Stormwater - Implementation



Harwood Union Middle and High School, Duxbury Stormwater Treatment AGENCY OF NATURAL RESOURCES

Towns: Duxbury

County: Washington

Watershed: Winooski

State Funding: \$29,040

Funding Source: Capital Fund

Description: The project is located at the Harwood Union High School in the town of Duxbury. The construction of Harwood Union predates state stormwater regulations and the infrastructure, therefore, offers little to no stormwater treatment. With approximately 8.3 acres of impervious surface, deteriorating stormwater infrastructure, as well as encroachment on (and direct input into) Lozelle Brook, runoff from Harwood Union High School contributes to stream bank erosion, sedimentation and pollutant transport to a Dowsville Brook tributary. The result of this project will be the construction of a 1,400 square foot bioretention practice that will mitigate runoff from approximately 0.53 acres of rooftop runoff that collects in roof drains and empties into a pipe system that outlets in Lozelle Brook.

Partner: Friends of the Mad River

Area outside classroom before bioretention was installed



Completed construction of bioretention area with boardwalk





Project Status:

Funded SFY 2017 Completed SFY 2018

Results:

- 0.53 Acres of impervious surface treated
- 0.26 kg of phosphorous reduced anually, over 20 years

Data Source: https://dec.vermont.gov/watershed/cwi/projects

For more information visit: https://dec.vermont.gov/watershed/cwi







Dam Removal - Implementation

Passumpsic River Dam Removal at Burke Hollow Road in East Burke AGENCY OF NATURAL RESOURCES

Towns: Burke

County: Caledonia

Watershed: Passumpsic

State Funding: \$150,000

Funding Source: Capital Fund

Description: The East Burke dam is a 155 feet long, 12 feet high concrete dam in poor condition on the East Branch of the Passumpsic River in East Burke, VT. This project will physically remove the dam and help to re-establish the natural conditions of the River. The removal of this dam will improve water quality by converting a relatively shallow, stagnant impoundment to a free-flowing condition, More than 8,000 cubic yards of sediment will be removed, and removal of the dam will restore sediment transport and continuity in an area of river (below the dam) that is sediment starved. Previous funding has developed a removal plan and this phase involves hiring a contractor to ensure successful removal of the dam as required by the design plan and permits.

Partner: Connecticut River Conservancy

Before removal of the East Burke Dam on the East Branch of the Passumpsic River



After removal of the East Burke Dam on the East Branch of the Passumpsic River





Project Status:

Funded SFY 2017 Completed SFY 2018

Results:

 99 Stream miles reconnected for stream equlibrium and aquatic organism passage

Data Source: https://dec.vermont.gov/watershed/cwi/projects

For more information visit: https://dec.vermont.gov/watershed/cwi







Lake Shoreland - Implementation

Lake Wise Practice Implementation- Lake Carmi, Franklin AGENCY OF NATURAL RESOURCES

Towns: Franklin
County: Franklin

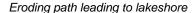
Watershed: Missisquoi Bay

State Funding: \$37,125

Funding Source: Capital Fund

Description: This project implements Lake Wise practices within the Lake Carmi watershed in Franklin, which serve to restore and protect Lake Carmi shoreland through assessments followed by shoreland best management projects. Although much of Lake Carmi has shoreland development close to the water's edge, there are still many opportunities for "softening" the shores and re-naturalizing them with native plantings as well as implementing practices for controlling stormwater runoff. Improving shoreland conditions helps protect water quality and aquatic habitat, which recent science shows to be the greatest threat to Vermont lakes. Implemented practices include: shoreline ditches, rock aprons, stone lined-culvert inlet/outlets, check dams, shoreline plantings and stabilization.

Partner: Franklin Watershed Committee





Lakeshore path stabilized with stone to prevent further erosion





Project Status:

Funded SFY 2015 Completed SFY 2018

Results:

• 11 Drainage structures installed or repaired

Data Source: https://dec.vermont.gov/watershed/cwi/projects

For more information visit: https://dec.vermont.gov/watershed/cwi





Agricultural Pollution Prevention - Implementation Riparian Forest Buffer AGENCY OF AGRICULTURE FOOD & MARKETS

Towns: Richford County: Franklin

Watershed: Missisquoi Bay

State Funding: \$7,049

Funding Source: Capital Fund

Description: Implementation of agricultural best management practices that reduce pollutants (e.g., nutrients, pathogens, sediment) and improve soil health.



Project Status:

Funded SFY 2018 Completed SFY 2018

Results:

- 18.5 Acres of agricultural land treated by buffer
- 9.73 kg of phosphorous reduced anually, over 15 years

Data Source: https://dec.vermont.gov/watershed/cwi/projects

For more information visit: https://agriculture.vermont.gov/







Agricultural Conservation Easements for Water Quality - Implementation

Tracy Woods Conservation Easement with Wetlands Protection VERMONT HOUSING & CONSERVATION BOARD

Towns: South Hero County: Grand Isle

Watershed: North Champlain

State Funding: \$55,000

Funding Source: Capital Fund, Housing & Conservation Trust Fund

Description: Fee purchases/easements to take farmland out of production or limit agricultural uses to enhance water quality in challenging locations. Agricultural Easements for water quality require a minimum 50-foot riparian buffer and limits agricultural uses within buffer area.

Partner: Lake Champlain Land Trust



Project Status:

Funded SFY 2017 Completed SFY 2018

Results:

- 45 Acres conserved
- 35.5 Acres conserved as forestland
- 8 Acres with special water quality protection (subset of acres conserved)

Data Source: https://dec.vermont.gov/watershed/cwi/projects

For more information visit: https://vhcb.org/







Road Project - Implementation

TH 4 High Pond Road – Municipal Roads Erosion Control AGENCY OF TRANSPORTATION

Towns: Hubbardton

County: Rutland

Watershed: Otter Creek, South Champlain

State Funding: \$20,000

Funding Source: State Transportation Fund

Description: Implementation of projects to correct road related erosion problems for gravel and paved roads and road drainage culverts (e.g., ditches, turnouts, check dams, culvert armoring) and stormwater treatment practices that collect, store, infiltrate, and filter runoff from transportation infrastructure (e.g.,

bioretention, gravel wetlands, wet ponds).

Partner: Hubbardton



Project Status:

Funded SFY 2017 Completed SFY 2017

Results:

- 8448 Linear feet of road drainage improved
- 8.78 kg of phosphorous reduced anually, over 8 years

Data Source: https://dec.vermont.gov/watershed/cwi/projects

For more information visit: https://vtrans.vermont.gov/



