers are designed to protect. That information is available for land managers.

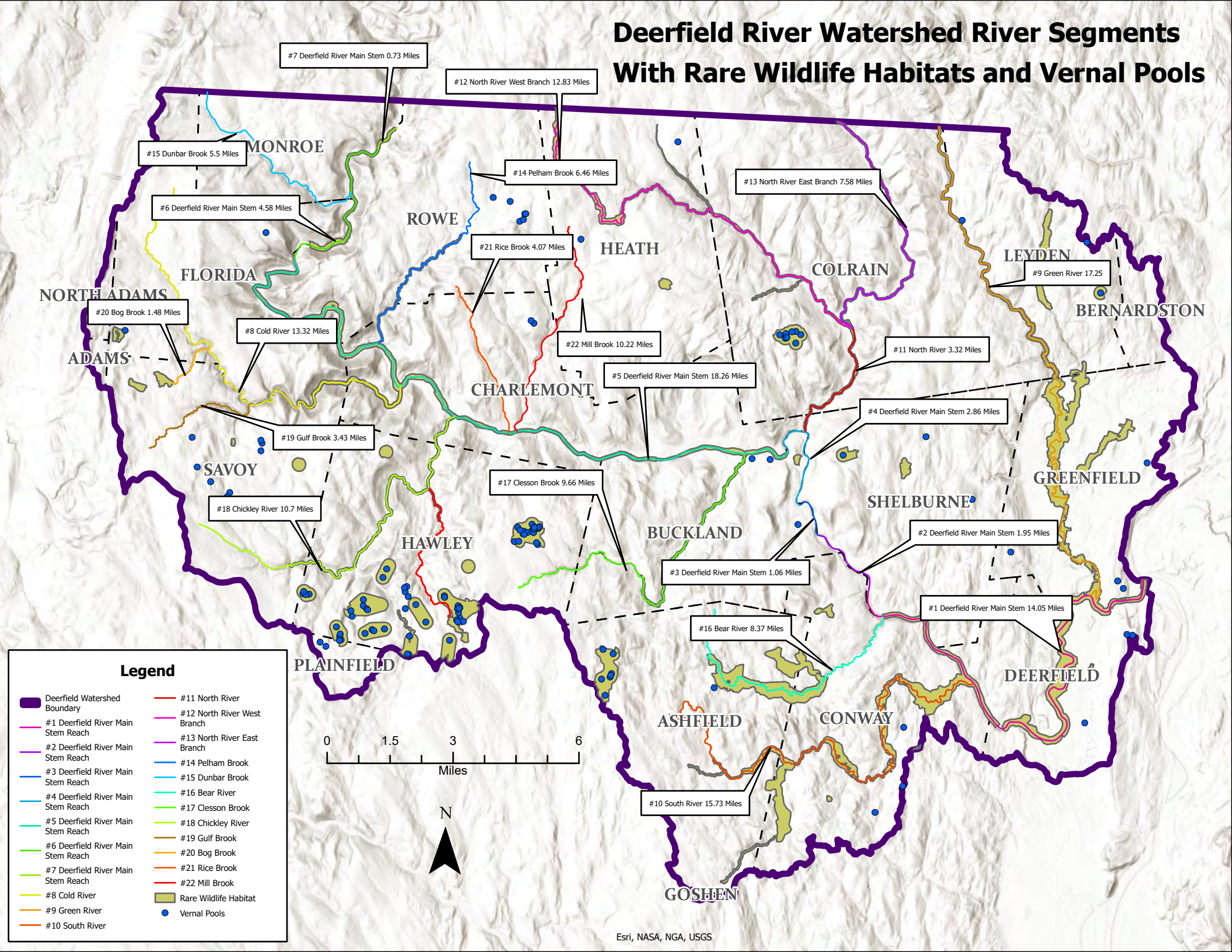
Segment 8, 15, and 19. Old Growth Forest, Mohawk Trail State Forest, Savoy Mt. State Forest, and Dunbar Brook-Monroe State Forest

- Mohawk Trail State Forest and the adjacent Savoy Mountain State Forest include 700 acres of old growth forests, almost half of all old growth in Massachusetts, and mature second growth. Old growth includes 400 to 500 year old trees, including the oldest eastern hemlock in the state at over 500 years old, 31 white pines exceeding 150 feet in height, 10 ash trees over 140 feet, and Hemlock, Black Birch, White Oak, and Northern Red Oak between 150 to 400 years old (Leverett 2024 and Kershner and Leverett 2004).
- Nearby Dunbar Brook-Monroe State Forest has an additional 20 acres of ancient and old second growth forests. This includes a 124 foot tall White Ash, a 156 foot tall, 47 inch diameter White Pine, and Old Big Tooth Aspens 19 inch diameter 112' tall (Kershner and Leverett 2004).

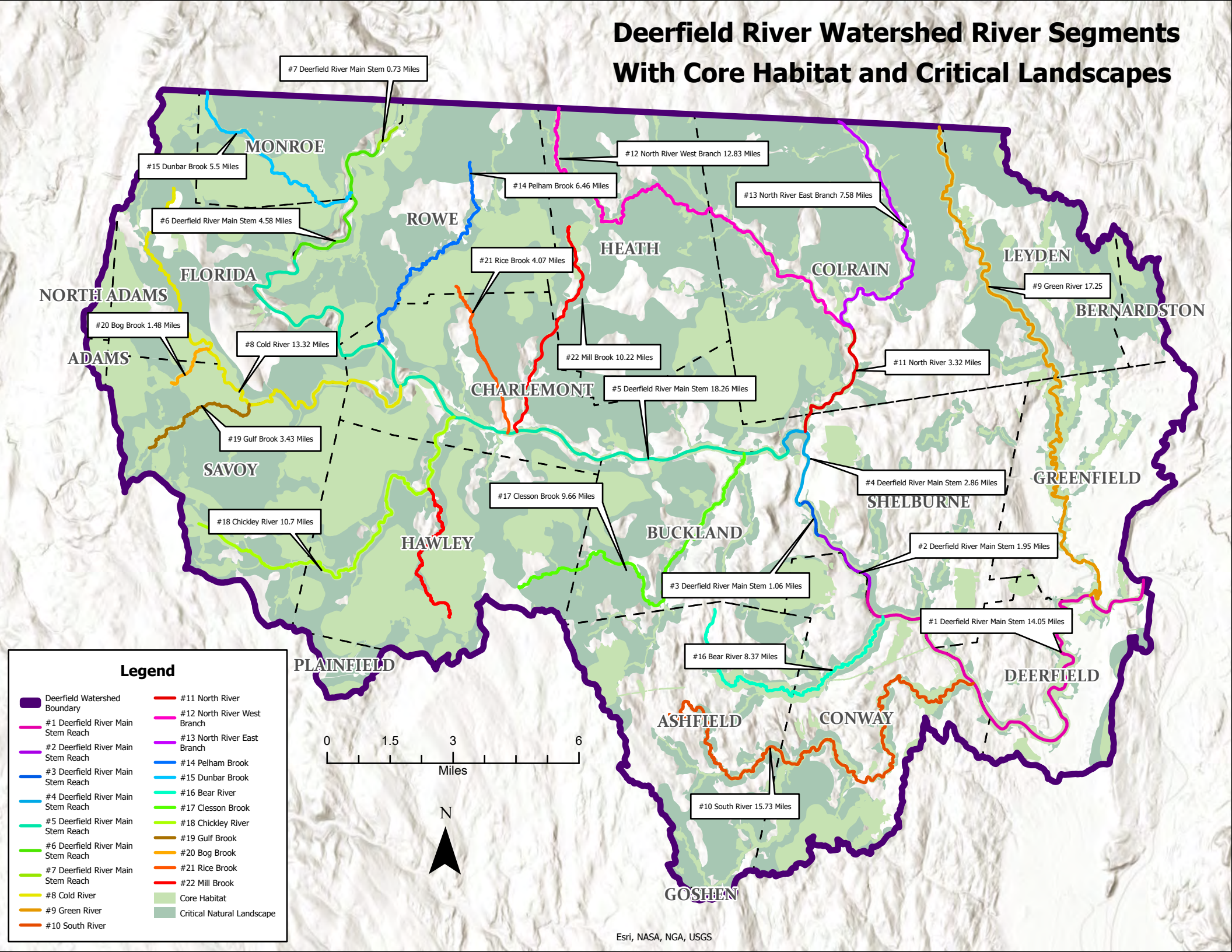
Segment 22. Hawley Bog, Hawley Bog Preserve, ORV

- Hawley Bog is a high elevation bog and one of the best New England natural unspoiled bog. A mat of peat 30 feet thick floats on water in a glacial kettle hole, with rare bog plants. The 30 acre bog is owned by The Nature Conservancy (25 acres) and the Five College, Inc. (5 acres). It contains a boardwalk, allowing easy discovery of the bog for visitors. It is adjacent to the historic Hawley Old Town Common. which has additional walking paths and historic information (The Nature Conservancy n.d.). The bog hosts rare carnivorous plants, including round-leaved sundew (Drosera rotundifolia), purple pitcher plants (Sarracenia purpurea), and horned bladderwort (Utricularia cornuta) (Whimbrel Nature 2017).

See **Rare Wildlife and Vernal Pools** map (NHESP Estimated Habitats of Rare Wildlife) and **Core Habitat and Critical Natural Landscapes** map (NHESP/TNC BioMap) on the next two pages.


Deerfield River Watershed River Segments
With Rare Wildlife Habitats and Vernal Pools
#7 Deerfield River Main Stem 0.73 Miles
#12 North River West Branch 12.83 Miles
#15 Dunbar Brook 5.5 Miles
MONROE
#14 Pelham Brook 6.46 Miles
#13 North River East Branch 7.58 Miles
#6 Deerfield River Main Stem 4.58 Miles
ROWE
#21 Rice Brook 4.07 Miles
HEATH
LEYDEN
#9 Green River 17.25
FLORIDA
COLRAIN
NORTH ADAMS
#20 Bog Brook 1.48 Miles
BERNARDSTON
#8 Cold River 13.32 Miles
#22 Mill Brook 10.22 Miles
#11 North River 3.32 Miles
ADAMS
#5 Deerfield River Main Stem 18.26 Miles
CHARLEMONT
#4 Deerfield River Main Stem 2.86 Miles
#19 Gulf Brook 3.43 Miles
SAVOY
GREENFIELD
#17 Clesson Brook 9.66 Miles
SHELBURNE
#18 Chickley River 10.7 Miles
BUCKLAND
#2 Deerfield River Main Stem 1.95 Miles
HAWLEY
#3 Deerfield River Main Stem 1.06 Miles
#1 Deerfield River Main Stem 14.05 Miles
#16 Bear River 8.37 Miles
PLAINFIELD
DEERFIELD
ASHFIELD
CONWAY
#10 South River 15.73 Miles
GOSHEN
Legend
Deerfield Watershed Boundary
#1 Deerfield River Main Stem Reach
#2 Deerfield River Main Stem Reach
#3 Deerfield River Main Stem Reach
#4 Deerfield River Main Stem Reach
#5 Deerfield River Main Stem Reach
#6 Deerfield River Main Stem Reach
#7 Deerfield River Main Stem Reach
#8 Cold River
#9 Green River
#10 South River
#11 North River
#12 North River West Branch
#13 North River East Branch
#14 Pelham Brook
#15 Dunbar Brook
#16 Bear River
#17 Clesson Brook
#18 Chickley River
#19 Gulf Brook
#20 Bog Brook
#21 Rice Brook
#22 Mill Brook
Rare Wildlife Habitat
Vernal Pools
0
1.5
3
6
Miles
N
Esri, NASA, NGA, USGS

Deerfield River Watershed River Segments With Core Habitat and Critical Landscapes

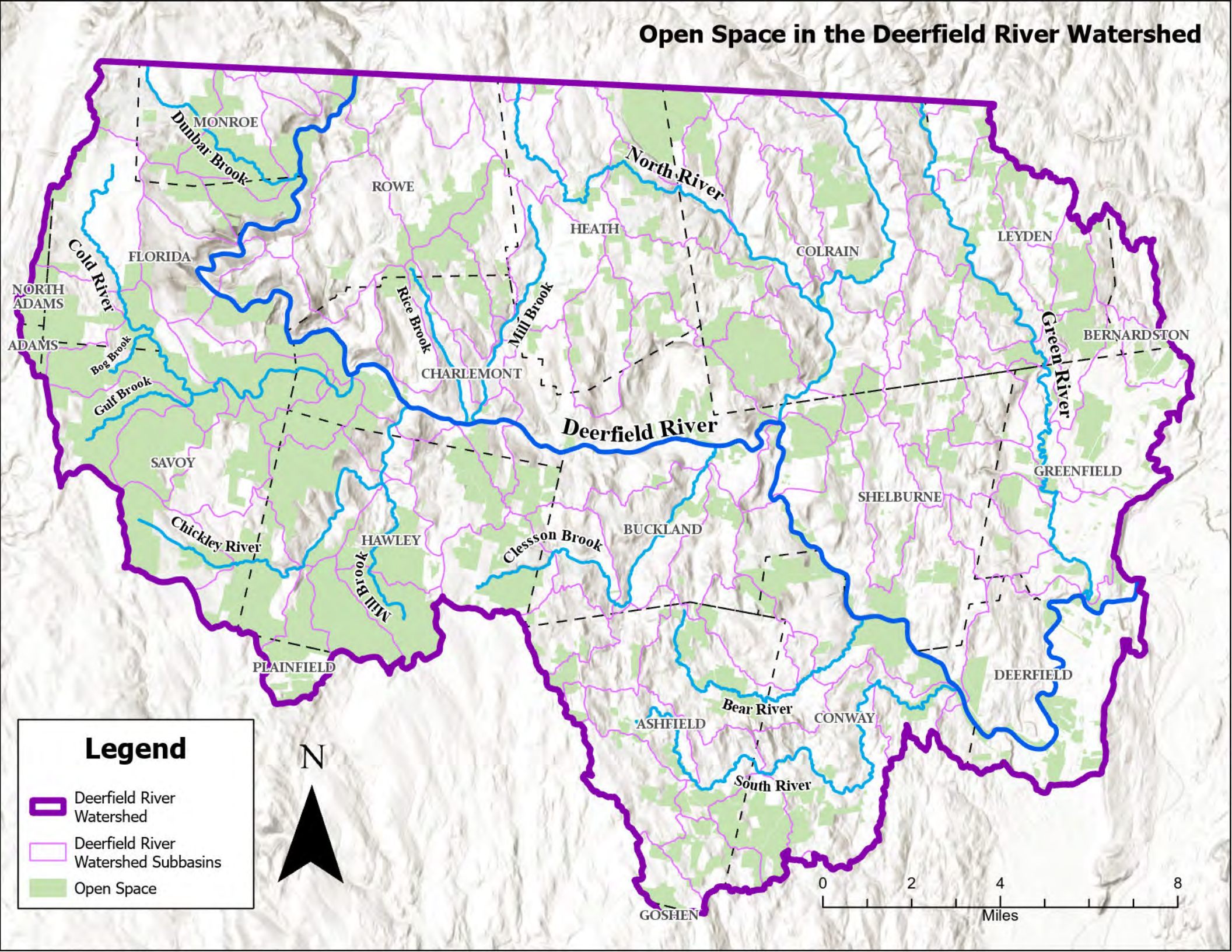


Natural Areas and Protected Lands

The Deerfield River watershed contains extremely diverse natural and protected lands of state and federal significance. The crown jewels include:

Open Space Type	Open Space areas with key features (partial list)
Massachusetts State Forests	• Buckland State Forest • Catamount State Forest • Dunbar Brook-Monroe State Forest – old growth forest and cascades • Hawley State Forest – historic Beehive flagstone charcoal kiln • H.O. Cook State Forest • Kenneth Dubuque Memorial State Forest • Mohawk Trail State Forest- old growth forest, Mohican - Mohawk Trail, Civilian Conservation Corps structures, and national register district • Rowe State Forest • Savoy Mountain State Forest- old growth forest, Mohican – Mohawk Recreation Trail, and Shaker Trail near a historic Shaker settlement • Shelburne State Forest • South River State Forest – Mohican – Mohawk Recreation Trail
MassWildlife Wildlife Management Areas	• Ashfield Hawley Wildlife Management Area • Catamount Wildlife Management Area • Green River Wildlife Management Area • Hawks Brook Wildlife Management Area • Leyden Wildlife Management Area • Maxwell Brook Wildlife Management Area • North River West Branch Wildlife Management Area • Poland Brook Wildlife Management Area
Massachusetts Audubon Society	• Conway Hills Wildlife Sanctuary • High Ledges Wildlife Sanctuary (beyond immediate river area)
The Trustees of Reservations	• Chapel Brook Reservation • Bear Swamp Reservation • Bullitt Reservation
Other land trusts	• Dell Road Conservation Area, Franklin Land Trust • Rowe Land Trust properties • Warren W. Smith Forest, New England Forestry Foundation
Town Conservation Areas and Parks	• Town of Colrain Conservation Area • Pelham Lake Park, Rowe • Shelburne Road Conservation Area • Town of Heath Conservation Area • Tunnel Road Cons. Area, Florida – Soapstone Quarry/Talc Mine

The **Open Space** map on the following pages shows the areas with protected open space.


Open Space in the Deerfield River Watershed
MONROE
Dunbar Brook
ROWE
North River
HEATH
LEYDEN
COLRAIN
FLORIDA
Cold River
NORTH ADAMS
ADAMS
Bog Brook
Gulf Brook
Rice Brook
Mill Brook
CHARLEMONT
Green River
BERNARDSTON
Deerfield River
SAVOY
GREENFIELD
SHELBURNE
Chickley River
HAWLEY
Clessson Brook
BUCKLAND
Mill Brook
PLAINFIELD
DEERFIELD
Bear River
ASHFIELD
CONWAY
South River
GOSHEN
Legend
Deerfield River Watershed
Deerfield River Watershed Subbasins
Open Space
N
0
2
4
8
Miles

Fisheries

The Deerfield River harbors a large portion of Massachusetts' trout population, and the Deerfield River watershed includes 25% of all high quality trout streams in Massachusetts. There are 175 wild trout streams in the watershed, or about 800 km of length.

The upper Deerfield River is arguably the premier wild trout stream in Massachusetts (Adam Kautza, DFG personal communication). The river segment from Fife Brook Dam to Route 2 is the premier recreational angling area, supporting numerous guides and recreational anglers. Trophy sized Brown Trout are the main draw. The main tributaries of the Deerfield River, including the Green, North and South Rivers, are also trout streams with a lower abundance than the mainstem. In a pending agreement, Brookfield Power agreed to increase its Deerfield River dam baseflow to 125-225 CFS to support trout.

Wild Rainbow Trout are exceedingly rare in Massachusetts, and are only found in certain Deerfield River tributaries, particularly Clesson Brook, but also Bear River, and Pelham, Rice, Avery and Wilder Brooks.

Mass Department of Fish and Game field assessments show that most brown trout in the Deerfield, 81%, are wild. Brown Trout populations in the Deerfield River are higher than other streams in Massachusetts, at around 282 per mile. The state stopped stocking Brown Trout in 2023 in the Deerfield due to the viability of the wild fishery.

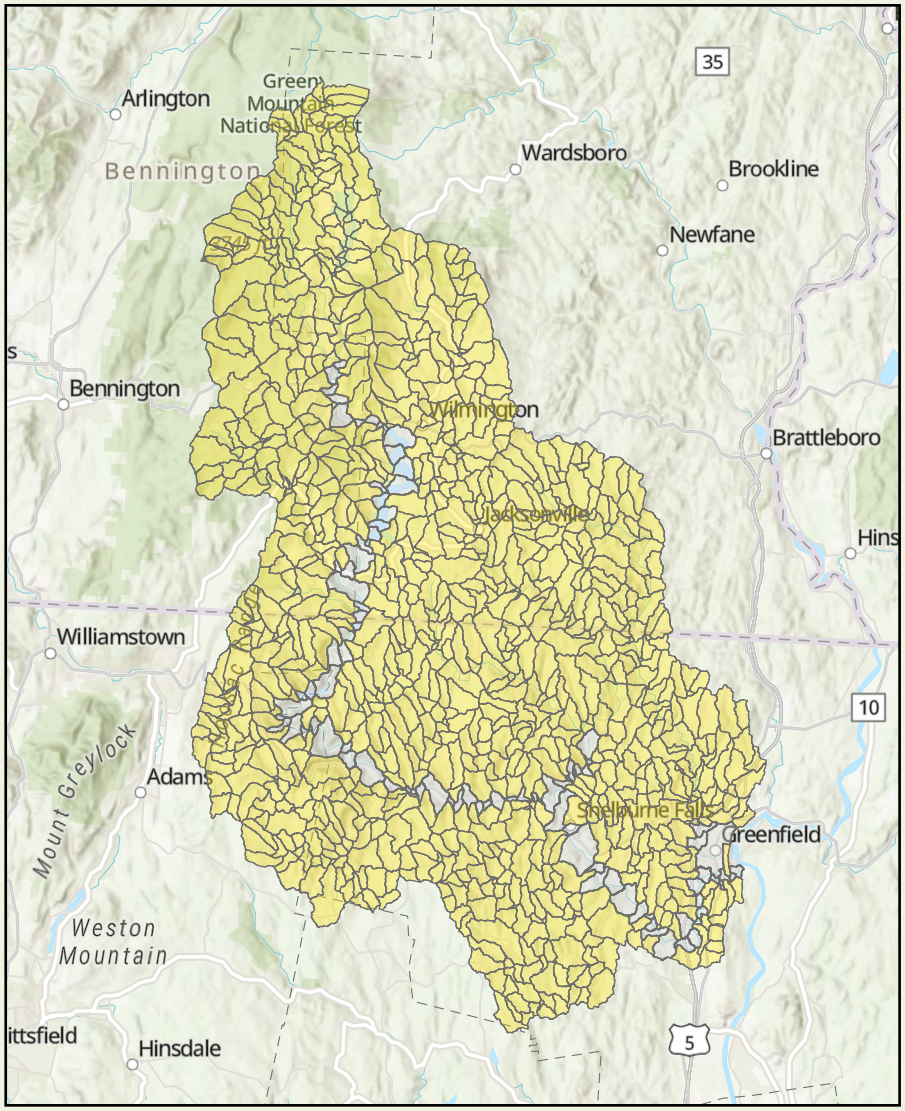
From an angler's perspective, the three best streams for coldwater fishing in New England are seen as the Deerfield, the Battenkill and the Hoosic Rivers (Erin Rogers, Trout Unlimited).

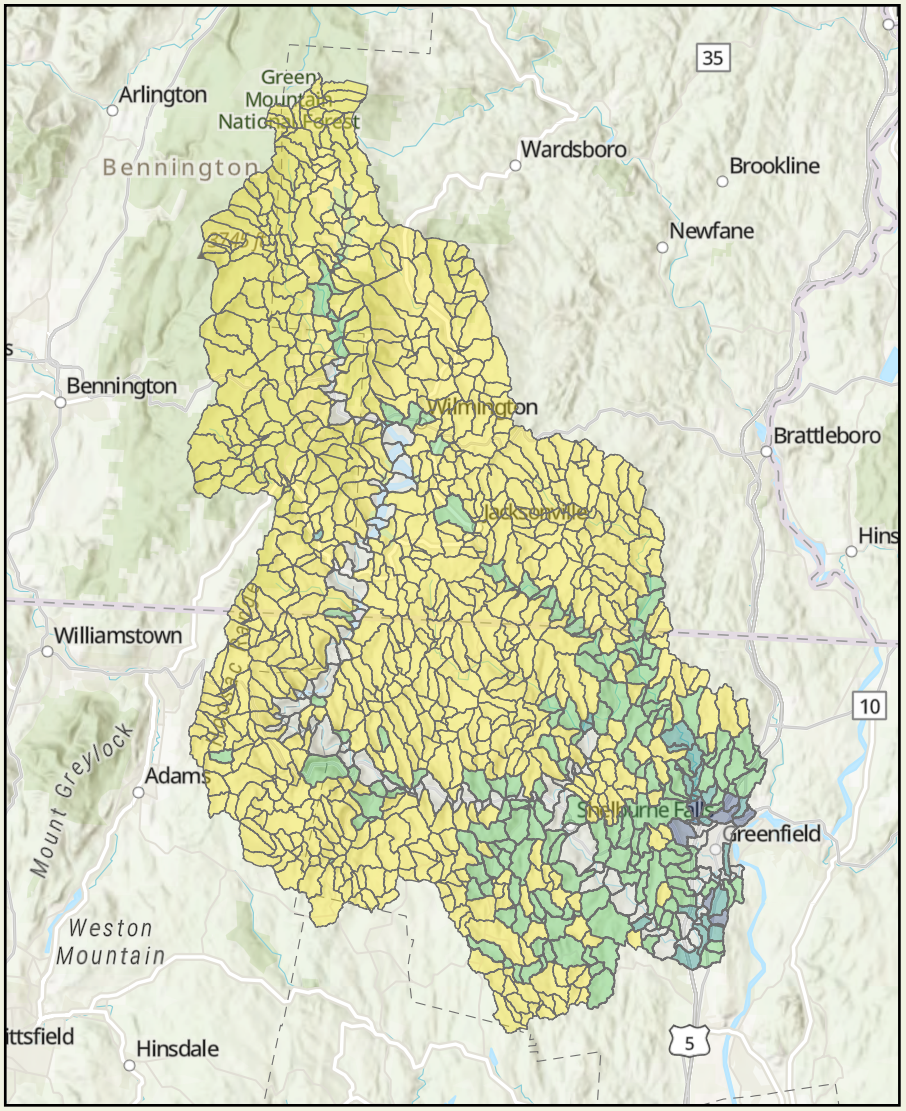
Coldwater/connected streams are very important for fish survival if temperatures increase. Climate change has profound impacts on coldwater fish, especially in summer when water temperatures of 68-70 degrees mean that fish will either need to move or die. The Deerfield River watershed is perhaps the most important watershed in New England, or at least New England outside of Maine, for stream temperature/occupancy and the survival of coldwater fish. The Upper Mainstem of the Deerfield is the most important reach for this purpose, followed by the larger tributaries and Middle Mainstem.

The USGS identifies the Upper (mostly in Vermont with a small amount in Massachusetts) and Middle Sections of the Deerfield River (all in Massachusetts) as the Brook Trout habitat that is the most resilient to significant stream temperature increases in Massachusetts and Vermont.

See the following **Stream Temperature and Brook Trout Occupancy** maps for the watershed and, for comparison, all of Massachusetts and Vermont.

Brown Trout Stream Habitat Resilience in the Deerfield River Watershed





Current Occupancy Probability

- N/A
- 50%
- 70%
- 90%
- 100%

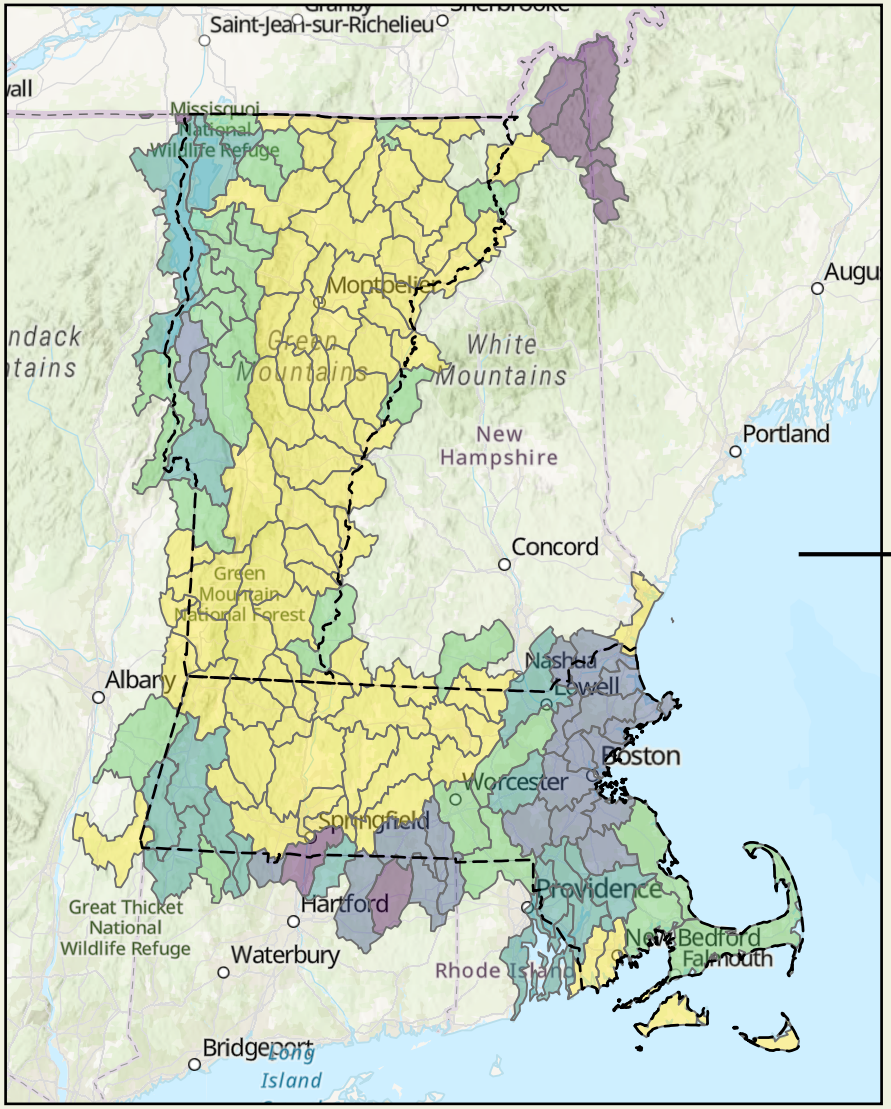
0 2.5 5 10 Miles

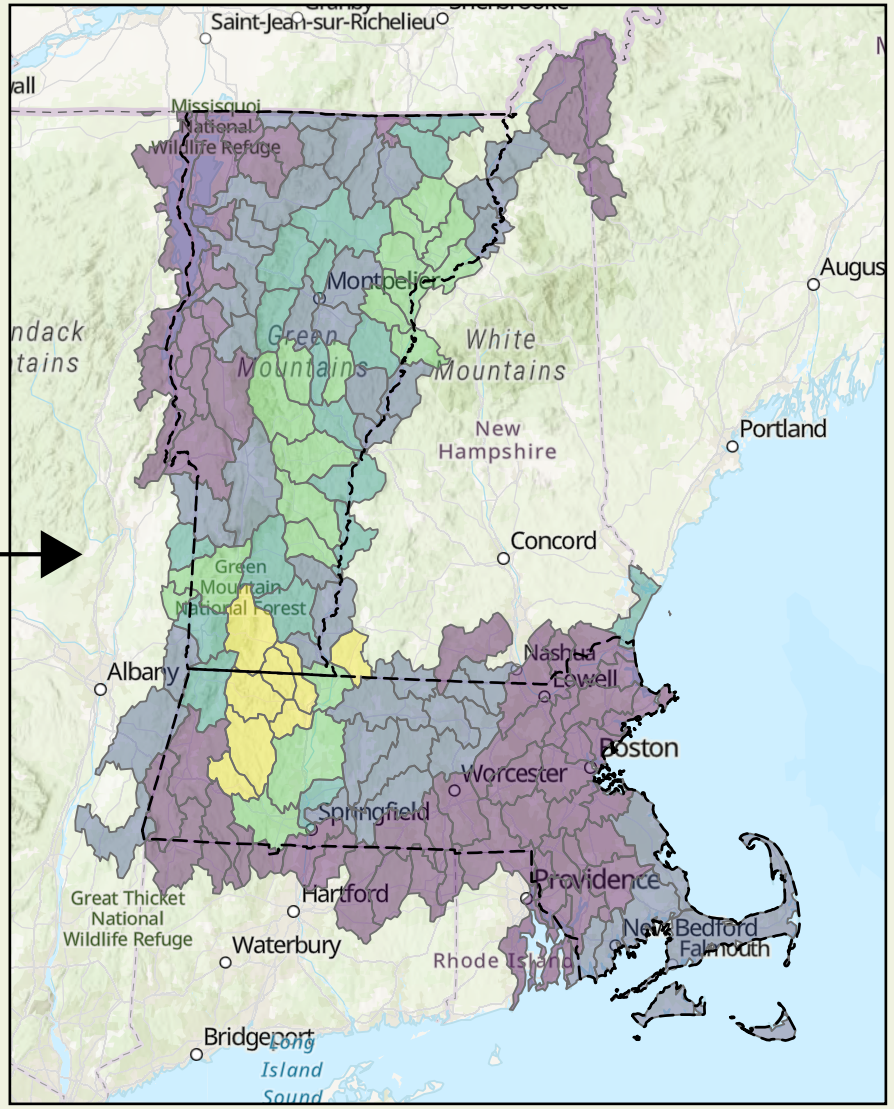
N
W E
S

Occupancy Probability w/ an increase in air temp of 4 degrees Celsius

- N/A
- 50%
- 70%
- 90%
- 100%

Brown Trout Stream Habitat Resilience in Massachusetts and Vermont





VT/MA

Current Occupancy Probability

- 20%
- 40%
- 60%
- 80%
- 100%

0 15 30 60 Miles

N W E S

VT/MA

Occupancy Probability w/ an increase in air temp of 4 degrees Celsius

- 20%
- 40%
- 60%
- 80%
- 100%

Areas of High Water Quality (see Water Quality subsection)

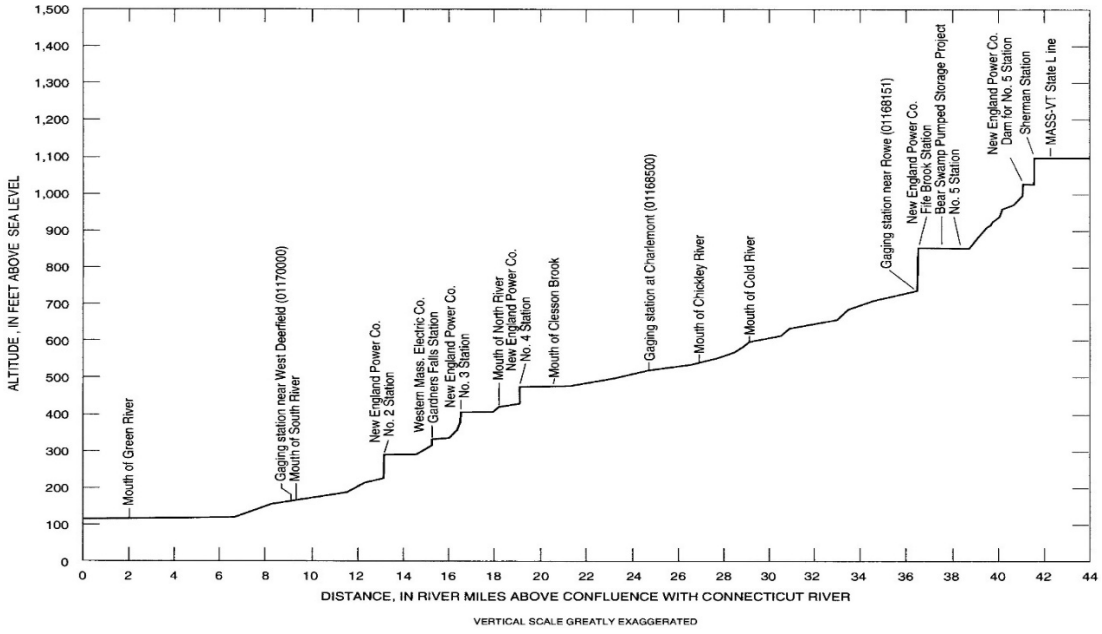
The water quality in the Deerfield River and its tributaries is generally excellent for a non-wilderness area. Four sections standout as water quality ORVs:

- Deerfield River, from the Vermont-Massachusetts State Line to confluence with North River (a coldwater fishery).
- North River, East Branch, from the Vermont-Massachusetts State Line to the confluence with the Deerfield River (a coldwater fishery).
- North River, West Branch, from the Vermont-Massachusetts State Line to the confluence with the Deerfield River (a coldwater fishery).
- Green River, from the Vermont-Massachusetts State Line to the confluence with the Deerfield River (a warm water fishery).

G. Geological Resource Outstandingly Remarkable Values

Overview

The hills and mountains of the Deerfield River watershed are shallow unconsolidated glacial till over bedrock, with much of the bedrock in the hills and mountains being very hard metamorphic rock (Friesz 1996), allowing for steep slopes. Outwash sand and gravel, deposited by fast moving glacial outwash and water movement are located along the streams and rivers. Floodplain alluvium, gravel, sands, silt, and clay are carried and deposited by water, with clay deposits from pro-glacial Lake Hitchcock in the lower river floodplains along the Deerfield, Green, and Connecticut Rivers. (MacPhee 2017 and Friesz 1996).



Climbing out of the lower valleys, bedrock changes from sedimentary to metamorphic rock. (Friesz 1996)

Waterfalls, Cascades and Gorges

There are numerous waterfalls, cascades and gorges on the Deerfield River mainstem and its tributaries that qualify as outstandingly remarkable. They are described below:

Falls and gorges on the Deerfield River mainstem:

- Zoar Gap in Charlemont: This is the most challenging whitewater rapid on the Deerfield River, ranging from Class III to Class IV depending on flows. The river flows through a constricted gorge here creating a beautiful rapid, very popular for rafting and kayaking.
- Salmon Falls in Shelburne/Buckland: A very large and highly scenic falls in the center for Shelburne Falls. Known by Native Americans as Salmon Falls, these falls were considered an important native fishing site and prior to colonial settlement was also the site of extensive colonial fishing.
- The "Glacial" Potholes found on the Deerfield River, at the base of Salmon Falls in Shelburne Falls, Massachusetts, are a testament to the creative power of geological time, ice and rock. The multitude of otherworldly potholes found here are one of the largest collections of natural potholes in the world and the site of the largest pothole on record. As the glaciers receded, fifty separate pools ranging from 6 inches to 39 feet in diameter were formed as river plunge pools, not by direct glacial action.
- Potholes and plunge pools are found throughout the area, although not as spectacular as at Shelburne Falls.

Falls on South River: There are three very scenic water falls on the South River in Conway:

- Reeds Bridge Road Falls
- Conway Station Falls
- Chapel Falls on Chapel Brook, a tributary of the South River

Falls on smaller tributaries:

- Whirley Baths on the Cold River in Charlemont
- Tannery Brook Falls, on a tributary to Gulf Brook in Savoy
- Stafford Brook Cascade, located near its confluence with Green River
- Cascades on Dunbar Brook in Monroe State Forest
- Cascades on Pelham Brook, Charlemont and Rowe
- Mill Brook Falls in Charlemont, although this is a dam without an impoundment
- Twin Cascades in Florida on Cascade Brook, a tributary of the Deerfield River

Other Geological ORVs

Segment 1. Geologic ORV

- Jurassic armored mud balls are a rare sedimentary structures in the same geologic layers as Podokesaurus (State Dinosaur) and Dinosaur Footprints (State Fossil). They are "only easily seen in Massachusetts," Massachusetts State Geologists Dr. Brian Yellen and emeritus state geologist Dr. Steve Mabee. Most are located outside of the Deerfield River study area (Stop and Shop and Greenfield Community College in Greenfield, Unity Park and Gill Bridge in Turners Falls), but one reported site is at the "Cheapside Quarry" in northeast Deerfield, River Road on private property (Little 2020a).

Segment 4. Shelburne Falls/Salmon Falls (not free-flowing but worthy for context)

- The potholes, incorrectly referred to as "glacial" potholes, were carved by falling water at the falls and are one of the largest plunge pools in New England (Little 2020b). The unique dramatic eddy-hole type potholes were carved out of hard high-grade metamorphic rocks (felsic and mafic gneisses) with a unique geological process. They are one of the most developed sets potholes and considered one of the "natural wonders of eastern North America" (Ji and Li 2019).

Segment 5, 6, and 8. Geological ORV

- Florida's mineral deposits and mining history are unique for both what they reveal of the geology and the natural resources extraction history. Concentrations of mineral deposits of Talc at 42 39'34"N, -72 59'52"W, and Chalcedony, associated with Serpentine, Pyrite, magnetite, hyalite, talk, and asbestos, east of the Hoosac Mountain summit, (Gleba 2008).
- Hoosac Tunnel Soapstone Quarry (Hoosac Talc Mine) in Florida's Tunnel Conservation Area at 42° 39' 52''N, 72° 58' 35''W was mined for soapstone circa 1885-1895 and talc beginning in 1909 (Hudson Institute of Mineralogy 2025).
- Rowe Schist and Garnet Schist of the Rowe Formation are an important feature, frequently visited by college geology students for the opportunity to view metamorphic sedimentary, granitic, and volcanic gneisses (Cheney and Brady 1992 and Norton 1975).

Segment 18. Geological ORVs

- Hawley Foundation bulbous structures are possibly relic pillow lavas (500' north of West Hawley Road and Pudding Hollow Road), frequently visited by college geology students for the opportunity to explore (Karabinos, Stoll, and Hepburn 2003).

Segment 19. Geologic ORVs

- Tannery Falls, discussed in the waterfalls and cascades above, reveals an especially steep and exposed bedrock which confines Tannery Brook and Gulf Brook and creates a narrow gorge, albeit with relatively low water flow and not especially dramatic. This hard rock with steep banks is the same reason so many sections of the Deerfield River were able to attract dams, requiring a minimum amount of dam for a large amount of water storage. This gorge is too small and water flows are too limited to attract dams, but it demonstrates the forces that allowed dams elsewhere (Barnes 2021). It is, however, a uniquely confined condition and, because of the narrow gorge, collects blowdown trees that do not have a path to escape (personal observation).

Segment 22. Geological ORV

- Davis Pyrite Mine and Davis Mine Brook are both a historic and geological ORVs. It was an iron pyrite mine, which yields sulfur dioxide and sulfuric acid, both with toxic tailings, and low concentrations of gold. It collapsed in 1920, leaving 3 hectares (7.4 acres) of tailings (Bloom 2004). Other minerals mined in Rowe included talc, small concentrations of silver and gold (Mass. Historic Commission 1982h). These minerals drove settlement in rural Rowe.

H. Historic and Cultural Outstandingly Remarkable Values

Overview

From the retreat of glaciers, about 12,000 years ago, until the European Contact Period circa 600 years ago, what we now call the Mohawk Trail (a misnomer) or the Mohican – Mohawk Recreation Trail was occupied by Native Americans for indigenous settlement and subsidence agriculture, hunting, gathering, traveling, resource procurement, and trade for thousands of years (Bendremer personal communication). Most of this Native American use was adjacent to and near the Deerfield River and its tributaries.

The Paleo-Indian period (circa 12,000 to 9,000 years Before the Present, or B.P.), Early Archaic period (9,000 to 7,000 years B.P.), and Middle Archaic (7,000 to 5, 000 B.P.), left only a very limited archaeological record. As tools evolved in the Late Archaic period (6,000 to 3,000 B.P.) the archaeological record grew. (Franklin Regional Council of Governments, FRCOG, and Berkshire Regional Planning Commission, BRPC, 2002). Because of the risk of looting, most archaeologists do not reveal site locations sites until the findings are protected on or off site. As a result, some locations are unavailable for this study.

The study area is the unceded homeland of Native American tribes, primarily the Pocumtuck nation, with a major focus in Deerfield, and, to a lesser extent, the Nipmuc nation, Mohican nation, and the Wabanaki nation, including the Squakeag band (Native Land Digital 2025 and MHC n.d.).

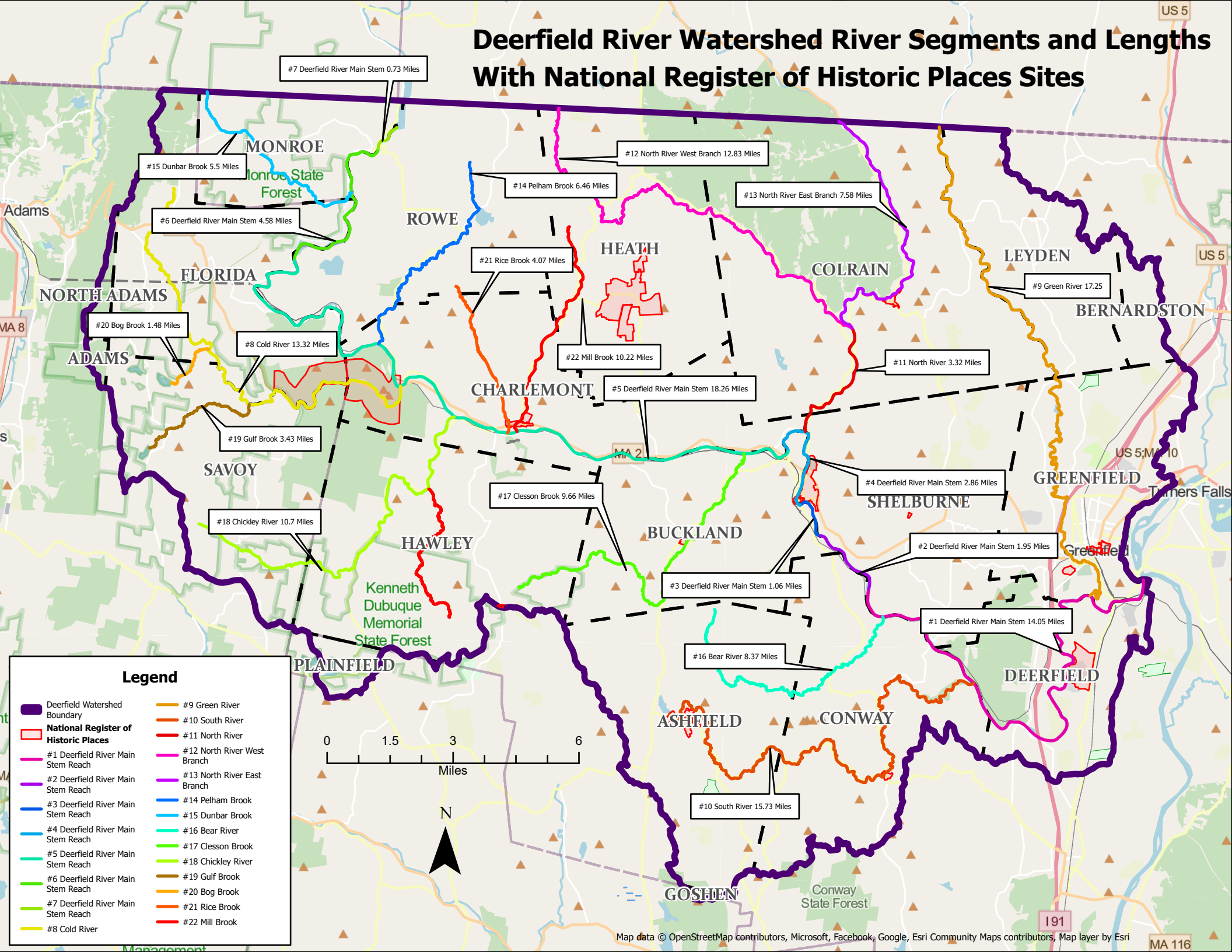
The Deerfield River Valley's limited industrialization was built on tapping its rivers for mechanically powered mills and later hydroelectric power. Mills were located at accessible drops in elevation and were later replaced by hydro-electric, especially on the Deerfield River mainstem. This made the mainstem "one of the most completed developed and thoroughly regulated streams in the field of water power production in the United States" (Botts 1935), prior to the era of vast water power production (e.g., Colorado River, Columbia River, and Tennessee Valley). Most of the Deerfield and its tributaries, however, remain free flowing.

Many of the pre-hydro power mechanically powered mills, mill works, and alterations are historic Outstandingly Remarkable Values, representing hundreds of years of history. The mills often involved some river channel manipulation, but that was primarily limited to the villages, the mills, and the dams and usually was had a much smaller pool upstream of dams than later hydro-power facilities.

Point of Interest *(Costello 1974)*	**Segment**
Mohawk Trail	Deerfield River
Mohawk Cold River Trai	Cold River
Mohawk Path	Rice Brook
Hawks Fort, Taylor Fort, and Rice Fort, Charlemont	Deerfield River
Heath's First Settler	Closest to the Mill Brook
Shelburne Bridge, 1793	Deerfield River
Pocumtuck Falls	Deerfield River
Shelburne's First Two Settlers	Deerfield River
Grist Mills and Saw Mill	Dragon Brook / Deerfield River
Deviation in the Boundary	Deerfield River
Military Road	Deerfield River
Country Road	North and Deerfield Rivers
Old World Road	Deerfield River
Ye Foot Path trail	Deerfield River

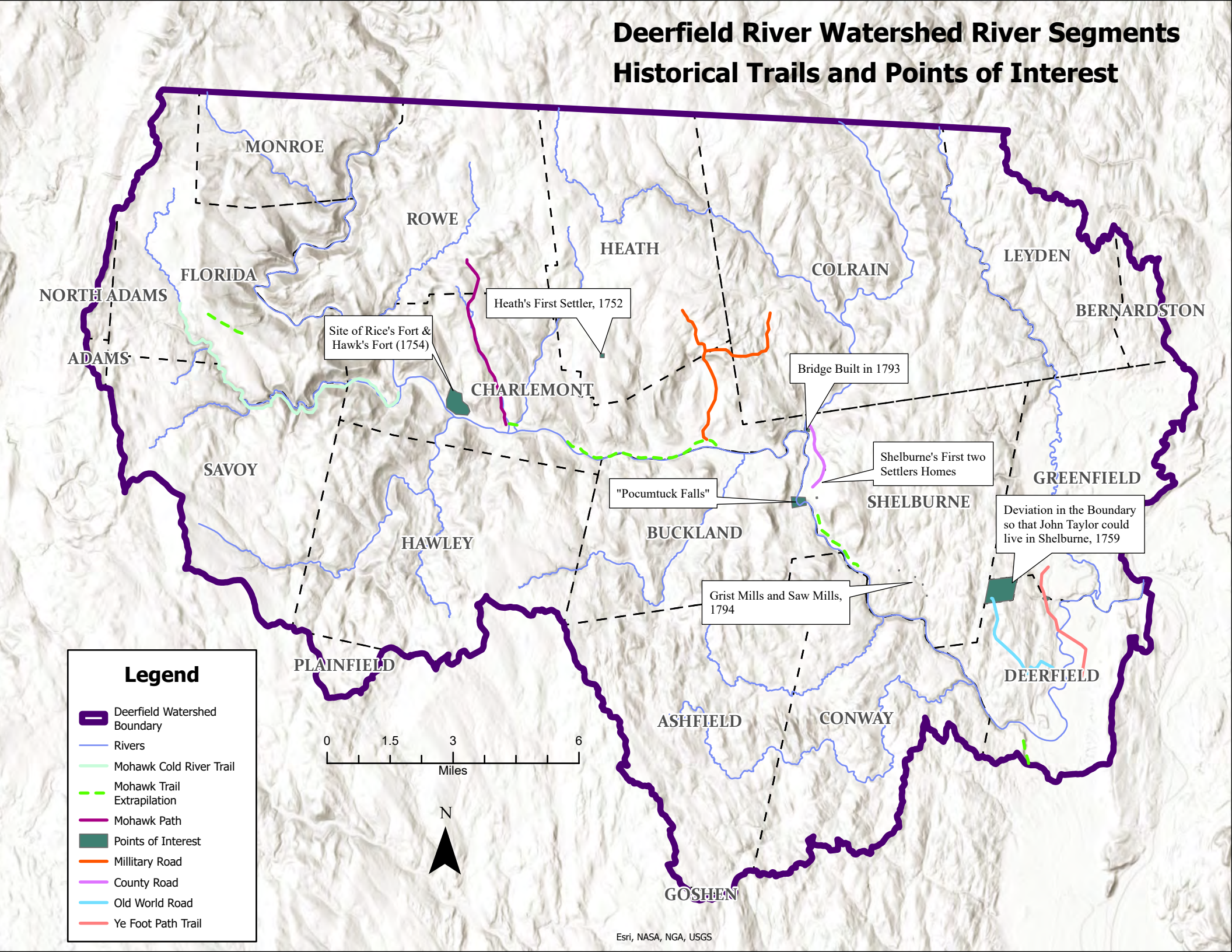
See the Deerfield River watershed **National Register of Historic Places** and **Historic Trails and Points of Interest** maps on the next two pages.

Deerfield River Watershed River Segments and Lengths With National Register of Historic Places Sites



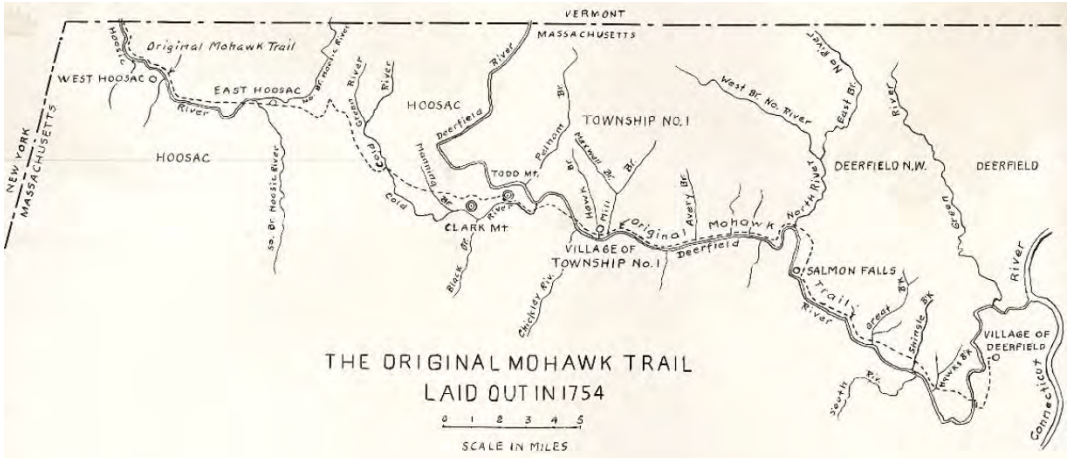
Legend

- Deerfield Watershed Boundary
- **National Register of Historic Places**
- #1 Deerfield River Main Stem Reach
- #2 Deerfield River Main Stem Reach
- #3 Deerfield River Main Stem Reach
- #4 Deerfield River Main Stem Reach
- #5 Deerfield River Main Stem Reach
- #6 Deerfield River Main Stem Reach
- #7 Deerfield River Main Stem Reach
- #8 Cold River
- #9 Green River
- #10 South River
- #11 North River
- #12 North River West Branch
- #13 North River East Branch
- #14 Pelham Brook
- #15 Dunbar Brook
- #16 Bear River
- #17 Clesson Brook
- #18 Chickley River
- #19 Gulf Brook
- #20 Bog Brook
- #21 Rice Brook
- #22 Mill Brook


Deerfield River Watershed River Segments
Historical Trails and Points of Interest
MONROE
ROWE
HEATH
COLRAIN
LEYDEN
FLORIDA
NORTH ADAMS
ADAMS
BERNARDSTON
Heath's First Settler, 1752
Site of Rice's Fort & Hawk's Fort (1754)
CHARLEMONT
Bridge Built in 1793
SAVOY
Shelburne's First two Settlers Homes
GREENFIELD
"Pocumtuck Falls"
SHELBURNE
Deviation in the Boundary so that John Taylor could live in Shelburne, 1759
BUCKLAND
HAWLEY
Grist Mills and Saw Mills, 1794
PLAINFIELD
DEERFIELD
ASHFIELD
CONWAY
GOSHEN
Legend
Deerfield Watershed Boundary
Rivers
Mohawk Cold River Trail
Mohawk Trail Extrapilation
Mohawk Path
Points of Interest
Millitary Road
County Road
Old World Road
Ye Foot Path Trail
0
1.5
3
6
Miles
N
Esri, NASA, NGA, USGS

Segments 1, 2, 3, 4, 5, and 8. Mahican – Mohawk Trail ORV

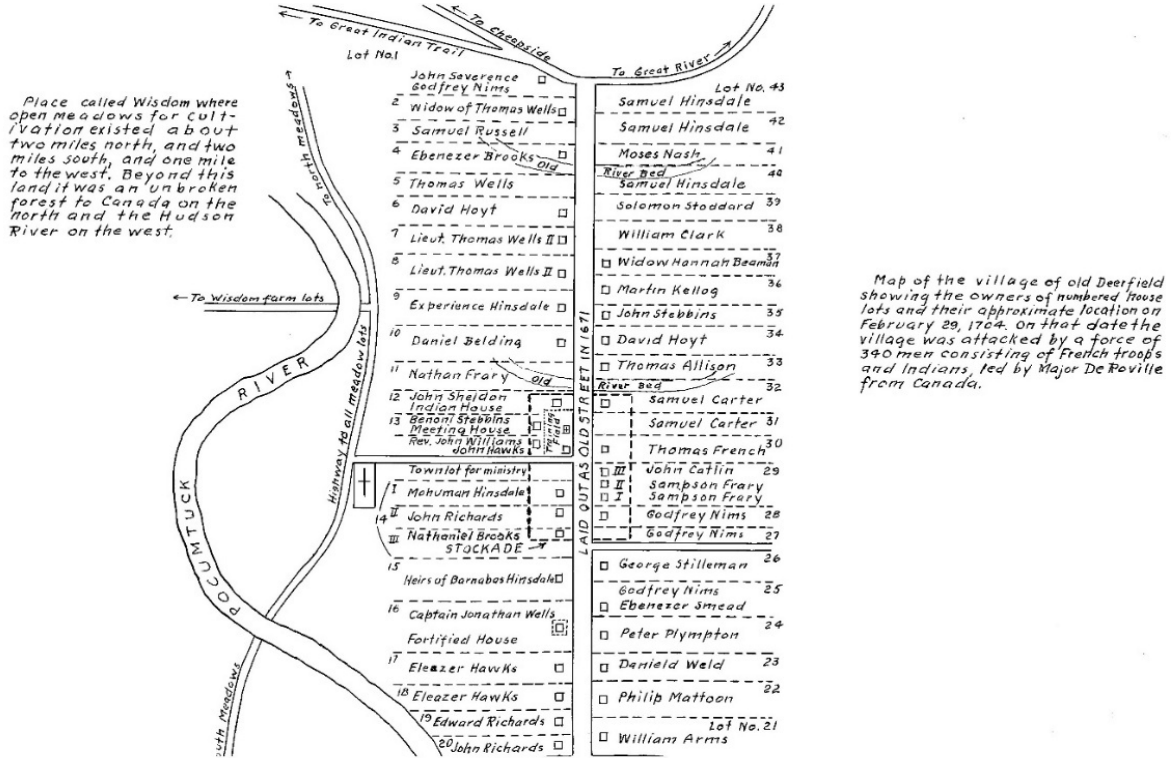
- From thousands of years ago, Native American groups traveled between the Hudson and the Connecticut valleys along a route that followed the Hoosic River, across the Hoosac Mountains, and along the Deerfield River. Although likely used by a variety of native peoples, it became known as the Mohawk Trail or the Mahican-Mohawk Trail (also spelled as Mohican), probably because the Mohawks of present-day New York State traversed it to reach the Pocumtuck who lived in what is now Deerfield for a 1664 battle. That same trail was almost certainly used by indigenous tribes fleeing European settlement and seeking refuge with the Mahican tribe to the west (Bendremer personal communication).
- The Europeans expanded the trail into roads and railroads, joining the forts, farms, mills, villages and towns of northwestern Massachusetts, southwestern Vermont, and eastern New York. The trail later served as a provisioning route for Fort Massachusetts, the mid-18th century garrison between North Adams and Williamstown. It was extensively used during the Revolutionary War. Benedict Arnold passed over it on his way to Fort Ticonderoga in New York. Later, literary figures such as Ralph Waldo Emerson, Nathaniel Hawthorn, and Henry David Thoreau tramped the trail. Over time, the trail's route was modified for vehicles, eventually resulting in the construction of Route 2, known as "The Mohawk Trail."
- The Mahican-Mohawk Trail, a hiking route, re-traces this historic route. The trail's rebirth began in 1992, when a group of Williams College students explored the history and path of the trail and assessed opportunities for reestablishing a trail. The Trail today follows the original corridor where possible and traverses a portion of the original Native American trail atop Todd Mountain in Mohawk Trails State Forest. (*www.mass.gov/location-details/mohican-mohawk-trail*)



Original Mohawk Trail Laid Out in 1754 (Costello 1974)

Segment 1. Historic ORVs

- Greenfield and Deerfield, near the confluence of the Deerfield River and the Connecticut River and Native American and early colonial period travel, have extensive archaeological and historic findings (FRCOG and BRPA 2002).
- There were extensive Native American sites throughout the Deerfield River floodplain (Massachusetts Historic Commission. 1982e.)
- Before European contact, the Pocumtuck were heavily concentrated along the Deerfield River, including what is now Historic Deerfield Village.
- Historic Deerfield village was platted, or laid out, in 1671. Although the Pocumtuck and other Native Americans invited European descent settlers to trade, they resisted the loss of their homelands to and encroachment by European settlers. With King Philip's war in in eastern Massachusetts influencing the Deerfield Valley. Hostilities broke out in 1675 when Native Americans attacked the English militia (Bloody Brook Massacre in Deerfield) and the English then slaughtered non-warrior Native Americans in 1676 (Bruchac 2011).
- After the attacks, Deerfield Village was abandoned until 1682. Deerfield Village was rebuilt, with a population decline after attacks in 1704 during the Colonial and Revolutionary period (Shedd 1958). 30 buildings in Old Deerfield remain from that period as one of the best collections of buildings from that era in the United States (Massachusetts Historical Commission or MHC n.d.).



Historic Deerfield 1704 (Costello 1974)

National Register of Historic Places (district) and National Historic Landmarks of Old Deerfield (MHC n.d.)

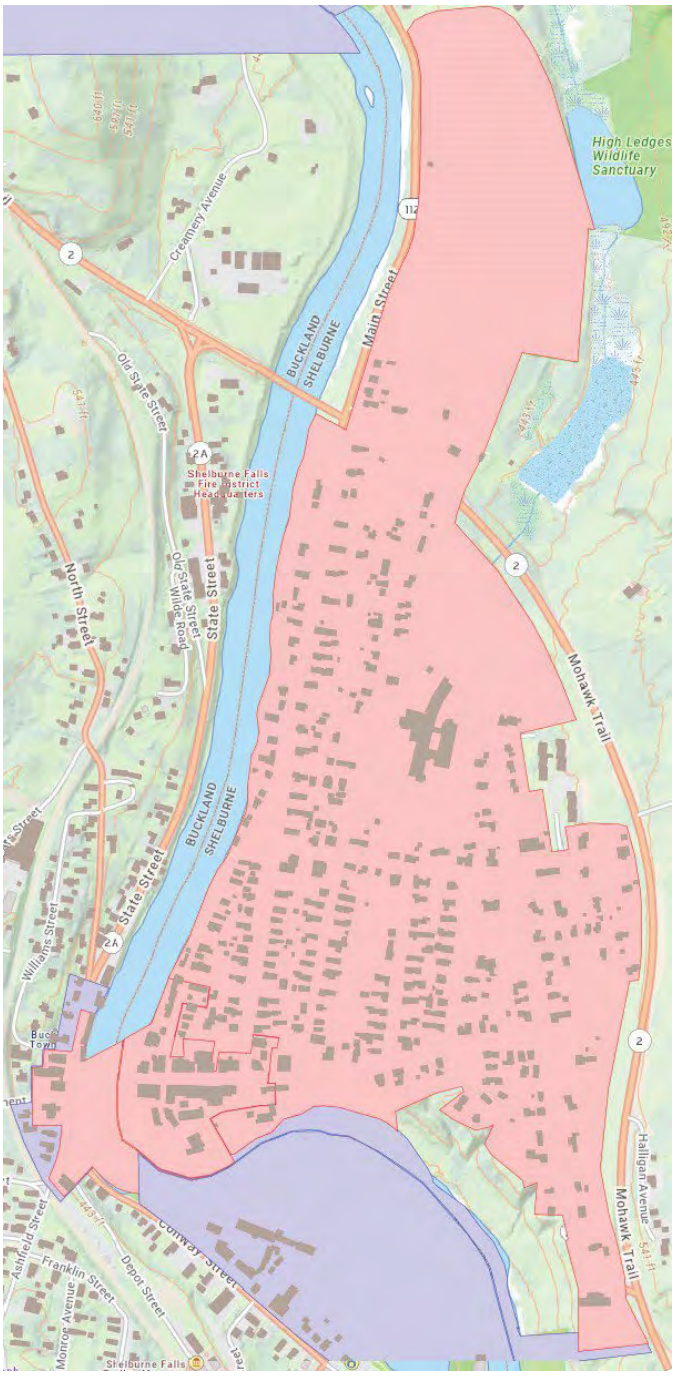
- The Cheapside section of Greenfield, on the north bank of the Deerfield River, has some of the longest settlement history from Native American settlements, especially the encampments during the King Philip or Metacom's War (1675-1676) on to the current time. The Deerfield River ferry, set up as an established service in 1758, helped concentrate Cheapside settlement patterns (Massachusetts Historic Commission. 1982f).
- The Cheapside Railroad Bridge (1912) remains, located near the former ferry crossing (Mass. Historical Commission 1986).
- The scenic 198-foot Bardwell's Ferry Bridge (1890), over the Deerfield River gorge connecting Shelburne and Conway, is listed on the National Register of Historic Places. It has a pin-connected through truss (Mass. Historic Commission n.d.).

Segment 4. Historic ORVs (not free-flowing but important for context)

These features are historic ORVs, but the river segment through Shelburne Falls is not eligible for Federal Wild and Scenic designation because of hydro-electric impoundments, dams, and facilities.

- Native American archaeological sites in Shelburne, a long history of fishing at Salmon Falls in Shelburne Falls, and transportation routes indicates a strong early Native American use of the area, especially a seasonal use and Native American/early European contact trading adjacent to and near the river.

- Precontact archaeological sites have been documented throughout the Deerfield Valley and especially close to major waterway travel routes. Although the sites are confidential, four sites have been identified in Shelburne. (FRCOG and BRPA 2002).
- The Deerfield River has had a special place both for Native Americans and for early European contact period settlers. For example, in 1743, the Massachusetts colonial legislature set aside 'the Salmon fishing falls," now Shelburne Falls, to "be reserved for the use of the publick with Twenty Acres of Land Around them for Conveniency of fishing…" (Province of Massachusetts Bay 1743, 341). That site, with its huge natural pothole, now hosts three hydroelectric stations, which are themselves historic, being constructed between 1912 and 1913 (Great River Hydro n.d.). Although this segment of the river is not free-flowing and not eligible for Wild and Scenic designation, it is a landmark that helps anchor the free-flowing sections of the river.
- Shelburne Falls, in Shelburne to the northeast and Buckland to the southwest, was developed based on water power and transportation, first the misnamed Mohawk Trail, then early roadways, and finally the railroad with its access west through the Hoosac Tunnel gave it an agricultural history and, along the Deerfield River, a denser settlement pattern and industrial development (saw mills, gristmills, saw mill villages) than much of the Deerfield River valley.
- The Victorian iron truss bridge, the concrete trolley bridge, now the bridge of flowers, and the early commercial, institutional, and residential buildings in Shelburne Falls on both the Buckland and Shelburne sides of the river and early colonial settlement on the Clesson Brook floodplain are important historical features that illustrate the area's history (Mass. Historical Commission 1982b and 1982i.). National Register of Historic Places districts in both Buckland and Shelburne document this critical history.



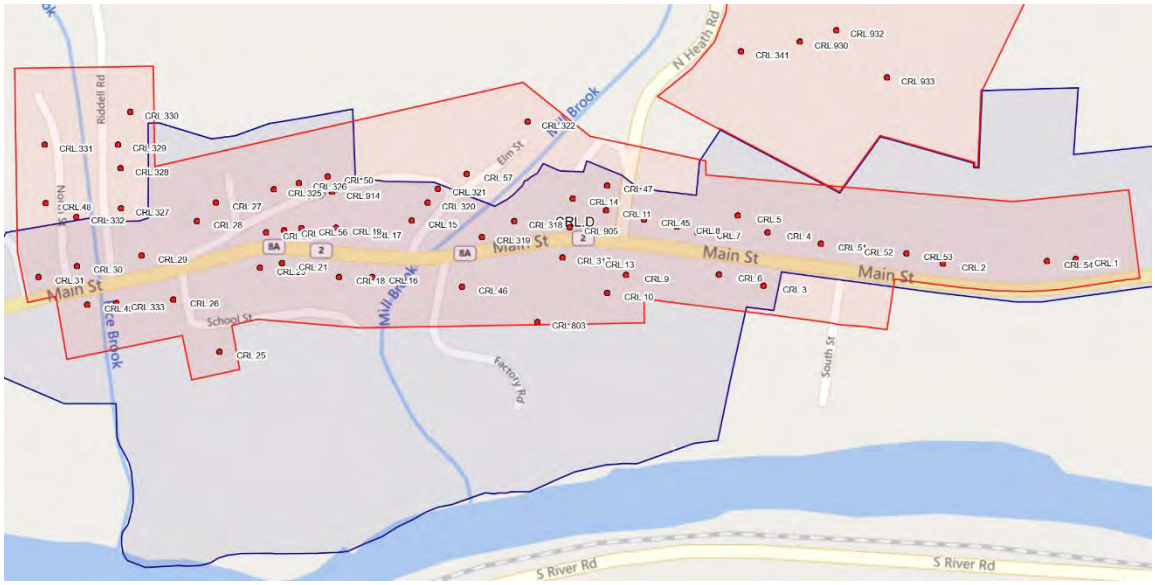
Buckland and Shelburne National Register Historic of Historic Places district (MassGIS)

Segment 5. Historic ORVs

- Seven archaeological sites in Charlemont and three sites in Florida have been identified along the Deerfield River (FRCOG and BRPA 2002), including the line of forts described in the next segment, with their exact locations confidential.

Segments 5 and 22. Historic ORVs

- Charlemont's location on the Deerfield River made it a major crossroads for both Native American and European-descent travel. The Mohawk Trail, the railroad with its Hoosac Tunnel connection, and early and finally modern roads provided especially strong links east and west. From a rich agricultural history, residential and visitor housing, and more recently ski area development has influenced development patterns (Massachusetts Historical Commission 1982c). From 1936 to 1953 five ski areas were developed near Charlemont village, although only Berkshire East remains today (Berkshire East Mountain Resort n.d.).
- The small and vibrant Charlemont village's historical buildings and the ***Charlemont***



Charlemont Village National Register Historic District (MHC n.d.)

Village National Register Historic District (1988) preserve the rich history of the region and qualify as a historic ORV.

- The 18th Century Hawks Fort, Rice Fort, and Taylor Fort, as part of the line of forts, with the Taylor's Fort Archaeological Project helping document the history (FRCOG and BRPC 2002 and Lewis 2006).
- The National Underground Railroad Network to Freedom project includes two sites in Charlemont: Hart and Mary Leavitt House, 1593 Mohawk Trail/Rte. 2 (42.619061N, -72.796604W) and the Roger Hooker and Keziah Leavitt House, Mohawk Trail/Rte. 2 (42.329954N, -71.121812W) (National Park Service n.d.).

Segment 5. Historic ORVs

- The Hoosac Tunnel allowed railroads to cut though the Berkshire mountains from the Town of Florida in the Deerfield River valley on the east side of the mountains to the City of North Adams in the Hoosic River valley on the west side of the mountain. The tunnel project started in 1850 and was finally completed in 1875-1876, was a feat of engineering. Much of the heavy drilling was done with explosives (nitroglycerin and

electric blasting caps) combined with one of the first pneumatic drills, the Burleigh Rock Drill. With the use of explosives and 19th Century building practices, 196 people died during tunnel construction. The American Society of Civil Engineers listed the tunnel a Historic Civil Engineering Landmark in 1975.

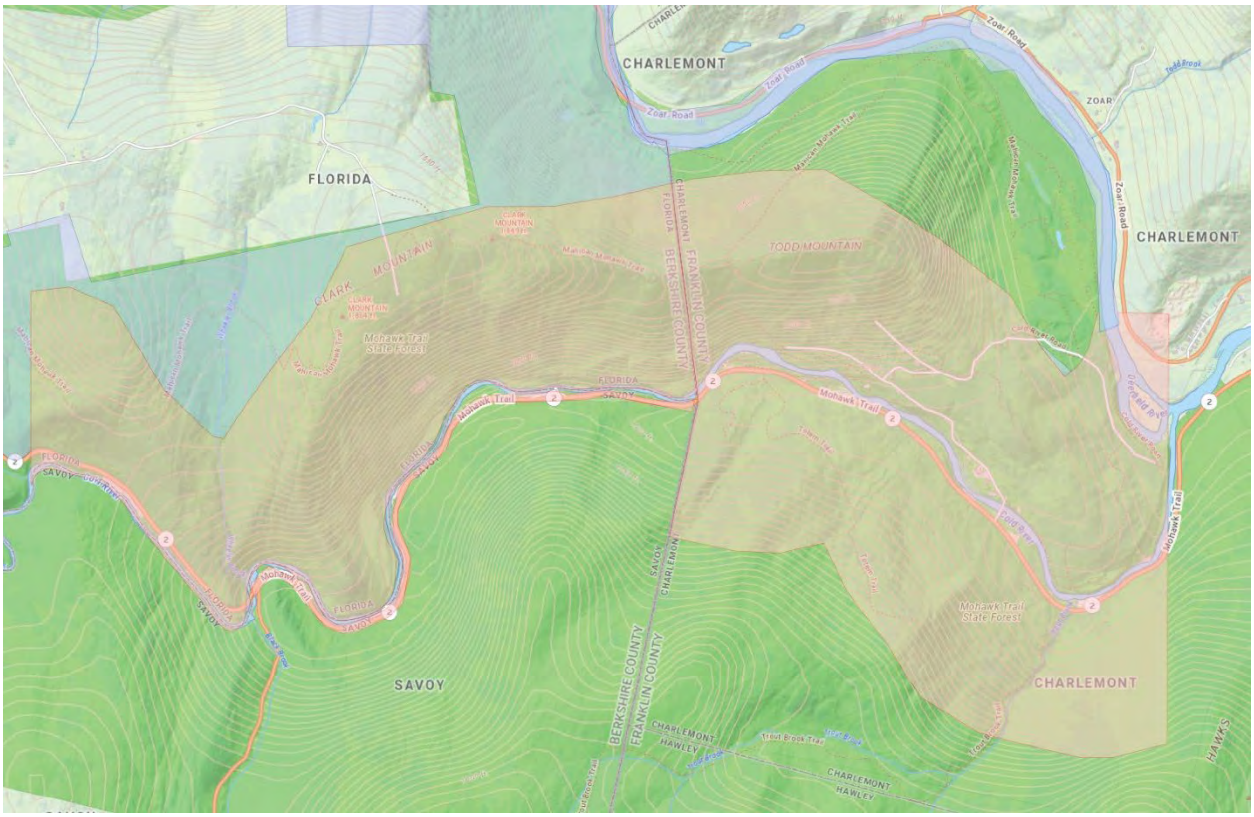
- Railroad spur lines, added to extend off the main Deerfield River line once the Hoosac Tunnel was built, greatly aided in the extraction of natural resources in the Deerfield River valley (Resch 2009).
- The railroad through and extending east was from the Hoosac Tunnel was the keystone that allowed rail service from Greenfield, and points east, to North Adams, and points west, helping define the Route 2 corridor before the development of Route 2 as a highway.
- The abandoned short shaft located immediately south of the Hoosac Tunnel demonstrates the challenges of building a tunnel in 1876.

Segment 7. Historic ORVs

- The Hoosac Tunnel & Wilmington Railroad, originally a narrow gauge railroad from the tunnel to Wilmington Vermont, mostly on the west bank of the Deerfield River, has left remnants in the rural landscape, including Monroe and Rowe (Mass. Historic Commission 1982g).
- Yankee Rowe Power Plant Site, (not on a free flowing but worthy for history) was one of the first civilian nuclear power plants in the US (planning starting in 1954, opened in 1961), developed during an optimistic time believing that nuclear power would be safe and inexpensive. The plant has been decommissioned and mostly removed, but remnants remain and will for centuries marking an important event in US history.

Segment 8 and a small section of Segment 6 Historic ORVs

- The Cold River. Mohawk Trail National Register of Historic Places district covers the Mohawk Trail within Mohawk State Forest from the confluence of the Cold River and Manning Brook on the west to the confluence of Cold and Deerfield Rivers on the east. The site includes the site of the Native American Mohawk Trail, old now grown over farms, and trail work and other improvements built by the Civilian Conservation Corps in the 1930s (National Park Service 1972).



Mohawk Trail National Register District (MassGIS)

Segment 9. Historic ORVs

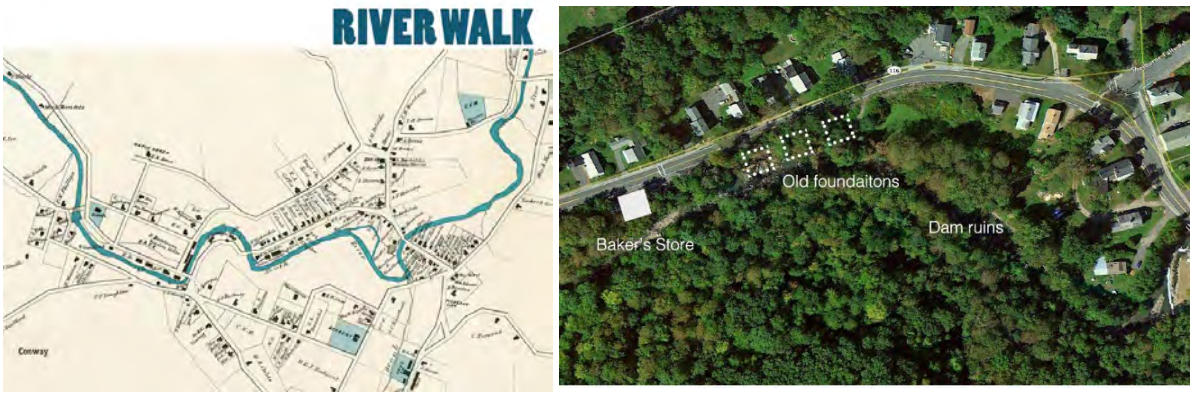
The Eunice Williams Covered Bridge (1870 rebuilt 1972 and 2014) at the Green River Pumping Station, Greenfield, was rebuilt but still retains a historical memory. (NSPCB n.d.) 42.6465oN, -72.6202oW. Covered bridges were roofed to protect the wood support trusses from the weather. Half of the covered bridges in Massachusetts are in the Deerfield Watershed (National Society for the Preservation of Covered Bridges or NSPCB n.d.). Each of the historic bridges (more than 50 years old) represents a historic ORV, but the highest historic value are those bridges from the mid-19th Century (1825-1875).

Segment 10. Historic ORVs

- Ashfield does not have any known Native American archaeological sites. Seasonally, Pocumtuck nation traveled from the Deerfield Valley for hunting, fur trade, fishing, and limited horticulture and likely left some trails. European-descent settlement came slowly. There were no colonial settlements until the 18th century when roads (1736) and dispersed settlement patterns began. This settlement grew in earnest with the end of the French and Indian Wars (English French Wars in Europe), but the area remained a small rural area with an agricultural economy until the 20th Century (Massachusetts Historical Commission 1982a). Between Native American and European decent

Ashfield contains a rich architectural history over the last two centuries, although no historic ORVs have been identifies to date.

- In Conway village on the South River, the southernmost tributary to the Deerfield River, the mill and water power history has been immortalized in a Conway River Walk



The Conway River Walk preserves to memory of its mill and waterfront history (FRCOG n.d.), a historic ORV

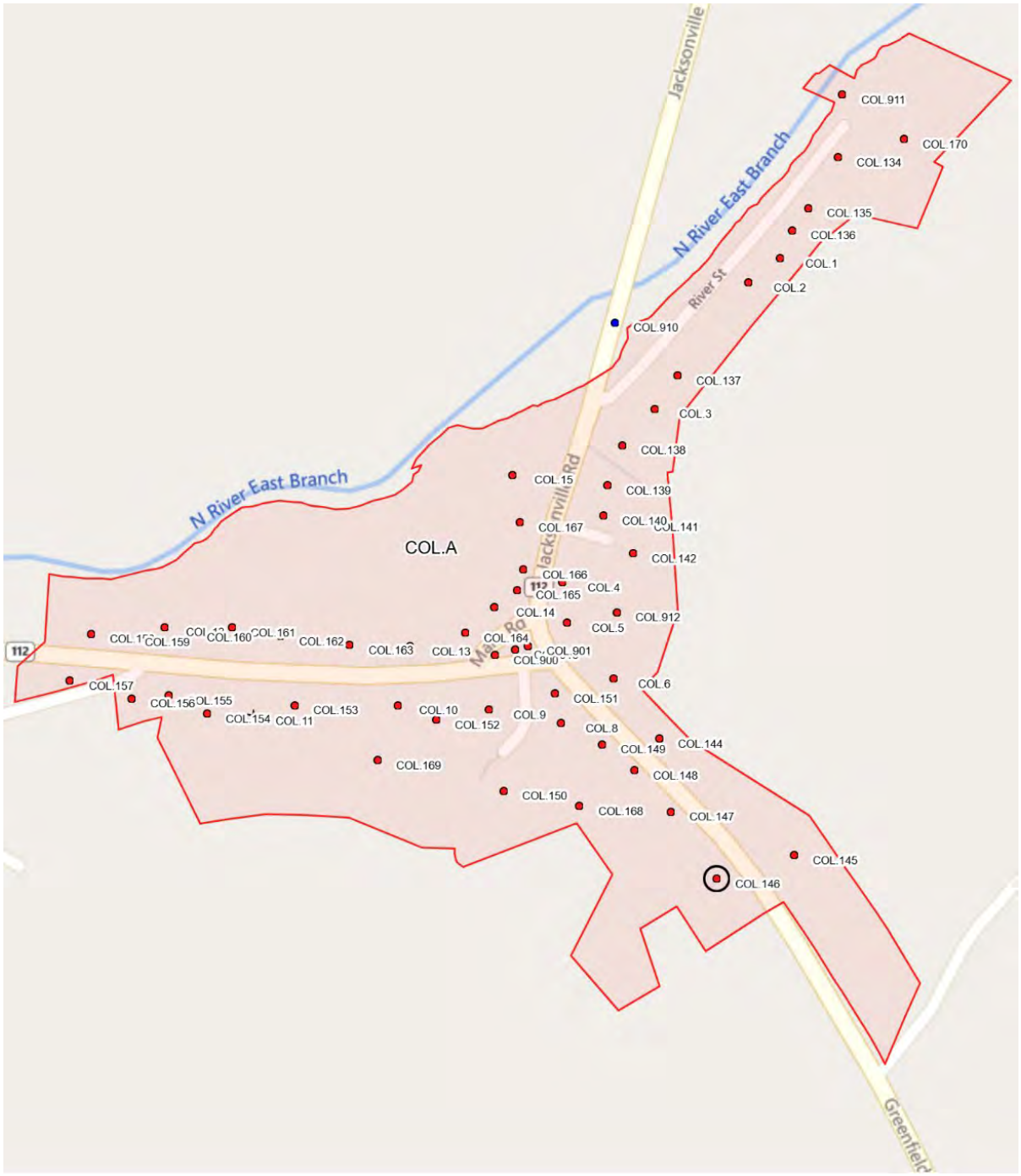
(FRCOG n.d.).

- Burkeville Covered Bridge (1870), listed in National Registry of Historic Places (MACRIS n.d. and NSPCB n.d.) 42.5078°N, -72.7111°W, represents the high style of covered bridge architecture from the mid-19th Century (1825-1875).

Segment 13. Historic ORVs

- Colrain has no known Native American archaeological sites, but the North River and the uplands nearby attracted seasonal Native American horticulture, hunting, fishing, and encampments. Native American tribes were present at least as late as circa 1759 when the last Native American/European descent settler skirmishes ended.
- Fortifications as part of the Massachusetts "line of forts" were developed in Colrain.
- Colrain is a small rural and industrial community. The North River and its tributaries supplied 18th and 19th Century water power, driving small-scale industrial development, a defined village center, and the residential and institutional wealth that came with that development.
- Historical development features remain in Colrain center, honored by the Colrain center National Register District (Massachusetts Historical Commission 1983)
- More limited historic traces remain in Griswoldville and Shattuckville (Massachusetts Historical Commission 1983).
- The Arthur A Smith Covered Bridge (1869) in Colrain, on the National Register of Historic Places (MACRIS n.d. and NSPCB n.d.) 42.6700°N, -72.7188°W.

- The Adamsville Road Bridge.



Colrain National Registry Historic District (MHC n.d.)

Segment 17 adjacent. The Beehive, Hawley State Forest, Hawley, Historic Register

- The Beehive Charcoal Kiln (42.563712, -72.879759) is the New England flagstone charcoal kiln. It was built in 1870 by Albert Dyer of Plainfield for William O. Bassett, a Hawley farmer (Charcoal Kiln 2024). It is adjacent to the watershed divide between the Swift River to the South and the Clesson Brook to the northeast. While not within the

study area, it is so close to that watershed divide that it influenced the history of this segment and is worth noting. Hawley State Forest, Hawley, Historic Register

Segment 19. Historic ORVs

- The Shaker Trail (New State Road to Sherman Road), Savoy State Forest, Savoy, remembers the historic Shaker settlement.
- New States Cemetery on Savoy town property, includes Shaker graves.

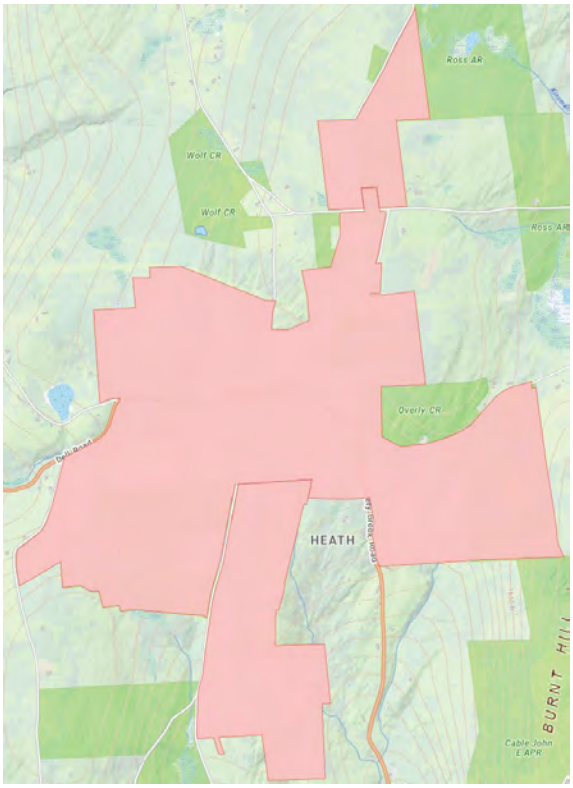
(Durwin 2013).

Segment 22. Historic ORVs (also see Segments 5 and 22 for Charlemont Historic District)

- The Bissell Covered Bridge (1951) in Charlemont (NSPCB n.d.) 42.6317N, -72.8689W, is historic, although not a high architecture 19th Century covered bridge.
- Beginning with the platting of the Town Common in 1789, the Heath Town Common, Center Cemetery, and residential and commercial buildings and were developed thought the 18th, 19th, and 20th centuries, retaining the unique character of a small rural town. They comprise the Heath National Register of Historic Places district (Mass. Historic Commission n.d.).

Segment 22. Historic ORVs

- The Hawley Old Town Common was used from 1794-1848. When the Town facilities were moved, the land was claimed by other uses and virtually no trace above ground exists, but it remains a unique historical features, and one of relatively few Massachusetts Town Commons that were totally abandoned (Sears n.d.).
- An archaeological dig at the former Sanford Tavern (Archeological Dig n.d.) documented its history.



Heath National Register of Historic Places district (MassGIS)

I. Nationwide River Inventory

The Nationwide Rivers Inventory (NRI) is a good starting point for identifying river segments that should be included in a National Wild and Scenic River designation.

The NRI is a listing of more than 4,500 free-flowing river segments in the United States that have been identified as eligible or potentially eligible for inclusion in the National Wild and Scenic Rivers System. Nationwide Rivers Inventory river segments possess one or more regionally or nationally significant "outstandingly remarkable" natural or cultural values.

All federal agencies must seek to avoid or mitigate actions that would adversely affect NRI river segments. The intention of listing a river on the NRI is to preserve river values for which it might be designated. Fewer than 14,000 miles, or less than 0.5% of all the river miles in the United States, are protected as Wild and Scenic Rivers. The Nationwide Rivers Inventory, however, includes approximately 78,000 miles of eligible or potentially eligible river segments – more than five times the mileage of the National Wild and Scenic Rivers System.

Massachusetts Segments

There are six Deerfield River segments in Massachusetts included in the NRI, including two mainstem segments, and four tributary streams.

River Segment: Deerfield River Mainstem

Description: Fish-(A regionally significant trout stream and an historic Atlantic Salmon Fishery.)
Reach: Schneck Brook to Stillwater Bridge
River Miles: 6
Outstandingly Remarkable Values: Fish, Other
Potential Classification: No data
Year Listed/Updated: 1982

River Segment: Deerfield River Mainstem

Description: Fish-(River is an historic Atlantic Salmon fishery.) History-(Segment parallels the Mohawk Trail, the principal route for expeditions against English settlements during French and Indian Wars.)
Reach: Confluence with Fife Brook to South of Charlemont
River Miles: 11
Outstandingly Remarkable Values: Fish, Historic
Potential Classification: No data
Year Listed/Updated: 1982

River Segment: Cold River

Description: Wild-(An excellent example of an undeveloped free flowing, low order river system which is one of the few remaining examples of this kind of system south of Vermont.)
Reach: From headwaters to confluence with the Deerfield River
River Miles: 14
Outstandingly Remarkable Values: Other
Potential Classification: No data
Year Listed/Updated: 1982

River Segment: South River

Description: Fish-(A regionally significant trout stream and an historic Atlantic Salmon Fishery.) History-(Segment parallels the Mohawk Trail, the principal route for expeditions against English settlements during French and Indian Wars.)
Reach: Conway to confluence with Deerfield River
River Miles: 6
Outstandingly Remarkable Values: Wildlife
Potential Classification: No data
Year Listed/Updated: 1982

River Segment: Gulf Brook

Description: Wild: an excellent example of an undeveloped free flowing, low order river system which is one of the few remaining examples of this kind of river system south of Vermont.
Reach: Headwaters to confluence with the Cold River
River Miles: 4
Outstandingly Remarkable Values: Other
Potential Classification: No data
Year Listed/Updated: 1982

River Segment: Bog Brook

Description: Wild: an excellent example of an undeveloped free flowing, low order river system which is one of the few remaining examples of this type south of Vermont.
Reach: From headwaters at Bog Pond to confluence with the Cold River (there is a small impoundment that enlarged Bog Pond, but it is not on the brook itself).
River Miles: 1
Outstandingly Remarkable Values: Other
Potential Classification: No data
Year Listed/Updated: 1982

Vermont Segments

There are two Deerfield River segments in Vermont included in the NRI, one mainstem segment and one tributary stream.

River Segment: Deerfield River Mainstem

Description: Wild-(Corridor and surrounding watershed are virtually undeveloped.) Hydrologic-(One of the last remaining examples of a free-flowing, undeveloped, low-order river in this section.)
Reach: From headwaters to Green Mountain NF boundary at Harriman Reservoir
River Miles: 19
Outstandingly Remarkable Values: Other
Potential Classification: No data
Year Listed/Updated: 1982, 1993

River Segment: Green River

Description: Botanic-(Headwaters include Gates Pond, which has a variety of inland wetland plant communities which is unusual in the southern portion of this section.)
Reach: Headwaters to Vermont-Massachusetts state border
River Miles: 15
Outstandingly Remarkable Values: Other
Potential Classification: No data
Year Listed/Updated: 1982

J. Water Quality Evaluation

The water quality in the Deerfield River is very good overall for the region. With a few exceptions, most of the Deerfield River mainstem and its key tributaries are fully supporting water quality standards for both primary and secondary contact recreation, as well as aesthetics.

Most of the Deerfield River and tributaries are designated as a coldwater fishery due to its consistently low water temperatures, supporting trout populations. The following waterbodies are classified as B Cold Water Fisheries:

- Deerfield River, Vermont-Massachusetts State Line to confluence with North River
- North River, East and West Branches from the Vermont-Massachusetts State Line to confluence with the Deerfield River
- Green River, Vermont-Massachusetts State Line to confluence with the Deerfield River.

In the Deerfield River Watershed, the following waterbody is classified as B Warm Water Fishery.

- Deerfield River, North River confluence to confluence with the Connecticut River.

There are currently ten facilities with permitted NPDES discharges in the watershed – five municipal wastewater treatment plants (Monroe, Charlemont, Buckland/Shelburne, Old Deerfield, and Greenfield), and five industrial current or former dischargers (Yankee Atomic Electric Company in Rowe, the former BBA Nonwovens in Colrain, US GenNE and Consolidated Edison hydroelectric projects, and WTE Recycling).

Monitoring Background

The Deerfield River Watershed Association (DRWA) water quality monitoring program began in 2017, and the results below summarize the past three years of data collected by volunteers at sites throughout Deerfield watershed, including its tributaries, in both Vermont and Massachusetts. Monitoring has focused on e-coli bacteria in both states, with limited testing for nitrogen and phosphorus in Vermont.

Deerfield River Mainstem (MA)

The mainstem Deerfield River in Massachusetts has very good water quality throughout its length, tested for e-coli bacteria, during dry weather and at most locations during wet weather as well. Swimming standards were met at test sites including Shunpike, Charlemont, Gardner's Falls, Stillwater and Deerfield Academy. The Route 5 & 10 Bridge site in Greenfield, which is downstream of the confluence with the Green River, receives a majority of the runoff from Greenfield. Even with that urban runoff input, the average e-coli level at the 5 & 10 Bridge site is slightly above the swimming standard in wet weather only.

Green River (MA and VT)

The Green River changes drastically as it flows from rural Vermont through some agricultural use and into the city of Greenfield near its mouth. The water quality reflects this change in landscape as the bacteria counts are typically low upstream of Greenfield and then increase as the river flows through Greenfield. Bacteria levels met swimming standards in three sites upstream from Greenfield (Green River Village in VT, state line and Green River Road in MA).

Integrated Waters Report Assessment of Water Quality and Support for Uses

Name	#	Location	Impairments	Fish, Aquatic Life & Wildlife	Aesthetic	Contact Recreation	
						1st	2nd
Bear River	MA33-17	Headwaters to Deerfield River, Conway	Temperature	NS	NA	NA	NA
Chickley River	MA33-11	Savoy State Forest to Deerfield River, Charlemont	E. coli near mouth	FS	NA	NS	NS
Clesson Brook	MA33-15	Hawley to Deerfield River, Buckland	None	NA	NA	FS	FS
Cold River	MA33-05	Source in Florida to Deerfield River confluence, Charlemont	None	FS	FS	FS	FS
Deerfield River	MA33-01	Sherman Reservoir to Cold River, Charlemont	Flow regime modification	NS	NA	NA	NA
Deerfield River	MA33-02	Cold River to North River, Charlemont	None	FS	NA	FS	FS
Deerfield River	MA33-03	North River to Green River, Greenfield	None	FS	NA	FS	FS
Deerfield River	MA33-04	Green River to Connecticut River, Greenfield	E. coli	NA	NA	NS	FS
Dunbar Brook	MA33-48	State line to Deerfield River, Rowe	None	FS	FS	NA	NA
Green River	MA33-28	Vermont state line to Greenfield dam	Temperature	NS	FS	FS	FS
Green River	MA33-29	Greenfield dam to Nash's Mill Road swimming area dam	None	NA	NA	NA	NA
Green River	MA33-30	Swimming area dam to Deerfield River, Greenfield	Fecal coliform/E. coli, temperature, turbidity, no coldwater assemblage	NS	NS	NS	NS

Gulf Brook	MA33-56	Burnett Pond outlet, Savoy to Cold River, confluence, Savoy	None	NA	NA	NA	NA
Mill Brook	MA33-14	Headwaters in Heath to Deerfield River in Charlemont		FS	NA	FS	FS
North River	MA33-06	Confluence of East and West Branches to Deerfield River, Charlemont	Temperature, no coldwater assemblage	NS	FS	FS	FS
North River, East Branch	MA33-19	Vermont state line to West Branch confluence, Colrain	E. coli, temperature	NS	FS	NS	FS
North River, West Branch	MA33-27	Heath to East Branch confluence, Colrain	Temperature	NS			
South River	MA33-102	Johnny Bean Drive to Deerfield River, Conway	Fecal coliform/E. coli, temperature, habitat alterations	NS		NS	

NS = Not Supporting NA = Not Assessed FS= Fully Supporting
(Watershed Planning Program 2023)

Swimming standards were not met for wet or dry weather in two Greenfield Center locations (Colrain Street and Route 2). In between two Greenfield sampling locations, a small tributary named Maple Brook enters the Green. Maple Brook is mostly buried under Greenfield and receives almost all the stormwater from the town when it rains, which then goes into the Green River between those two sites. Because even the dry weather samples are often elevated in Greenfield, there are likely additional sources of bacteria in addition to precipitation runoff. Total nitrogen levels were usually below the EPA recommendation at all sites.

East Branch North River (MA and VT)

The East Branch North River at Foundry Village, Colrain, MA meets swimming standards in dry weather but not wet weather. The East Branch North River in Vermont has mysteriously high bacteria levels in Jacksonville, VT, particularly in dry weather. DRWA has tested upstream and downstream of the wastewater treatment facility (WWTF) and it is not the source of bacteria. Some other small source tracking efforts have been taken that have not identified potential sources of bacteria in Jacksonville.

The East Branch North River was tested above and below the Jacksonville Wastewater Treatment Facility (WWTF) for nitrogen, and there are significantly higher nitrogen levels downstream of the WWTF, which is to be expected. In low flow conditions, the TN levels in the East Branch North River tend to exceed the EPA recommendation.

South River (Conway, MA)
The South River flows through many agricultural fields and has somewhat variable bacteria levels in both wet and dry weather. The testing site at Reeds Bridge Road in Conway met swimming standards in dry weather but exceeded standards in wet weather.

Clesson Brook (Buckland, MA)
Swimming standards were met in both dry and wet weather on Clesson Brook.

Ellis Brook (Dover, VT)
Swimming standards were met in both dry and wet weather on Ellis Brook.

Beaver Brook (Wilmington, VT)
Swimming standards were met in dry weather but exceeded in wet weather.

North Branch of Deerfield River (Vermont)
Swimming standards were exceeded in wet weather in all four test sites (Valley Trail, East Dover Road, Wilmington Center and Wilmington above WWTP). Swimming standards were only exceeded in dry weather at Wilmington Center. Past analysis of results from this section of the river has suggested that elevated bacteria coming from Beaver Brook (just upstream of the Wilmington Center site) could be contributing to these higher levels but is not the sole source. Agricultural and urban runoff may also
be sources of elevated bacteria during wet weather at these locations. Overall, the total nitrogen levels in the North Branch Deerfield River in Vermont are usually below the EPA standards with a slight increasing trend moving from upstream to downstream.

Overall Water Quality

Overall, the Deerfield River Watershed has very good water quality for the region, especially the Massachusetts portion of the mainstem Deerfield River. The North Branch Deerfield River in Wilmington, VT, the East Branch North River in Jacksonville, VT and the Green River in Greenfield are heavily impacted at times. Wilmington and Greenfield would benefit from efforts to reduce urban and agricultural runoff. In the case of Jacksonville, it is unclear where the source of bacteria is but once identified it should be addressed.

Water Quality Recommendations for Designation

Based on the water quality assessment above, water quality concerns are not a reason to exclude any river segments of the Deerfield River or its tributaries, with the exception of the following stream segments:

- Deerfield River mainstem in Greenfield, Massachusetts, downstream from Routes 5&10 Bridge;
- Green River in Massachusetts, downstream from Colrain Street in Greenfield.

Sources: O'Donnell 2024; Watershed Planning Program n.d.; Massachusetts Department of Environmental Protection 2004

K. Classification

Based on applicable criteria, the following preliminary classifications are recommended for the segments of the Deerfield River and its tributaries that are eligible for designation:

- River Segment 1: Deerfield River Mainstem, Reach #1: Recreational
- River Segment 2: Deerfield River Mainstem, Reach #2: Recreational
- River Segment 4: Deerfield River Mainstem, Reach #4: Recreational
- River Segment 5: Deerfield River Mainstem, Reach #5: Recreational
- River Segment 6: Deerfield River Mainstem, Reach #6: Recreational
- River Segment 8: Cold River: Recreational
- River Segment 9: Green River: Recreational
- River Segment 10: South River: Recreational, with some Scenic sections
- River Segment 11: North River: Recreational
- River Segment 12: North River, West Branch: Recreational
- River Segment 13: North River, East Branch: Recreational
- River Segment 14: Pelham Brook: Recreational
- River Segment 15: Dunbar Brook: Scenic
- River Segment 16: Bear River: Scenic
- River Segment 17: Clesson Brook: Recreational
- River Segment 18: Chickley River: Recreational
- River Segment 19: Gulf Brook: Scenic
- River Segment 20: Bog Brook: Wild
- River Segment 22: Mill Brook: Recreational
- River Segment 23: Chapel Brook: Scenic

Section VI: Evaluation of Suitability

A. Existing River Protection

Deerfield River watershed municipalities and the state agencies working in the watershed are almost universally dedicated to protecting wild and scenic values. Competing goals and values along with limited resources, however, limit some of these efforts.

Adequacy of Local Zoning and Land Use Controls in Protecting Wild and Scenic Values

The municipalities in the watershed are generally small and except for Greenfield most of them have no professional planning staff and limited resources at their disposal. Many of the communities have town administrators who often provide grant writing and project management expertise. In addition, the municipalities and various consortiums of municipalities and RPAs have received grants to help advance specific river protection related planning projects.

The municipalities receive technical assistance for many of their river protection related planning projects from their regional planning agencies (RPAs).

- Frankin Regional Council of Governments (FRCOG) serves a majority of the communities in the watershed: Ashfield, Bernardston, Buckland, Charlemont, Colrain, Conway, Deerfield, Greenfield, Hawley, Heath, Leyden, Monroe, Rowe, and Shelburne. Except for the City of Greenfield, these communities are all small towns.
- Berkshire Regional Planning Commission (BRPC) serves a few municipalities in the western part of the watershed: Adams, Florida, North Adams, and Savoy. Only a tiny sliver of Adams and North Adams is within the watershed and that is far from any significant section of the Deerfield River or its tributaries.
- Pioneer Valley Planning Commission (PVPC) serves Goshen and Plainfield, but only a tiny sliver of each town is within the watershed and they are far from any significant section of the Deerfield River or its tributaries.

All of the communities in the watershed have zoning, some of which have strong land use and environmental regulations while some in very slow growth areas with few new threats have only the bare minimum. Likewise, while a majority of communities have subdivision regulations, few of those are modern and up to date. Generally, only a very few more urban valley communities on the east and west side of the watershed have stormwater and wetlands regulations. The current regulatory environment has been adequate to serve the very slow growth and minimal amount of development, but many of the communities are not prepared if a large project was proposed.

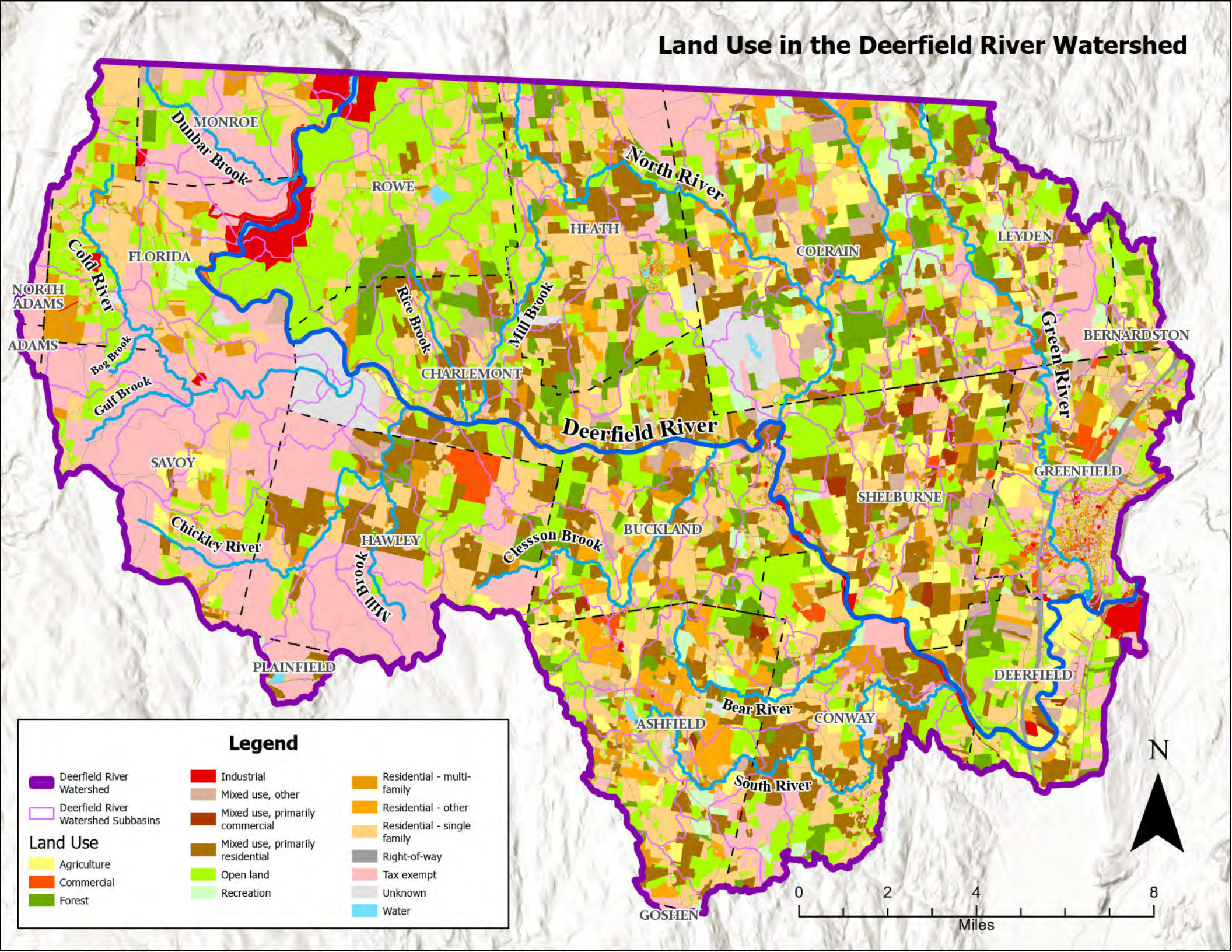
The vast majority of the watershed is within the FRCOG region. FRCOG performed a detailed regulatory review of local land use and environmental regulations within the

FRCOG section of the Deerfield River watershed (MacPhee et al. 2017). Specifically, this assessment examined:

- Is development prohibited within the 100-year floodplain?
- What stormwater runoff / management standards are required?
- Is erosion and sediment control for construction activities and post construction conditions addressed?
- Is the amount of impervious surface on a lot minimized?
- Does the community allow, encourage, or mandate Open Space Residential Design subdivision that provides for clustered residential development with open space protection?
- Has a water supply protection district been established to protect groundwater resources?
- Does the community allow parking options that reduce overall impervious surface? Are trees and LID stormwater management required for larger parking lots?
- Are common driveways allowed to reduce overall impervious surface?
- Does a community have Site Plan Review, and does it address stormwater and encourage LID?
- Does the bylaw encourage or require preservation of existing vegetation and mature trees or the planting of new trees in development/ redevelopment activities?
- Does the community address stormwater impacts and land clearing for large-scale ground-mounted solar installations?

The **Land Use** map shows watershed land use as shown in MassGIS data.

Land Use in the Deerfield River Watershed



The Zoning and Subdivision table below is an assessment of how well municipal regulations protect the Deerfield River and its tributaries. **Note: A regulatory approach may not be right for every community. The level of local regulations is a local choice.**

Zoning and Subdivision Water Quality and River Protection*

Fully addressed in the regulations **Partially addressed in regulations** **Not or minimally addressed in regulations or no regulations**	Adams	Ashfield	Bernardston	Buckland	Charlemont	Colrain	Conway	Deerfield	Florida	Goshen**	Greenfield	Hawley	Heath	Leydon	Monroe	N. Adams	Plainfield	Rowe	Savoy	Shelburne
Floodplain development																				
Zoning stormwater management																				
Subdivision stormwater management																				
Zoning erosion/sedimentation																				
Subdivisions erosion/sedimentation																				
Impervious cover																				
Cluster, Open Space Residential																				
Water supply protection																				
Parking																				
Common driveways																				
Site Plan Review																				
Zoning vegetation and trees																				
Subdivisions natural features																				
Subdivisions trees																				
Subdivisions road design																				
Large-Scale PV*																				

*analysis before "Act Promoting a Clean Energy Grid" (2024) streamlined approvals
**Goshen is currently undergoing a comprehensive zoning revision not yet in effect.

MacPhee et al. 2017 (primary source), City of North Adams 2024, Town of Adams 2023, Town of Deerfield 2024, Town of Florida 2016, Town of Goshen 2023, Town of Plainfield 2016, Town of Savoy, 2017.

Given the low growth and development pressures, most of the zoning and subdivision provisions are adequate to protect wild and scenic values based on current

development patterns and demands. Unfortunately, while major development projects will be rare in the 20 communities in the watershed and non-existent in most of them, it is impossible to rule out a large scale development in almost any community. Many of the communities face some threats to wild and scenic values from the rare large scale non-traditional development that can occur.

Some communities (e.g., Deerfield and Greenfield) have strong regulatory schemes overall. Some communities (e.g., Charlemont) are actively planning for the future that they want. Improving regulatory schemes in almost every community to prepare for those rare events would be highly desirable to protect wild and scenic values and community values.

Section VII. Assessment of River Management Issues and Strategies includes recommendations for local regulatory and non-regulatory strategies to strengthen the ability of communities in the Deerfield River watershed to manage the river in accordance with National Wild and Scenic River standards.

1. State and Local Government's Ability to Manage and Protect Wild and Scenic Values on Non-federal Lands: Scenic and Recreational Protections; Natural Resource Protections; Water Quality Protections; Historic and Cultural Protections

In addition to local zoning and subdivision regulations, there are federal and state environmental protection statutes and regulations that provision additional protections of wild and scenic values on non-federal lands. Some of these provide opportunities for local administration and can be supplemented by local regulatory systems.

State & Federal Regulatory Protection	Notes and Local Options
Federal Clean Water Act, Section 404	Regulates fill materials into waters of the US, including wetlands
Massachusetts Scenic and Recreational Rivers Act	Identifies and designates specific river segments for protection and recreational use
Water Quality Certificates (state issued under federal law)	Regulates projects impacting water quality
Massachusetts Wetlands Protection Act, Rivers Protection Act, and Wetlands Protection Regulations	State regulatory system for wetlands and rivers protection, with a 200-foot riverfront area on both sides of rivers and streams. Permits are granted by municipalities. Some communities also adopt local wetlands bylaws.
National Environmental Policy Act	Federal review of Federally funded or licensed projects significantly affecting the environment
Massachusetts Environmental Policy Act	State review of major projects

Federal and Massachusetts Endangered Species Acts	Federal and state acts protecting against "takes" of rare and endangered species
National Historic Preservation Act, Section 106	Federal law for review of federally funded or licensed projects affecting projects on or eligible for listing on the National Register, with state Section 106 review of those projects
Waters Act, Chapter 91	Regulate construction and filling of great ponds over 10 acres) and the Connecticut River
FEMA National Flood Insurance Program	Sets minimum standards for local zoning and state building code for communities to be eligible or National Flood Insurance.

Massachusetts Scenic and Recreational Rivers Act

The Massachusetts Scenic and Recreational Rivers Act, passed in 1971, designates certain rivers in the state for priority protection and recreational development. Forty-six rivers in Massachusetts are given this designation, including the nearby Westfield River. The act is implemented through the Massachusetts Department of Environmental Management (Mass DEM) (now DCR), which develops work programs and implements the act, as seen with the North River pilot project. The act aims to protect the state's rivers, including their aesthetic, recreational, and natural resource values.

Key aspects of the act include:

- Designation and Protection: The act identifies and designates specific river segments for protection and recreational use.
- Regulatory Authority: The Department of Conservation and Recreation (DCR) is the regulatory agency for implementing the act.
- River Stewardship: The River Stewardship Council plays a role in advising and advocating for river protection, often in partnership with the National Park Service.
- Implementation: The act is implemented through orders and regulations, which regulate activities like dredging, filling, and altering or polluting the rivers.
- Public Participation: Public hearings and meetings are held to allow for public input and involvement in the management of these rivers.
- Protection of Resources: The act aims to protect public and private property, wildlife, fisheries, and the irreplaceable wild, scenic, and recreational river resources.
- Inclusion in the National System: Some rivers designated under the Massachusetts Scenic and Recreational Rivers Act have also been designated as National Wild and Scenic Rivers.

Municipal Application of State/Federal Laws
These environmental laws collectively provide strong tools for protecting wild and scenic values. Locally, there are three key areas where municipalities can ensure that these regulations protect those values.

1. Massachusetts Wetlands Protection Act and Regulations
The Massachusetts Wetlands Protection Act and Regulations protects wetlands, floodplains, and rivers and a 200-foot riverfront area on both sides of rivers and streams. It helps keep water clean, preserving wildlife habitat, and controlling flooding.

According to the law, the riverfront area provides the eight interests of the Wetlands Protection Act: protection of public and private water supply, protection of groundwater supply, protection of land containing shellfish, protection of wildlife habitat, flood control, storm damage prevention, prevention of pollution, and protection of fisheries. The law also establishes the policy of the state to protect the natural integrity of rivers and to encourage and establish open space along rivers.

The Act and its regulations are administered by municipal conservation commissions. Many of those commissions do a fabulous job administering permits, generally completely with volunteers in most of the watershed communities, and very rarely supplementing state law with local bylaws (for towns) and ordinances (for cities). Some communities could use additional support and training.

2. National Flood Insurance Program
FEMA's National Flood Insurance program sets the **minimum** standard for zoning (adopted by municipalities) and building code (in Massachusetts, adopted by the state) in order for property owners to be eligible for the National Flood Insurance program. The state building code meets these standards, but many of the municipalities' zoning in the watershed do not. Meeting these standards is critical to protect wild and scenic values.

3. Stronger local flood plain and fluvial flooding standards
The National Flood Insurance program only sets minimum standards. In particular, the Flood Insurance Rate Maps (FIRMS) set the minimum standard for the horizontal extent of the floodplain or flood fringe and for the floodway. These maps are based on historical data. They do not necessarily protect the full extent of current floodplains nor, in areas with rapid river channel (fluvial) erosion, do they necessarily protect against river channel erosion and river channel migration. Adding these protections is also critical to protect wild and scenic values.

B. Existing Support for Wild and Scenic Designation: Local and Regional Support; State Support; Congressional Support

As discussed in detail in the Status of Deerfield River in Designation Process, in 2021, the Deerfield River Watershed Association began building local support for protecting the Deerfield River as a National Wild and Scenic River, with watershed-wide public outreach and consensus building.

As a result, detailed in that same status section there is broad local and regional support, with letters of support, for designation of the Deerfield River and its tributaries DRWA from 21 communities in the watershed (14 in Massachusetts and 7 in Vermont) and 12 organizations and agencies. No communities have expressed opposition.

The Deerfield River Wild and Scenic Act of 2025 (S. 1187 and H.R. 2451, text in Appendix) was reintroduced in 2025, sponsored by Congressman Jim McGovern (MA) (lead); Senator Edward Markey (MA) (lead); Congressman Richard Neal (MA); Representative Becca Balint (VT); Senator Peter Welch (VT); Senator Bernie Sanders (VT); and Senator Elizabeth Warren (MA).

C. Designation Effects

1. General Effects of the Partnership Wild and Scenic River Model

The Partnership Wild and Scenic Rivers model was established for designation and management for those rivers predominantly in private, municipal or state, as opposed to federal, ownership. The Partnership Rivers in New England demonstrate the potential effects of designation under the Wild and Scenic Rivers Act. Partnership Wild and Scenic Rivers model features include:

- No reliance on federal land ownership or management;
- Reliance on local and state regulations and management as before designation;
- Administration and implementation of a locally led management plan facilitated by a locally appointed, broadly participatory Wild and Scenic Committee, convened for each river specifically for this purpose;
- Responsibility for management of river resources shared between the local, state, and federal partners on the Committee;
- No required establishment of a National Park or superintendent or law enforcement agent from the National Park Service;
- No new regulatory process, only National Park Service review of permits going through the existing federal regulatory framework.
- No required purchase or transfer of lands to the NPS;
- Succeeds through voluntary education, outreach, management efforts and local support.

2. Effects on Dams

The Study assessed the existing dams on the rivers to see if they are compatible with the free-flowing river conditions necessary for designation. There are numerous segments of the Deerfield River mainstem and its tributaries where dams are present, but the dams and their full upstream impoundment areas have been excluded from consideration for designation. See Section V for details on each of the dams.

On the mainstem of the Deerfield River there are ten dams, and all of these dams and their upstream impoundment areas have been excluded from consideration for designation under this study. There are also five dams on the Green River, three dams on the South River, and nine dams on the other tributaries of the Deerfield River. Many of these dams are very small and are located at the extreme upstream end of the stream segments. All of these dams and their upstream impoundment areas have been excluded from consideration for designation as well.

Consequently, it is concluded that Wild and Scenic River designation will have no effect on any of the dams on the Deerfield River mainstem or its tributaries.

3. Summary of General Findings on Suitability

Analysis of existing local, state, federal, and non- regulatory protections applicable to the Deerfield River and its tributaries, along with the river protection strategies recommended in Section VII of this Management Plan, are found to adequately protect the rivers and to be consistent with the purposes of the Wild and Scenic Rivers Act. These protections, combined with local support for river preservation, provide substantial protection to the rivers and their adjacent lands.

When combined with the protections that would be provided through the Wild and Scenic Rivers designation, the Deerfield River and its tributaries' Outstandingly Remarkable Values, free-flowing character, and water quality would be adequately protected without the need for federal land acquisition or federal land ownership and management.

This finding is consistent with similar findings that have been made for each of the existing Partnership Wild and Scenic Rivers, whereby the designating legislation for each of those rivers has prohibited the federal condemnation of lands, as provided for by Section 6(c) of the Wild and Scenic Rivers Act. It is anticipated that any designating legislation for the Deerfield River and its tributaries will likewise include such provisions.

This Management Plan has been developed with input from and to meet the needs of local, state, and federal stakeholders. It has been endorsed as the Management Plan for the Deerfield River and its tributaries by the communities of _____.

This Management Plan would be utilized as the “Comprehensive Management Plan” called for by Section 3(d) of the Wild and Scenic Rivers Act should the Deerfield River and its tributaries be designated as components of the national system. The Deerfield River Management Plan, as implemented by the Deerfield River Wild and Scenic Committee that will be formed after the Wild and Scenic designation, provides an appropriate and effective management framework for the long-term management and protection of the watercourses. It is concluded that there is sufficient support to make the rivers suitable for designation under the Wild and Scenic Rivers Act based on the Partnership Wild and Scenic Rivers model.

Section VII. Assessment of River Management Issues and Strategies

A. Summary of River Management Issues and Problems

This section identifies the key management issues for the Deerfield River, and a series of local, state and federal management strategies that can address these issues.

Issue	Problems
Point and Non-point source pollution	• Water quality is generally good but is poor in some hot spots, especially the Green River, which has elevated E. coli levels below the confluence with Greenfield's Maple Brook. • There are areas with debris in and along the river. • Some discarded tires which, because they insulate water, can breed warmer weather mosquitos/disease vectors. • River access in some areas is causing bank erosion.
Water Use	• Generally, water quantity or water use does not create problems. • There are a few areas where new limits on access to the river could threaten farmer access and pumping for irrigation.
Dam Releases and Management	• FERC licenses (typically issued every 40 years) address dam releases for fisheries, erosion, white water boating, and other uses. The Deerfield River Watershed Association, Trout Unlimited, FRCOG, and other groups often gain intervener status to join those conversations. • Communities have been less engaged in the FERC license process. • The FERC licensed dams, from their impoundments downstream to their dams and millraces, are not free flowing, and consequently, are not Wild and Scenic designation eligible. • Non-FERC licensed dams range from old mill dams to mid-20th century small-scale hydroelectric facilities. The Massachusetts Division of Ecological Restoration (DER) has assessed these dams and the potential benefits of dam removal. Those non-FERC licensed dams could be prioritized for eventual removal. Where those dams create non-free flowing conditions, they should be included in the overall Wild and Scenic study so that if the dams are ever removed a small amendment could expand W&S designation to those areas. • Some of the FERC licensed dams come with Conservation Restriction or FERC license conditions prohibiting new dams within the licensed reach of the dam. Those areas should be a priority for permanent land preservation, ideally with public access, subject to the FERC licensee holding full water flow rights for hydroelectric power.

Issue	Problems
River Recreational Use and Public River Access: Fishing, Camping, Hiking, Boating, Swimming, Hunting	• There is a shortage of public river access points, particularly for swimming, small (car-top) boats and hiking. This is a concern particularly for the Fife Brook to Charlemont reach, and the Bardwell's Ferry to Deerfield reach, which both experience heavy recreational use. • There is a problem of public access to some very scenic portions of the Mahican Mohawk Trail along the river, due to posting of no trespassing signs by the railroad and some private landowners. This also restricts the ability to maintain trail sections. • River access is being overused in some areas, with erosion, trash and debris, and excessive demands on emergency services. • Wayfinding to recreation and river access sites is limited. • Volunteer and paid river ranger resources are limited.
Riverfront Land Use	• Most of the current riverfront land uses are consistent with river protection, especially forests, farms, and recreation. • Development pressures on riverfront lands are expected to increase as the river is discovered and river recreational use increases. • There are many uses, including farming and lawns, which come to or close to the rivers' edge and can damage the river and habitat. • Incentive and regulatory programs do not always protect the river or the riverfront areas. • Non-native invasive plants, especially Japanese Knotweed (*Reynoutria japonica*) have spread in profusion along the river, and lower habitat value and damage resource areas • Riverfront flooding from rivers and from undersized culverts • Older designed culverts that impede the travel of flora and fauna and degrade ecosystems
Fisheries	• Fisheries, especially sports fishing trout fisheries, are rich and varied. • Both public road projects and private landowners sometimes disturb fishery habitat, especially during emergency projects immediately after major storm events. • Increased water temperature is creating some threats to fisheries.

B. Recommendations: River Management Strategies

Development of Deerfield River management strategies has been one of the primary tasks of the Deerfield River Wild and Scenic Study Committee (Study Committee). The management strategies in this study are intended for protecting and enhancing the Wild and Scenic River values identified as important at the local, regional, state or national level. If the Deerfield River and its tributaries are designated, this study concludes that the management strategies in this study would serve as the

comprehensive rivers management plan required under Sec on 3(d)(1) of the Wild and Scenic Rivers Act (WSRA). If the rivers are not added to the National Wild and Scenic Rivers System, the management strategies will still serve to provide insight for state and local partners working to manage and protect the special values of the Deerfield River and its tributaries.

1. **River Management Partners**
   Successful management of the Deerfield River as a National Wild and Scenic River will require collaboration of many partners at the local, regional, state, and federal levels. Partners will include:
   - Deerfield River Wild and Scenic Study Committee: This committee provided oversight in the development of this study and will be the primary committee to oversee the implementation of the plan's recommendations and ensure local input in the river's management.
   - Deerfield River Watershed Association (DRWA): DRWA is the lead organization in coordinating efforts to seek National Wild and Scenic designation of the Deerfield River. DRWA is one of several sponsors of various river cleanups in the area.
   - Connecticut River Conservancy (CRC): DRWA is an affiliate of CRC, and CRC provides administrative and financial services for DRWA, and is an active supporter of the designation process.
   - Friends of the South River: The Friends is an informal group of citizens working to preserve this remarkable resource.
   - MA Executive Office of Energy and Environmental Affairs (EEA) Woodlands Partnership Implementation Grant: The Woodlands Partnership has already been a partner, providing the majority of funding needed to complete this study.
   - Communities in the Deerfield River watershed: The Massachusetts communities of Ashfield, Buckland, Charlemont, Colrain, Conway, Deerfield, Florida, Greenfield, Leyden, Savoy, Shelburne will play an important role, participating in the Deerfield River Wild and Scenic Study Committee, and implementing the local land use strategies in this plan.
   - Franklin Land Trust (FLT): FLT plays an important role in land protection in the watershed and can assist in the protection of important riverfront lands through the acquisition of fee interests or conservation restrictions.
   - Regional Planning Agencies: The two regional planning agencies in the watershed, Franklin Regional Council of Governments and Berkshire Regional Planning Commission will have roles in assisting watershed communities in adopting land use strategies in this plan.
   - Massachusetts Executive Office of Energy and Environmental Affairs (EOEEA): EOEEA should be engaged in the protection of the Deerfield River through its state designation under the Massachusetts Scenic and Recreational Rivers Act.

- State Legislative Delegation: The Massachusetts state legislators in the watershed will be important in the process for protecting the river under the Massachusetts Scenic and Recreational Rivers Act.
- National Park Service: The National Park Service protects the river under the provisions of the National Wild and Scenic Rivers Act, will be engaged with a local river partnership committee and will provide funding to implement study recommendations through the Partnership Rivers Program.
- Federal Legislative Delegation: The Massachusetts federal legislators in the watershed will be important in the process for protecting the river under the National Wild and Scenic Act, including securing Congressional approval for designation.
- Vermont communities and organizations: When the study is expanded to include the Vermont portion of the watershed, the Vermont communities and organizations will play important roles in implementing local management recommendations.

2. Local Management Strategies

Communities can improve planning and regulatory strategies to encourage the kind of growth that they want and reduce growth damaging river resources. The following local management strategies are recommended:

- River Corridor Protection Zoning: River protection zoning can establish increased riverfront setbacks, limit land uses that adversely impact rivers, establish green development performance standards, and address river channel (fluvial) erosion. There are several effective models available, including:
  - Franklin Regional Council of Government (FRCOG) Model River Corridor Protection Overlay District with associated fluvial erosion hazard and river corridor mapping;
  - Westfield River Wild and Scenic model bylaws;
  - Town of Deerfield bylaws for green development performance standards;
  - Vermont Model Fluvial Erosion Hazard (FEH) Districts

  Any of these models can be used and refined to meet the Massachusetts regulatory framework, in cooperation with Deerfield River watershed towns, Planning Boards, and the regional planning agencies.

- Improved Wetlands Bylaws: Improved wetlands bylaws can provide stronger protections than those in the MA Wetlands Protection Act (200' wide river resource area buffer). Wetland bylaws only require a majority Town Meeting vote, a lower bar than the 2/3rds vote required for riverfront protection zoning.

- Improved Floodplain Zoning : Floodplain zoning should, at a minimum, be upgraded to the Massachusetts Flood Hazard Management Program's model.

Communities can refine and supplement that model in other parts of their bylaws or zoning:

- Further restrict uses and requiring floodproofing of structures.
- Add protection against shifting river channels (effluvial erosion), even when those river channels could erode beyond the 100 year floodplain boundary.
- Examine minimum freeboard above base flood elevations.

The Town of Deerfield has an effective Floodplain Zoning bylaw, for example:

- Limits permitted floodplain uses to agricultural, forestry, outdoor recreational uses, conservation of water, plants, and wildlife, wildlife management areas, pre-existing buildings, and municipal or civic uses, including water or wastewater treatment facilities
- Prohibits altering, dumping, filling, or removal of riverine materials or dredging, impoundments, dams, or other water obstructions, commercial or industrial uses, parking or storage of vehicles, trailers or equipment within 200 feet of the riverbank, dumping of trash, garbage or other materials on or near the riverbank, and construction of any kind on slopes of greater than 25%. No discharge of pollutants directly to any river or water body is permitted.
- Allow residential uses by Special Permit with specific performance standards.

- Cluster, Open Space, or Context-Sensitive Zoning: Expand open space preservation incentives in existing zoning. Adopt zoning bylaws and subdivision regulations for cluster development and context sensitive development. In Massachusetts, subdivision regulations only require Planning Board actions once the legislative body authorizes regulating subdivisions, a lower bar than going to Town Meeting.

- Improved river corridor mapping: FRCOG developed a model river corridor mapping methodology to assist in mapping fluvial erosion hazard areas and river corridors.

- River Corridor Easement: FRCOG and Franklin Land Trust have developed a model easement which they are still refining which supports, on a willing seller/willing buyer basis, preserving fluvial erosion hazard areas and river corridors.

- Investments of state and federal infrastructure funding to expand nature based solutions to funding, environmental degradation, undersized culverts, culverts with non-natural substrates on the bottom, and other obsolete infrastructure.

3. **Regional Management Strategies**
   Key regional river management strategies for the Deerfield River include:
   - Adopt a Memorandum of Understanding among communities and others to address decision making regarding federal Partnership River funding, coordinated mutual adoption of river protection bylaws, and regional discussions of projects of regional impact.
   - Collaborate with Woodlands Partnership seeking federal designation as a National Heritage Area to complement a future National Wild and Scenic River designation.
   - Prioritize regional cooperation for invasive species removal, especially non-native Japanese Knotweed (*Reynoutria japonica*) which proliferates along many of the river channels.
   - Continue to coordinate the annual DRWA regional Deerfield River clean-up, an all-volunteer effort.

4. **State Management Strategies**
   Exploring state management strategies is an integral part of protecting the Deerfield River, particularly if federal support is delayed or unavailable:
   - Explore state designation of ONRW (Outstanding National Resource Waters) through Mass DEP (called ORW's or Outstanding Resource Waters in MA). This designation could be applied on a specific basis to limited sections of the Deerfield River and its tributaries, for example.

     Designation in Massachusetts is described in 314 CMR 4.04(3), as shown below:
     4.04: Antidegradation Provisions

     (1) Protection of Existing Uses.
     In all cases existing uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.

     (2) Protection of High Quality Waters.
     High Quality waters are waters whose quality exceeds minimum levels necessary to support the national goal uses, low-flow waters, and other waters whose character cannot be adequately described or protected by traditional criteria. These waters shall be protected and maintained for their existing level of quality unless limited degradation by a new or increased discharge is authorized by the Department pursuant to 314 CMR 4.04(5). Limited degradation also may be allowed by the Department where it determines that a new or increased discharge is insignificant because it does not have the potential to impair any existing or designated water use and does not have the potential to cause any significant lowering of water quality.

     (3) Protection of Outstanding Resource Waters.

The quality of Outstanding Resource Waters shall be protected and maintained. (a) Any person having an existing discharge to these waters shall cease said discharge and connect to a POTW, unless it is shown by said person that such a connection is not reasonably available or feasible. Existing discharges not connected to a POTW shall be provided with the highest and best practical method of waste treatment determined by the Department as necessary to protect and maintain the outstanding resource water. (b) A new or increased discharge to an Outstanding Resource Water is prohibited unless: 1. the discharge is determined by the Department to be for the express purpose and intent of maintaining or enhancing the resource for its designated use and an authorization is granted as provided in 314 CMR 4.04(5). The Department's determination to allow a new or increased discharge shall be made in agreement with the federal, state, local or private entity recognized by the Department as having direct control of the water resource or governing water use; or 2. the discharge is dredged or fill material for qualifying activities in limited circumstances, after an alternatives analysis which considers the Outstanding Resource Water designation and further minimization of any adverse impacts. Specifically, a discharge of dredged or fill material is allowed only to the limited extent specified in 314 CMR 9.00: 401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States within the Commonwealth and 314 CMR 4.06(1)(d). The Department retains the authority to deny discharges which meet the criteria of 314 CMR 9.00 but will result in substantial adverse impacts to the physical, chemical, or biological integrity of surface waters of the Commonwealth.

(4) Protection of Special Resource Waters.
The quality of Special Resource Waters shall be protected and maintained. No new or increased discharge to an SRW, and no new or increased discharge to a tributary to an SRW that would result in lower water quality in the SRW, may be allowed, except where: (a) the discharge results in temporary and short term changes in the quality of the SRW, provided that the discharge does not permanently lower water quality or result in water quality lower than necessary to protect uses; and (b) an authorization is granted pursuant to 314 CMR 4.04(5).

(5) Authorizations.
(a) An authorization to discharge to waters designated for protection under 314 CMR 4.04(2) may be issued by the Department where the applicant demonstrates that: 1. The discharge is necessary to accommodate important economic or social development in the area in which the waters are located; 2. No less environmentally damaging alternative site for the activity, receptor for the disposal, or method of elimination of the discharge is reasonably available or feasible; 3. To the maximum extent feasible, the discharge and activity are designed and conducted to minimize adverse impacts on water quality,

including implementation of source reduction practices; and 4. The discharge will not impair existing water uses and will not result in a level of water quality less than that specified for the Class. (b) An authorization to discharge to the narrow extent allowed in 314 CMR 4.04(3) or 314 CMR 4.04(4) may be granted by the Department where the applicant demonstrates compliance with 314 CMR 4.04(5)(a)2. through 4. (c) Where an authorization is at issue, the Department shall circulate a public notice in accordance with 314 CMR 2.06: Public Notice and Comment. Said notice shall state an authorization is under consideration by the Department and indicate the Department's tentative determination. The applicant shall have the burden of justifying the authorization. Any authorization granted pursuant to 314 CMR 4.04 shall not extend beyond the expiration date of the permit. (d) A discharge exempted from the permit requirement by 314 CMR 3.05(4) (discharge necessary to abate an imminent hazard) may be exempted from 314 CMR 4.04(5) by decision of the Department. (e) A new or increased discharge specifically required as part of an enforcement order issued by the Department in order to improve existing water quality or prevent existing water quality from deteriorating may be exempted from 314 CMR 4.04(5) by decision of the Department.

- Seek state scenic river designation, using either legislative designation of State Scenic River or administrative designation of Local Scenic River under Massachusetts Scenic and Recreational Rivers Act. Work with state agencies and legislators to seek to reinvigorate this program as needed.

  In Massachusetts, the Massachusetts Scenic and Recreational Rivers Act designates rivers with unique natural, cultural, or recreational values as "Local Scenic Rivers". The act provides a framework for protecting these rivers and promoting their recreational use. The program includes rivers like the Sudbury, Assabet, and Concord Rivers, as well as the Westfield River, and the Nashua River.

  This act allows the state to designate rivers with outstanding natural, cultural, or recreational values for protection and promotion. It provides a framework for managing these rivers and promoting their recreational use. The designation of a river under this act ensures protection of its free-flowing condition, water quality, and outstanding resource values.

  Examples of Local Scenic Rivers in Massachusetts:
  - Sudbury, Assabet, and Concord Rivers: These rivers were designated as Wild and Scenic in 1999, recognizing their outstanding ecology, history, scenery, recreation values, and place in American literature, according to OARS.
  - Westfield River: The Westfield River has been designated as a "Local Scenic River" and also as a "National Wild and Scenic River".

- Nashua River: The Nashua River, along with the Squannacook and Nissitissit Rivers, is part of a planning process to consider their eligibility for the National Wild & Scenic River System.

Benefits of the State Scenic Rivers Program:

- Protection of natural resources: The program helps protect the free-flowing condition, water quality, and outstanding natural, cultural, and recreational values of designated rivers.
- Promotion of recreational opportunities: The program promotes the recreational use of these rivers for activities like canoeing, kayaking, fishing, and hiking.
- Community involvement: The designation process often involves local communities, ensuring that their needs and values are considered in the management of the river.

- Explore whether some of the most ecologically valuable upland areas in the Deerfield River watershed should be designated as an Area of Critical Environmental Concern (ACEC) under Mass General Law c.21A, §2(7) and the ACEC Regulations (301 CMR 12.00). ACEC's recognize the most important ecological regions of the state and limit state actions which could damage those resources.

- State agencies should prioritize protection of the Deerfield River and its tributaries given their high ecological value.
  - MassWildlife and its Natural Heritage and Endangered Species Program (NHESP) should prioritize riverfront and habitat restoration and non-native invasive species removal.
  - The Division of Ecological Resources (DER) could prioritize riverfront and habitat restorations and non-native invasive species removal and funding and technical assistance for removal of non-FERC licensed dams.
  - The Municipal Vulnerability Preparedness (MVP) program should prioritize removal of fill within riverways and historic wetlands.
  - The MVP, Division of Ecological Restoration, and MassDOT should prioritize nature based solutions to flooding, from stream channel and floodplain restoration, culvert removal and replacement programs, and removal of non-hydro-electric dams and impoundments.

5. Federal Laws and Programs

Secure National Wild and Scenic River Designation:

- Work with the Congressional delegation in Massachusetts and Vermont to seek approval of legislation to authorize federal funding through the National Park Service to undertake a full study of the Deerfield River in both MA and VT for its eligibility for Wild and Scenic designation.

- Upon completing the study or studies, work with the Congressional delegation to secure approval of National Wild and Scenic River Designation for the recommended river reaches or segments. Alternatively, if Congressional designation is not available, consider seeking administrative designation through the Secretary of Interior.
- After designation is approved, the Committee should coordinate with National Park Service on Section 7 Reviews of federally funded or permitted water resources projects:
    a. The intention of Section 7 of the Wild and Scenic Act is to protect designated rivers from new federally-funded and permitted projects which would adversely affect the free-flowing condition and outstandingly remarkable values for which rivers are designated. This Section requires the evaluation of partially- or fully-federally funded or permitted construction and development water resource projects within the designated area. This Section prevents licensing or exemption by FERC (the Federal Energy Regulatory Commission) of new dams or hydropower facilities on or directly, negatively affecting the designated area; prevents federal projects which have a direct and adverse effect on the free-flowing nature, outstandingly remarkable values, or water quality of the designated area, and limits federal projects which would invade the designated area or unreasonably diminish the free-flowing nature, outstandingly remarkable values, or water quality of the designated area.
    b. Designation provides local input into the Section 7 review process. Under Section 7 of the Wild and Scenic Act only those projects with full or partial federal funding or permitting, construction and development and water resource related projects are reviewed by the post-designation Management Council and the National Park Service for potentially adverse effects on the rivers. This gives local input into the design and outcome of federally assisted projects. Examples of the types of projects which would typically fall under this category include those river-related projects which already fall under Section 404 of the Clean Water Act administered by the Army Corps of Engineers and the National Environmental Policy Act's (NEPA) including Environmental Assessment and Environmental Impact Statements implemented by the EPA. The NPS and the local Management Council would be consulted by the federal assisting (permitting, funding, etc.) agency during the normal review process that would occur regardless of Wild and Scenic designation. Projects might include dredging for repairs to a bridge piling, or construction at a border crossing station on the river. This review is meant to assess proposed projects to be sure federal actions are reviewed with full consideration of the potential impacts on the Wild and Scenic River and its ORVs, and to avoid these impacts. Please see Chapter I of this Management Plan which further discusses Wild and Scenic designation for more information.

6. **Partnership Rivers Strategies**
    - **Secure Partnership River Status:** This study recommends NPS Partnership River status for the Deerfield River. Typically, Partnership River status will provide approximately $220,000 per year in federal funds to take on priority projects to improve or protect the river.
    - **Identify Partnership River Funding Projects:** The Wild and Scenic Committee will prioritize and recommend projects for funding. Some potential strategies include:
        - Improve recreational river access for car-top boats, tubing, swimming and fishing. There is a need for better river access to all of the Deerfield River reaches;
        - Secure permanent protection for special features listed as Outstandingly Remarkable Values (ORVs) in this report, including waterfalls, geological features and scenic features;
        - Development or improvement of hiking trails that provide river access and river views;
        - Water quality monitoring and addressing pollution sources;
        - Improvements for fish habitat;
        - River clean-up projects.

7. **Land Protection Strategies**

    The post-designation Wild and Scenic River Committee, communities, land trusts, watershed organizations and others should collaborate to protect important riverfront lands that contribute to ORVs. Steps in this process include:
    - Identify Priority Land Parcels for Protection: Identify and prioritize lands for protection based on ORV values and recreational access values.
    - Coordinate with Land Trusts on Land Protection for ORV Values: It is recommended that the Wild and Scenic Committee work with Franklin Land Trust and others to prioritize and protect specific land parcels that relate to identified Outstandingly Remarkable Values (ORVs).
    - Utilize Multiple Land Protection Strategies: Strategies can include fee simple acquisitions, trail and conservation easements, river corridor easements.
    - Seek Grant Funding for Land Protection: In addition to Partnership River funds and Land Trust fundraising, other grant funding sources should be explored, including Municipal Vulnerability Preparedness grants, MassTrails grants, LAND grants and others.
    - Assist those municipalities who don't already have Open Space and Recreation Plans with writing and adopting such plans. These plans, typically written with Regional Planning Agency or consultant assistance, help them prioritize and be eligible for state open space funding.

- Assist land trusts, municipalities, and state agencies with open space preservation projects, increasing regional cooperation and available resources and reaching cooperative agreements to plan and protect together.
- Create model approaches to assist communities to exercise or assign their rights of first refusal for land leaving Chapter 61 (forestry), 61A (agriculture), and 61B (recreation) current use taxation programs.
- Develop recommendations for management of state and federal lands within the Wild and Scenic corridor.

8. Public Lands

- Federal land management agencies in the Deerfield River watershed should prioritize protection and restoration of the Deerfield River and its tributaries in all management plans and environmental assessments and EIS.
- State land management agencies, especially the MA Department of Conservation and Recreation and the MA Department of Fish and Game, should prioritize protection and restoration of the Deerfield River and its tributaries in all management plans.
- Federal and state agencies should promote public lands within the Deerfield River watershed as part of all website, wayfinding, and tourism information.

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Appendix 2. Deerfield River Wild and Scenic Act of 2025

119th Congress, 1st Section, S. 1187

To amend the Wild and Scenic Rivers Act to direct the Secretary of the Interior to conduct a study of the Deerfield River for potential addition to the national wild and scenic rivers system, and for other purposes.

IN THE SENATE OF THE UNITED STATES

MARCH 27, 2025

Mr. MARKEY (for himself, Mr. SANDERS, Ms. WARREN, and Mr. WELCH) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

A BILL

To amend the Wild and Scenic Rivers Act to direct the Secretary of the Interior to conduct a study of the Deerfield River for potential addition to the national wild and scenic rivers system, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the ''Deerfield River Wild and Scenic River Study Act of 2025''.

SEC. 2. DESIGNATION FOR STUDY; REPORT.

Section 5 of the Wild and Scenic Rivers Act (16 U.S.C. 1276) is amended—

(1) in subsection (a), by adding at the end the following:

''(147) DEERFIELD RIVER, MASSACHUSETTS AND VERMONT.—The entire river, including

''(A) the North, South, East, and West Branches of the Deerfield River; and

''(B) the major tributaries of the Deerfield River, including the Green River, North River, South River, Clesson Brook, Chickley River, Cold River, Gulf Brook, Bog Brook, and Dunbar Brook.''; and

(2) in subsection (b), by adding at the end the following:

''(24) DEERFIELD RIVER, MASSACHUSETTS AND VERMONT.—Not later than 3 years after the date on which funds are made available to carry out this paragraph, the Secretary of the Interior shall—

''(A) complete the study described in subsection (a)(147); and

''(B) submit to the appropriate committees of Congress a report describing the results of such study.''

Appendix 3. National Park Service and Other Letters