



2018 Aquatic Resource Mitigation Program Grant Awards

For 2018, the New Hampshire Department of Environmental Services Aquatic Resource Mitigation (ARM) Program has awarded funding for wetlands protection grants from the Aquatic Resource Mitigation Fund for 26 projects totaling \$4,288,402.75.

The NHDES ARM Fund, established by law, is a mitigation option for certain projects impacting wetlands and not able to provide other forms of mitigation. An ARM Fund Site Selection Committee is charged with identifying proposals to be funded by selecting high priority projects that most effectively compensate for the loss of functions and values from the projects that paid into the fund. According to the law, the projects determined to be appropriate for receipt of ARM Fund monies are subject to approval by the US Army Corps of Engineers and the NH Wetlands Council.

Project name Applicant Town	ARM Award Amount	Project Summary
Saco Service Area		
World Fellowship Center/Whitton Pond Upper Saco Valley Land Trust <i>Albany</i>	\$41,600	Three conservation easement parcels totaling approximately 422 acres, of the World Fellowship Center (WFC) campus in Albany will be acquired. The parcel includes 3,150 feet of shoreline on the 167-acre Whitton Pond, 2,200 linear feet of the Chocorua River, four pond-wetland complexes, one large and two small river floodplain wetlands, and two or more vernal pools. The undeveloped shoreline around Whitton and Back Ponds and the riparian forest and wetlands along the Chocorua River represent 76 acres of Tier 1 WAP Habitat. The Common Loon is a continuous breeding resident of Whitton Pond for over 100 years – one of the longest occupied sites in the state.
Pemigewasset-Winnepesaukee Service Area		
Great Meadow Phase II Tuftonboro Conservation Commission <i>Tuftonboro</i>	\$76,500	The Town will protect the “Great Meadow,” a 509-acre wetland that contains most of the headwaters of the third order Melvin River, which is the largest inflow stream to Moultonborough Bay on Lake Winnepesaukee. The project includes a 50-acre property and a 90-acre property, which abut the 204-acre, seven-lot town property, all of which overlies the Great Meadow wetland and aquifer. The parcel contains an intact aquatic resource buffer of over 11,000 feet of wetland edge. Wildlife habitat is exceptional, as is the underlying ecological integrity of the two parcels that lie within a 2,600-acre unfragmented forest block and much of the Great Meadow lies within Tier 1 or Tier 2 WAP habitat.

Pemigewasset – Winnepesaukee & Salmon Falls- Piscataqua Service Areas

<p>Birch Ridge Community Forest Southeast Land Trust <i>New Durham</i></p>	<p align="center">\$207,870</p>	<p>The project proposes to protect 2,019 acres of land that forms 12% of the watershed of Merrymeeting Lake in New Durham. The property extends from the Merrymeeting River to Rattlesnake Mountain, Mt. Eleanor, Birch Ridge, and reaches southward to Coldrain Pond and the Ela River. Straddling two watersheds, 1,311 acres drains north to Merrymeeting Lake in the Pemigewasset/Winnepesaukee watershed and 708 acres drains south to the Salmon Falls/Piscataqua watershed. The project includes three wetland restoration projects that will enhance the integrity of vernal pools and wetlands.</p>
<p align="center">Salmon Falls – Piscataqua Service Area</p>		
<p>Governor’s Run-Lamprey River Southeast Land Trust <i>Epping</i></p>	<p align="center">\$200,000</p>	<p>Approximately 18 acres will be protected that includes 1,015 linear feet of two tributary streams to the federally designated Wild and Scenic Lamprey River and 2,800 linear feet along the western bank. The property includes nearly 3.41-acres of important high value wetlands and floodplains, including two documented and one probable vernal pool. Approximately 99% of the Property is designated as Tier 2 by the WAP and is within a “High Priority” site for Blanding’s turtles and is a priority site for New Hampshire Fish and Game (NHFG). The Property is within a 780-acre, NHFG-mapped unfragmented forest block that with the completion of this project will result in approximately 53% of the block conserved.</p>
<p>Lamprey River Shoreline The Nature Conservancy <i>Durham</i></p>	<p align="center">\$50,000</p>	<p>The 10.5-acre tract along the Lamprey River in Durham will be acquired, adding it to The Nature Conservancy’s abutting 233-acre Lamprey River Preserve. The property includes 1,660 feet of frontage on the Lamprey River and nearly an acre of floodplain forest and wetland habitat along the river. Connected to nearly 1,500 acres of other protected land, it is an important link in a block of conserved properties along the designated Wild and Scenic Lamprey River. The property is also within an important Blanding’s turtle protection area identified by the Northeast Blanding’s Turtle Working Group, a cooperative project of the US Fish and Wildlife Service and NHFG.</p>
<p>Living Shoreline at Wagon Hill Farm Town of Durham <i>Durham</i></p>	<p align="center">\$250,000</p>	<p>The Town plans to restore salt marsh habitat and reduce erosion using state-of-the-science best management practices. A 0.36-acre living shoreline will be constructed and monitored to restore lost and degraded salt marsh, address erosion and prepare for sea-level rise. Approximately 296 feet of shoreline, from the artificial beach area to a historic crib pier, will be regraded, and planted to restore 15,700 square feet of salt marsh and tidal buffer. The project will control and restrict public access using fencing, maintaining water access at a defined location and providing an observation platform that overlooks the project and river.</p>
<p>Lubberland Creek Acquisition The Nature Conservancy <i>Durham</i></p>	<p align="center">\$100,000</p>	<p>Protect a 30-acre parcel located in the heart of the Crommet Creek Conservation Area (CCCA) in Durham. Acquisition will add to TNC’s abutting 282-acre Lubberland Creek Preserve. The CCCA comprises 4,902 acres in Durham and Newmarket, and is the largest block of natural lands in the immediate Great Bay watershed and NH’s North Atlantic Ecoregion, and includes the entire watershed of two tidal creeks that flow directly into the Great Bay estuary. The WAP ranks the entire tract as Tier 1, and it is within an important Blanding’s turtle protection area identified by the US Fish and Wildlife Service and NHFG.</p>
<p>Lubberland Creek Restoration Project Town of Newmarket <i>Newmarket</i></p>	<p align="center">\$200,000</p>	<p>The Town will restore Bay Road’s crossing of Lubberland Creek and will achieve three primary goals: (1) to restore aquatic connectivity at the system’s tidal/freshwater interface allowing diadromous fish passage at the perched Bay Road culvert, (2) to enhance the resilience of Lubberland Creek salt marsh, Great Bay estuary’s second largest contiguous salt marsh, by removing the existing tidal restriction at Bay Road with a structure that will allow upstream salt marsh migration, and (3) to remediate the flood hazard of this road-stream crossing, which overtops during flood events and thereby compromises public safety and contributes excess sediments and nutrients to Great Bay. Lubberland Creek currently passes through a 36-inch squashed, corrugated metal pipe at Bay Road and will be replaced with a 16 foot span box culvert which will restore full aquatic organism passage from its current barrier status, with a vertical structural span of nine feet.</p>

<p>Mathes Family Limited Partnership Southeast Land Trust <i>Epping</i></p>	<p>\$158,000</p>	<p>The project will protect 129.6 acres located on the west bank of the designated Wild and Scenic Lamprey River. The parcel encompasses 2,330 linear feet of a tributary stream to the Lamprey River and 4,560 linear feet along the western bank of the Lamprey. The property includes nearly 40.4-acres of important high value wetlands and floodplains, including three documented vernal pools and there is habitat on the property to support nearby known occurrences of three rare turtle species. The Property is within a “High Priority” site for Blanding’s turtles and is within a 1,670-acre, NHFG-mapped unfragmented forest block that with the completion of this project will result in approximately 56% of the block conserved.</p>
<p>Mullen Tract Southeast Land Trust <i>Fremont</i></p>	<p>\$122,130</p>	<p>The 33.8 acre parcel to be protected includes 1,290 linear feet of a tributary to Brown Brook, a tributary to the Piscassic River. The Mullen property includes nearly 12.5-acres of important high value wetlands, including 12.1-acres of Prime Wetlands, one documented vernal pool, and the landowner has documented occurrences of Blanding’s turtle on the Property. Approximately 39% of the Property is identified as WAP Tier 1 with the remaining 61% designated as Tier 2 habitat. The Property is within a “High Priority” site for Blanding’s turtles and is a priority site for NHFG.</p>
<p>Merrimack Service Area</p>		
<p>Brox Community Lands Conservation Easement Milford Conservation Commission <i>Milford</i></p>	<p>\$20,000</p>	<p>The Town will protect approximately 75 acres of the Brox Community Lands which consist of a mix of waterbodies with the associated marsh and shrub wetland habitats and vernal pools, a large open sand pit (due to past and present sand and gravel mining operations), and undisturbed forested areas. The wildlife habitats of the property have been ranked as Tier 2 by the WAP. The largest waterbody within the Brox property is about 35 acres of open water impounded by a beaver dam across Birch Brook and has supported many Great Blue Herons. Wildlife inhabiting the area dependent upon the dry, forested uplands surrounding the wetlands includes Blanding’s turtle, Spotted turtle and Eastern Hognose snake.</p>
<p>Piscataquog South Branch Connectivity Project Francetown Land Trust <i>Francetown</i></p>	<p>\$185,975</p>	<p>The project will protect and connect land along 2,000 feet of the South Branch of the Piscataquog River and its tributaries through the following: (1) Purchase a 12+ acre property along the west side of the South Branch to protect in perpetuity and (2) Protect in perpetuity 11.6 acres along the east side of the river, as a conservation easement donated by landowners in support of this project. The parcels contain upland and riparian forests and a 1.46-acre Red Maple-Black Ash Swamp; and upland forest, a floodplain forest containing 4.22 acres of Red Maple-Black Ash Swamp, vernal pools, and an intermittent stream that flows from the wetlands into the South Branch. This section of river is also listed as Wild Eastern Brook Trout Habitat.</p>
<p>Robert French Fee Piscataquog Land Conservancy <i>Weare</i></p>	<p>\$185,000</p>	<p>The project will protect 205 acres of exemplary aquatic resources and upland buffer including 22.58 acres of wetlands, comprised of a string of beaver-impounded wetlands that run north-south down the center of the property, and at least 11 vernal pools scattered across the remainder of the tract. The largest of the pools is a .65-acre black gum-red maple basin swamp that features trees approximately 400 years in age. The property includes a 4,700-foot riparian corridor along Bartlett Brook, which flows north towards the main branch of the Piscataquog River. The property has 88 acres of Tier 1 WAP habitat, 74 acres of Tier 2 habitat and would link 473 acres of previously unconnected conservation land.</p>
<p>Stillhouse Forest The Society for the Protection of New Hampshire Forests <i>Canterbury & Northfield</i></p>	<p>\$150,000</p>	<p>Protect 215 acres that includes over a mile of undeveloped frontage on the Merrimack River and is located directly across from Penacook & Boscawen Water Precinct’s three main drinking water wells. This property has 20 acres of wetlands, two significant oxbows that support high-quality silver maple floodplain forest, a mile-long perennial stream containing native brook trout, exceptional riparian wildlife habitat, several rare or threatened species, two exemplary natural communities, and 14 confirmed vernal pools. Two possible exemplary natural communities include the dry river bluff natural community and the silver maple-false nettle-sensitive fern floodplains which contain the vernal pools and silver maples that are hundreds of years old.</p>
<p>Merrimack River (CTAP) Service Area</p>		
<p>Country Hill Estates Parcel Preservation Concord Conservation Commission <i>Concord</i></p>	<p>\$350,000</p>	<p>The City will protect two parcels of land totaling 227.39 acres off District 5 Road in perpetuity. The protection of this property will add to a large block of conservation land, including the adjacent 546-acre Rossvie Farm. There are approximately 27 acres of forested scrub-shrub and riverine/upper perennial wetlands associated with two streams, potential vernal pools and ephemeral pools observed north of Ash Brook. Under the current City regulations, the site could potentially support up to 40 single-family house lots or 100 residential condominium units, including new roadways and other site improvements that would impact wetland and upland habitat.</p>

<p>Jennings Conservation Easement The Piscataquog Land Conservancy <i>Goffstown</i></p>	<p>\$94,000</p>	<p>The project will protect 52+/- acres of exemplary aquatic resources and upland buffer through purchase of a conservation easement. The property contains 11.6 +/- acres of wetlands, comprised of 10.2 acres of prime wetland in Paige Hill Marsh and an additional 1.29 acres along Harry Brook. The property also includes 1,380 feet of riparian corridor – 560 feet of Harry Brook and 820 feet of a tributary of Harry Brook that flows through Paige Hill Marsh. The property’s wetlands and riparian corridors provide habitat for a variety of wildlife species, and the Spotted Turtle and Northern Black Racer has been documented within one mile of the property.</p>
<p>Parker Farm’s Forest The Forest Society and <i>Auburn</i></p>	<p>\$375,000</p>	<p>The project will conserve an 87-acre parcel with 2,050 feet of undeveloped shoreline providing a critical forested buffer to Lake Massabesic, which is the surface water drinking source for over 165,000 residents of the City of Manchester and surrounding towns. Much of the property supports a mature, Appalachian oak-pine forest and hemlock-beech-oak-pine forest. The land contains 4.9 acres of wetlands and several intermittent and ephemeral drainage ways which drain towards the lake. If conserved, the property will add to the thousands of contiguous acres of Manchester Water Works land around the lake and further guarantee undeveloped shoreline by another 2,050 feet.</p>
<p>Lower Connecticut Service Area</p>		
<p>Cranberry Bog Culvert Replacement and Stream Restoration Town of Winchester <i>Winchester</i></p>	<p>\$215,488</p>	<p>The Town will replace the failing Cranberry Bog culvert, provide for 2.68 miles of stream connectivity both upstream and downstream of the new culvert, address a perched culvert condition, and improve the stream to enhance aquatic habitat. The existing culvert is considered a Tier 3 crossing and is located on Snow Brook which flows to the Ashuelot River under Back Ashuelot Road. The existing culvert, a 48” x 60’ long corrugated metal pipe will be replaced with a 5’ x 12’ x 60’ long closed bottom pre-cast concrete box structure be installed in accordance with the NH Stream Crossing guidelines. The work includes wetland restoration and will create 4-foot wide floodplain benches on both sides of the stream and stabilize a total of 160 sq.ft. of the upstream bank and 610 sq.ft. of the downstream bank by installing biodegradable coir fabric and replanting native species.</p>
<p>Granite Lake Headwaters The Harris Center for Conservation Education <i>Stoddard</i></p>	<p>\$200,000</p>	<p>The project will protect a 515-acre parcel located south of Route 9, in a rural zone with a 2-acre minimum lot size. It directly abuts 2,275 contiguous acres of conserved land and is adjacent to an 11,500-acre corridor of protected land that stretches in an unbroken belt from Stoddard to Peterborough. This parcel has several deeply incised drainages on its steep northwestern and southeastern slopes and contains two confirmed vernal pools. The first order streams flow across the property for more than three miles draining west into Nye Meadow, a 45-acre natural wetland protected by NH Audubon, and then into Granite Lake, a 238-acre cold-water lake managed by NHFG for its lake trout population.</p>
<p>North Branch Sugar River Land Conservation Project – Ruger Property Acquisition New Hampshire Fish and Game <i>Newport, Croydon, Grantham</i></p>	<p>\$475,500</p>	<p>Two properties totaling 3,181 acres known as the Ruger lands within the watershed of the North Branch of the Sugar River will be permanently protected including approximately 416 acres of wetlands habitat plus 28 vernal pools and 10.85 miles of streams. The project will expand the extent of protected lands in a 48,750 acre unfragmented block of natural land cover, and provide habitat for numerous wildlife species including at least 12 species of greatest conservation need. The Brighton Forest parcel (1,905 acres) has 713.2 acres of WAP Tier 1 habitat, 366 acres Tier 2 habitat, and a variety of other habitat types including approximately 40 acres of managed shrubland under an existing powerline right-of-way, 14.6 acres of old field, and 237.67 acres of a variety of wetland types including a 132 acre marsh complex and 11 documented vernal pools. The Loverin Hill parcel has 532.2 acres of WAP Tier 1 habitat, 294.5 acres Tier 2, and 390 acres Tier 3 habitat which cover 98.2% of the parcel.</p>
<p>Thompson Brook Restoration The Cheshire County Conservation District <i>Surry</i></p>	<p>\$74,195</p>	<p>The project involves stream passage improvements to provide aquatic organism passage that is currently restricted and will be improved to fully passable by all organisms. There will be approximately two and a half miles of upstream, barrier free, aquatic habitat reopened by this project. The project will restore the box culvert barrier for fish passage using a backwatering technique at this priority site. The restoration includes two components: 1) redirect high energy stormwater flows away from the confluence of the tributary outflow and 2) to create a step pool structure to restore aquatic passage over the perched outflow end of the box culvert. Once that elevation is achieved, it will allow most aquatic species to move up stream through the culvert even during relatively low flow conditions.</p>

<p>Tunis District Headwater and Wetland Protection The Upper Valley Land Trust <i>Hanover</i></p>	<p>\$299,644.75</p>	<p>The Tunis project will result in the permanent protection of 337± acres of headwater wetlands, streams, and uplands east of Moose Mountain, providing critical connectivity between the Appalachian Trail, Hanover Town Forest lands, and other conserved properties. The properties include 30 acres of Black Ash-Northern Hardwood-Conifer Swamp, several acres of wet meadow shrub and forested swamp, 3000 linear feet of intermittent streams, 1700 linear feet along Tunis Brook which hosts wild Eastern brook trout, and numerous vernal pools. It lies within a 12,000± acre unfragmented forest block home to bear and moose and other wide-ranging species.</p>
<p>Lower Connecticut Service and Contoocook Service Areas</p>		
<p>Bearce Property The Monadnock Conservancy <i>Jaffrey & Rindge</i></p>	<p>\$142,000</p>	<p>The project will protect the Bearce property that includes 61 acres of wetlands; 139 acres of upland; approximately 9,241 feet of streams; and one confirmed vernal pool. Approximately 200 acres in size, half of the property is located in Jaffrey with the other half located in Rindge. The easement will allow for forest management and agriculture and include a 100 foot buffer in order to protect the aquatic resources. The land is quite developable with abundant road frontage on two Class V roads. The Bearce property is directly adjacent to the Monadnock Conservancy's 77-acre Mountain Brook Reservoir property and within a 1,521-acre forested block.</p>
<p>Middle Connecticut Service Area</p>		
<p>Jean Chamberlin North Ammonoosuc Conservation Trust <i>Bath</i></p>	<p>\$35,000</p>	<p>Protect the 10-acre parcel of land located in High Priority Water Supply Land and is located approximately 525 feet from the Woodsville Community Water Supply intake, which serves 2075 people. This project will protect land near the confluence of the Connecticut and Ammonoosuc Rivers and will add to a potential conservation area of over 500 acres near the confluence of these rivers. The property includes 1,138 feet of frontage on the Ammonoosuc River with a mostly wooded riparian forest buffer, and 3 acres of Flood Hazard Area associated with the Ammonoosuc River, including one acre in the 100-year zone and two acres in the 500-year zone.</p>
<p>Jean Chamberlin South Ammonoosuc Conservation Trust <i>Haverhill</i></p>	<p>\$30,200</p>	<p>Protect 32.5 acres of land near the confluence of the Connecticut and Ammonoosuc Rivers. The project includes 1.5 acres of riparian enhancement through planting the wooded buffer to at least 50 feet and to increase native riparian tree cover. The project will add to a potential conservation area of over 500 acres near the confluence of the rivers, includes significant wetlands features, is in a flood hazard zone, is in an active river area, includes 23 acres of Tier I grassland habitat, is a High Priority Water Supply land, and is located approximately 1,590 feet from the Woodsville Community Water Supply intake.</p>
<p>Neil Chamberlin Conservation Area Ammonoosuc Conservation Trust <i>Bath</i></p>	<p>\$50,300</p>	<p>Protect a 204 acre parcel that includes 2,409 feet of riparian frontage on the Upper Connecticut River and supports continuous riparian forest with wooded buffer widths exceeding 100 feet. Its extensive road frontage and level fields make it very developable. The parcel includes 3,837 feet of first order streams; 25 acres of grassland habitat, 30-acres of Tier 2 WAP rocky/talus slope habitat, vernal pools and approximately 4 acres of High Priority Water Supply land. The far northeast corner of the Conservation Area drains towards the Ammonoosuc and is within the Woodsville Water and Light water supply watershed. If successful, this project will add to a conserved area of over 500 acres near the confluence of the Connecticut and Ammonoosuc Rivers.</p>