

An Overview of
Brook Trout
Conservation
Projects Supported
by U.S. Fish and
Wildlife Service
National Fish
Habitat Action Plan
Funds, 2006-2018



Background

The Eastern Brook Trout Joint Venture (EBTJV) was one of five pilot Fish Habitat Partnerships (FHP) that were formed prior to the formal approval of the National Fish Habitat Action Plan. As a pilot FHP, the EBTJV was provided the opportunity to recommend fish habitat conservation projects that would receive financial support from the U.S. Fish and Wildlife Service's (Service) National Fish Habitat Action Plan (NFHAP) appropriations that first became available in this agency's fiscal year (FY) 2006 Fisheries Program budget. In response to this new appropriation, the Service developed a policy (717 FW1) that describes the general requirements, eligibility criteria, and administrative procedures to guide the use of Service funds to implement projects and provide Federal assistance for the National Fish Habitat Action Plan.

Service NFHAP allocations to FHPs in support of fish habitat conservation projects totaled slightly more than \$37.4 million over the thirteen fiscal years (2006-2018) this budget appropriation has been available (Table 1). The average fiscal year allocation was \$2.9 million, with the lowest amount (\$0.8 million) occurring in FY 2006 and the highest being in FY 2010 (\$3.5 million).

Table 1 Service Allocations to FHPs in Support of NFHAP Fish Habitat Conservation Projects, FY 2006-2018

Fiscal Year	Allocation for Projects
2006	\$ 812,625
2007	\$ 1,760,000
2008	\$ 3,246,100
2009	\$ 2,746,100
2010	\$ 3,556,100
2011	\$ 3,409,683
2012	\$ 3,317,200
2013	\$ 3,304,170
2014	\$ 3,301,155
2015	\$ 3,176,149
2016	\$ 3,176,149
2017	\$ 3,171,875
2018	\$ 2,465,998
Total	\$37,443,304

Eastern Brook Trout Joint Venture NFHAP Project Allocations

From FY 2006 through FY 2018, the Service allocated a total of ~\$5.5 million to EBTJV supported NFHAP projects (Table 2). More than \$3.3 million of these funds went directly to supporting implementation of on-the-ground Brook Trout conservation projects, while a little more than \$600,000 was utilized to support EBTJV operations and \$1.5 million covered the Service's Region 5 indirect costs, which averaged about 28% of the total allocation.

The precipitous drop in the Service's NFHAP allocation to the EBTJV between FY 2013 and FY 2014 (Table 2) was due to a change in the method used to allocate these funds among FHPs, which was necessary because the number of recognized FHPs had increased to eighteen. Starting in FY 2014, the Service

implemented a competitive, performance-based process to allocate NFHAP project funds on an annual basis, which can be used to support FHP operations and deliver strategic conservation actions.

Table 2 Service Allocations to EBTJV Supported NFHAP Projects, FY 2006-2018

Fiscal Year	Allocation for Projects	Allocation for EBTJV Operations Support	Service Indirect Charge	Total Allocation
2006	\$ 157,000	\$0	\$ 40,000	\$197,000
2007	\$ 382,769	\$0	\$ 67,231	\$450,000
2008	\$ 449,218	\$0	\$ 150,782	\$600,000
2009	\$ 380,709	\$0	\$ 219,291	\$600,000
2010	\$ 437,000	\$0	\$ 163,000	\$600,000
2011	\$ 347,224	\$0	\$ 255,791	\$603,015
2012	\$ 336,510	\$ 71,500	\$ 174,864	\$582,874
2013	\$ 272,859	\$ 90,000	\$ 193,204	\$556,063
2014	\$ 91,500	\$ 90,000	\$ 76,420	\$257,920
2015	\$ 75,291	\$ 90,000	\$ 70,840	\$236,131
2016	\$ 86,903	\$ 90,000	\$ 38,571	\$215,474
2017	\$ 112,642	\$ 90,000	\$ 50,973	\$253,615
2018	\$ 214,131	\$ 90,000	\$ 2,510	\$306,641
Total	\$3,343,756	\$611,500	\$1,503,477	\$5,458,733

Brook Trout Conservation Projects

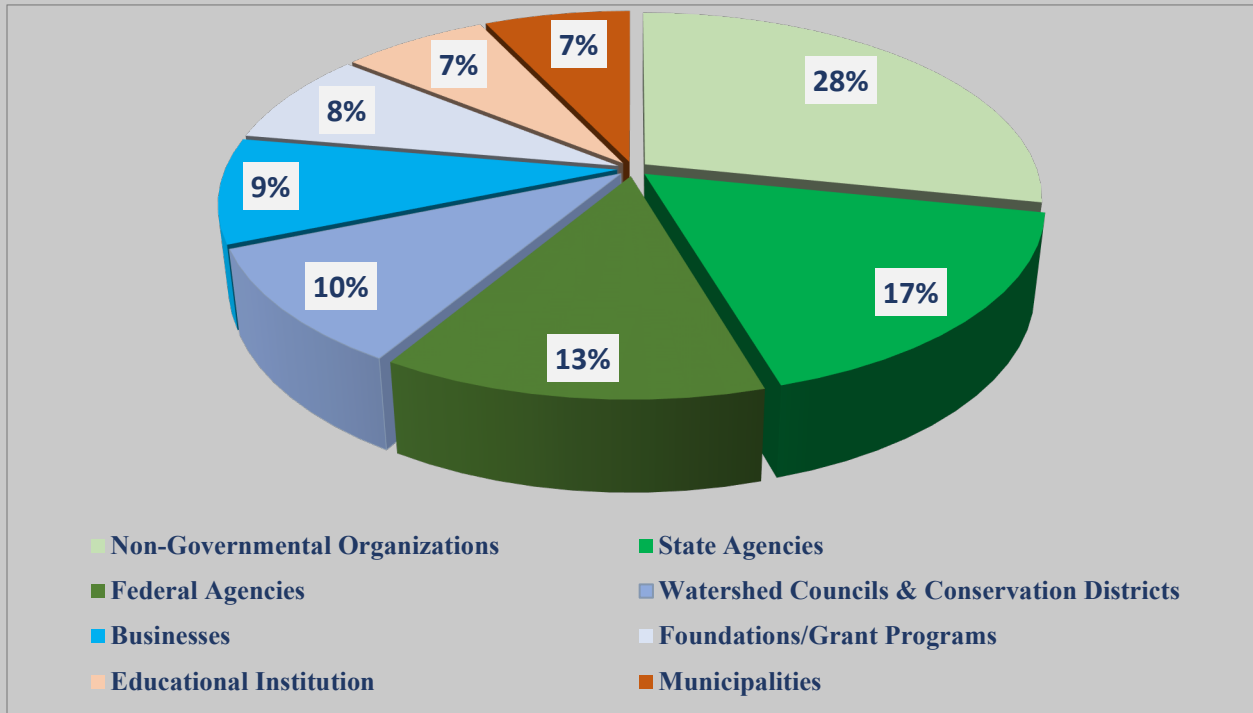
There have been eighty-eight Brook Trout conservation projects supported by the Service’s NFHAP funds (Table 3). The average number of Brook Trout conservation projects receiving Service NFHAP funds was ~7 per year with a maximum of 13 (FY 2009) and a minimum of 2 (FY 2014 and FY 2015).

Table 3 Brook Trout Conservation Projects Supported by Service NFHAP Funds, FY 2006-2018

Fiscal Year	Number of Projects Funded
2006	5
2007	8
2008	12
2009	13
2010	11
2011	8
2012	7
2013	8
2014	2
2015	2
2016	3
2017	3
2018	6
Total	88

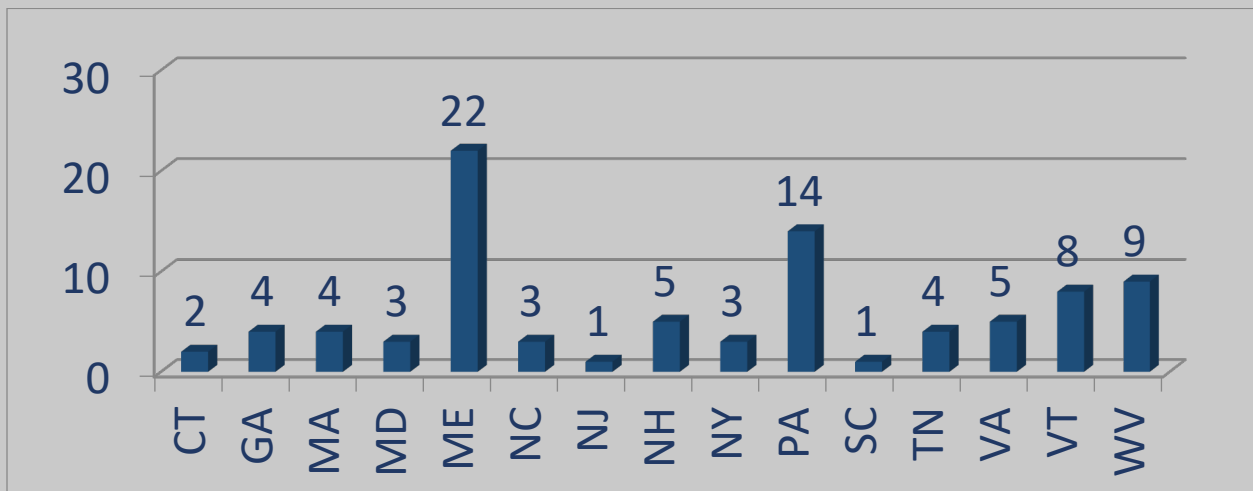
Two hundred forty different organizations have been involved in these Brook Trout conservation projects at the local level, with many partnering multiple times (Appendix I). Twenty-eight percent (28%) of these project partners were non-governmental organizations, 17% were state agencies, 13% were federal agencies, 10% were watershed councils or conservation districts, 9% were businesses, 8% were foundations or grant programs, 7% were educational institutions and municipalities, respectively (Figure 1).

Figure 1 Service NFHAP Supported Project Partners Grouped by Organizational Type, FY 2006-2018



These projects have been implemented in sixteen of the EBTJV’s eighteen member states, with Ohio and Rhode Island being the only exceptions (Figure 2). Twenty-five percent of the projects were implemented in Maine and 16% in Pennsylvania.

Figure 2 Number of Service NFHAP Supported Brook Trout Conservation Projects by State, FY 2006-2018



While the Service provided \$3.3 million in NFHAP funds to support the eighty-eight Brook Trout conservation projects, project partners contributed \$17.5 million, which equates to a 5:1 ratio of partner to NFHAP funds (Table 4). The total cost of the eighty-eight Brook Trout conservation projects was ~\$20.9 million, which results in the average project cost being \$237,416.

Table 4 Service NFHAP Funds Supporting Brook Trout Conservation Projects, FY 2006-2018

Fiscal Year	Service NFHAP Funds	Project Partner Funds	Total Project Costs	Ratio of Partner:NFHAP Funds
2006	\$ 157,000	\$ 312,000	\$ 469,000	2:1
2007	\$ 382,769	\$ 1,254,890	\$ 1,637,659	3:1
2008	\$ 449,218	\$ 4,002,848	\$ 4,452,066	9:1
2009	\$ 380,709	\$ 1,256,207	\$ 1,636,916	3:1
2010	\$ 437,000	\$ 2,814,950	\$ 3,251,950	6:1
2011	\$ 347,224	\$ 1,448,471	\$ 1,795,695	4:1
2012	\$ 336,510	\$ 1,949,826	\$ 2,286,336	6:1
2013	\$ 272,859	\$ 1,367,465	\$ 1,640,324	5:1
2014	\$ 91,500	\$ 260,700	\$ 352,200	3:1
2015	\$ 75,291	\$ 1,088,500	\$ 1,163,791	14:1
2016	\$ 86,903	\$ 435,400	\$ 522,303	5:1
2017	\$ 112,642	\$ 589,470	\$ 702,112	5:1
2018	\$ 214,131	\$ 768,119	\$ 982,250	4:1
Total	\$3,343,756	\$17,548,846	\$20,892,602	5:1

Forty-nine projects focused on in-stream habitat work that enhanced 240 stream miles, while one project enhanced 157 acres of lentic habitat (Table 5). Four projects entailed enhancing 16 acres of riparian habitat and eight projects restored 341 acres of riparian habitat. Forty-three projects removed 103 barriers to fish passage, re-opening access to 321 miles of stream. The EBTJV sees value in estimating the socioeconomic benefits derived from Brook Trout conservation projects and has developed a methodology for making these estimates using data contained in the US Fish and Wildlife Service report titled “An Assessment of Economic Contributions from Fisheries and Aquatic Resource Conservation (2010).” Using the multipliers identified in this methodology, the estimated socioeconomic benefits resulting from 88 Brook Trout conservation projects is \$309 million.

Table 5 Brook Trout Conservation Project Outcomes, FY 2006-2018

Type of Conservation Action	Project Outcome	Multiplier	Socioeconomic Benefit (million)
In-Stream Habitat Enhancement	240 miles	\$543,917/mile	\$130.5
Lentic Habitat Enhancement	157 acres	\$8,497/acre	\$1.3
Riparian Habitat Enhancement/Restoration	357 acres	\$7,678/acre	\$2.7
Stream Habitat Re-Opened	321 miles	\$542,697/mile	\$174.2
Total			\$308.7

Appendix I List of Project Partners

(Denotes the number of different projects the organization has been involved in)*

State Agencies

Blue Knob State Park

Connecticut Department of Environmental Protection

Georgia Department of Natural Resources (3)*

Maine Department of Conservation-Bureau of Parks & Lands

Maine Department of Environmental Protection (2)*

Maine Department of Inland Fisheries and Wildlife (11)*

Maine Department of Marine Resources (2)*

Maine Department of Transportation

Maine Forest Service

Maryland Department of Environment-Bureau of Mines (2)*

Maryland Department of Environment-Science Service Administration

Maryland Department of Natural Resources (2)*

Maryland Department of Natural Resources-Inland Fisheries

Massachusetts Division of Ecological Restoration

Massachusetts Division of Fisheries and Wildlife (3)*

New Hampshire Department of Environmental Services

New Hampshire Department of Resource and Economic Development (2)*

New Hampshire Division of Forests and Lands (2)*

New Hampshire Fish and Game Department (5)*

New Jersey Division of Fish and Wildlife

New York State Department of Environmental Conservation

New York State Office of Parks, Recreation and Historic Preservation-Allegany State Park

North Carolina Wildlife Resources Commission (5)*

Pennsylvania Bureau of Abandoned Mine Reclamation

Pennsylvania Department of Conservation and Natural Resources (2)*

Pennsylvania Department of Environmental Protection (4)*

Pennsylvania Fish and Boat Commission (7)*
South Carolina Department of Natural Resources (2)*
Tennessee Wildlife Resources Agency (2)*
Vermont Agency of Agriculture Foods and Markets
Vermont Agency of Transportation
Vermont Department of Environmental Conservation (4)*
Vermont Department of Fish and Wildlife (6)*
Vermont Department of Forest, Parks, and Recreation
Virginia Department of Game and Inland Fisheries (4)*
West Virginia Conservation Agency (2)*
West Virginia Department of Environmental Protection (3)*
West Virginia Department of Highways
West Virginia Department of Natural Resources (8)*
West Virginia Division of Forestry (2)*
West Virginia Rail Authority (3)*
West Virginia State Parks (2)*

Federal Agencies/Offices

Blue Ridge Parkway
Federal Emergency Management Agency
National Park Service - Great Smokey Mountains National Park (4)*
Office of Surface Mining Reclamation and Enforcement
US Army Corp of Engineers
US Environmental Protection Agency (2)*
US Fish and Wildlife Service (6)*
US Fish and Wildlife Service - Chesapeake Bay Field Office
US Fish and Wildlife Service - Ecological Services, Pennsylvania Field Office
US Fish and Wildlife Service - Maine Fisheries Resources Office (10)*
US Fish and Wildlife Service - Maine Fisheries Resources Office and Gulf of Maine Coastal Program
US Fish and Wildlife Service - Maryland Fisheries Resources Office

US Fish and Wildlife Service - Massachusetts Fisheries Resources Office
US Fish and Wildlife Service - National Fish Passage Program
US Fish and Wildlife Service - Northeast Fishery Center
US Fish and Wildlife Service - Nulhegan Wildlife Refuge (2)*
US Fish and Wildlife Service - Partners for Fish and Wildlife Program (4)*
US Fish and Wildlife Service - West Virginia Field Office
USDA Farm Service Agency (2)*
USDA Forest Service (4)*
USDA Forest Service - Chattahoochee & Oconee National Forests
USDA Forest Service - Chattahoochee National Forest (3)*
USDA Forest Service - George Washington and Jefferson National Forest (2)*
USDA Forest Service - George Washington National Forest
USDA Forest Service - Green Mountain National Forest (2)*
USDA Forest Service - Nantahala National Forest
USDA Forest Service - NC National Forests
USDA Forest Service - Pisgah National Forest
USDA Forest Service - White Mountain National Forest
USDA Natural Resource Conservation Service (14)*
USDOJ-Office of Surface Mining Reclamation and Enforcement (3)*

Non-Governmental Organizations

American Forest Management
American Rivers (5)*
Appalachian Trail Conservancy
Bobb's Creek Stream Guardians
Corporate Wetlands Restoration Partnership
Downeast Lakes Land Trust (4)*
Federation of Fly Fishers (3)*
Franklin Great Pond Association
Friends of Great Smokey Mountains National Park

Friends of the Smokies (2)*
Georges River Land Trust
Grand Lake Stream ATV Club
Grand Lake Stream Plantation
Grayson Highlands State Park
Great Pond Road Association
Great Smoky Mountain Association
Groveton Trailblazers
Keystone Creek Walkers
Monticello Fish and Game Club
Mount Rogers Appalachian Trail Club
New Jersey Highlands Coalition
Pavia Sportsmen Club
Project SHARE (7)*
Shavers Fork Coalition (2)
South East Fly Fishing Forum
Southern Highlands Reserve
The Mountain Institute
The Nature Conservancy (5)*
Trout and Salmon Foundation (4)*
Trout Unlimited - Candlewood Valley Chapter
Trout Unlimited - Dogwood Chapter
Trout Unlimited - Embrace-A-Stream
Trout Unlimited - Fred S. Burroughs North Jersey Chapter
Trout Unlimited - Georges River Chapter
Trout Unlimited - Georgia Chapters (2)*
Trout Unlimited - Georgia State Council
Trout Unlimited - Hoosic Chapter (2)*
Trout Unlimited - Kettle Creek and Gods Country Chapters

Trout Unlimited - Little River Chapter (4)*
Trout Unlimited - Local Chapter
Trout Unlimited - Maine State Council
Trout Unlimited - Mt. Bridge Chapter
Trout Unlimited - National (10)*
Trout Unlimited - New Jersey Local Chapters
Trout Unlimited - New Jersey State Council
Trout Unlimited - New York Chapter
Trout Unlimited - North Carolina Chapters (5)*
Trout Unlimited - Pemigewasset Chapter
Trout Unlimited - Potomac Headwaters Home Rivers Initiative
Trout Unlimited - Red House Brook Chapter
Trout Unlimited - Southern Appalachian Region
Trout Unlimited - Stanley Cooper Chapter
Trout Unlimited - Tennessee State Council (4)*
Trout Unlimited - Thames Valley Chapter
Trout Unlimited - Tiadaghton Chapter
Trout Unlimited - Tulpehocken Chapter
Trout Unlimited - Upper Connecticut River Home Rivers Initiative
Trout Unlimited - Vermont Chapters (2)*
Trout Unlimited - Virginia Chapters
Trout Unlimited - Virginia State Council
Trout Unlimited - Volunteers
Trout Unlimited - Youghiogheny Chapter
Trout Unlimited (15)*
Upstate Forever
Western Pennsylvania Conservancy
White River Partnership (2)*

Watershed Councils/Conservation Districts

Androscoggin River Watershed Council (3)*
Androscoggin Valley Soil and Water Conservation District
Batten Kill Watershed Alliance of New York and Vermont
Berks County Conservation District
Clinton County Conservation District, PA
Connecticut River Watershed Council
Foothills Resource Conservation and Development Council
Hancock County Soil and Water Conservation District
Hoosic River Watershed Association (2)*
Kettle Creek Watershed Association
Lamoille Natural Resources Conservation District
Luzerne Conservation District
Maiden Creek Watershed Association
Oxford County Soil and Water Conservation District
Potter County Conservation District, PA
Savage River Watershed Association
Schuylkill Conservation District
Soque River Watershed Association (3)*
South Sandy Creek Watershed Association
Southern Aroostook Soil and Water Conservation District
Tioga County Conservation District, PA (2)*
Washington County Soil and Water Conservation District
Western Maryland Resource Conservation and Development Council, Inc. (2)*
Western Pennsylvania Watershed Coalition
Winooski Natural Resources Conservation District

Municipalities

Androscoggin Valley Council of Governments (3)*
City of Pittsfield, MA

Galeton Borough, PA
Hollidaysburg Borough
Maiden Creek Township
Mineral Township
Spangler Municipal Authority
Town of Ashford, CT
Town of Buckfield, ME
Town of Cheshire, MA
Town of Clarksburg, MA
Town of Newry, ME
Town of Rochester, VT
Town of Searsmont, ME
Town of Southwest Harbor, ME
Town of Turner, ME

Washington County, NY

Educational Institutions

Blue Ridge Discovery Center
Eckerd School
Elm Research Institute
Emory and Henry College
Fleetwood High School
James Madison University
Lyndon State College
Massachusetts College of Liberal Arts
North Georgia Technical College (2)*
Schuylkill Valley High School
Tennessee Technical University (2)*
The Natural Resource Education Center at Moosehead
University of Maine Machias

University of Virginia-Virginia Trout Stream Sensitivity Study

Washington Academy

West Virginia Schools

West Virginia University (4)*

Yale School of Forestry

Businesses

Allegheny Mineral

Bass Pro Shops

Cascade School Supplies

Clayton Lakes Woodlands Holdings, LLC

Dominion Energy (2)*

Durbin & Greenbrier Valley Railroad (2)*

J.F. Allen Corporation

Little River Outfitters (2)*

Lyme Timber

Lyme Timber - GLS Woodlands

Millenium

Mountain Springs Trout Farm

Orvis Corporation (2)*

Pennsylvania Senior Environmental Corps

Plum Creek Company

Robbins Lumber

Skylark Farms

Snowshoe Corporation (3)*

The Forestland Group

Wagner Forest Management

Walmart (2)*

Foundations/Grant Programs

Canaday Family Foundation

Chesapeake Bay Trust
Davis Family Foundation
Dominion Foundation (2)*
Highway Transportation Aquatic Passage Program/Legacy Roads Fund
Hudson Farms Foundation
Maine Natural Resources Conservation Program
Maine Outdoor Heritage Fund
Maryland Bay Restoration Fund
Massachusetts Department of Fish and Game-Mass Riverways Program
Massachusetts Environmental Trust
Massachusetts Riverway
National Fish and Wildlife Foundation (4)*
National Fish and Wildlife Foundation - Chesapeake Bay Program
New Hampshire Charitable Foundation
Pennsylvania Department of Environmental Protection-Growing Greener Grant Program
Richard King Mellon Foundation
The Conservation Fund
Upper Connecticut River Mitigation & Enhancement Fund (5)*
US Fish and Wildlife Service - Sport Fish Restoration Fund