SHELDON SPRINGS TIERED BIO RETENTION PROJECT & STORMWATER RETROFIT OPPORTUNITIES

Photo Credit: Julie Moore

Practice: Treats about 3/4 of an acre of a gravel impervious surface lot. The water discharges into the Missisquoi River.

Cost: The total cost for this project including: engineering, project management, administration, and construction was $15,000.

Funder: Lake Champlain Basing Program (LCBP) Implementation Grant.

Project Team: Rock Tenn, Friends of Northern Lake Champlain (FNLC), Stone Environmental, Spaulding Construction.

Note: This project site was identified in the Sheldon Stormwater Master Plan. A project funded with Ecosystem Restoration Program Money to help communities identify, prioritize, and fix potential stormwater problems. We are currently working on a solutions specific report for all of Sheldon Springs.

PLANTED TREE BUFFERS ALONG THE MISSISQUOI RIVER

Photo Credit: MRBA

Practice: Buffers along stream banks help to stabilize the banks of the rivers and provide ecosystem benefits to wildlife.

Costs: Depends on the location of the site, however we estimate that to plant an acre of trees is about $4,000 (includes cost to the landowner to retire that land, volunteer and paid labor, and project management and administration).

Funders: Funding used to come from the Section 319 Grant from EPA, but that money is no longer available to watershed groups. In recent years, organizations apply to the Ecosystem Restoration Program through DEC.

Project Team: MRBA, ANR, USFW, Jay Peak (funds came from a fine issued to Jay Peak for stormwater permit infractions)

Note: Planting trees is one of the practices to help water quality that most everyone agrees with, however, there is a need to be flexible with buffer width to accommodate certain site characteristics. It is better to have some trees, than no trees!

FRANKLIN VILLAGE—STORMWATER OPPORTUNITIES

Photo Credit: Julie Moore

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Practice: Stormwater reduction and treatment at town buildings in Franklin. The project proposes to install a cistern at the Fire Station and a storm water treatment system behind the Town Office.

Cost: The total cost is $21,000

Funder: Applied for an Ecosystem Restoration Program Grant in November.

Project Team: Friends of Northern Lake Champlain (site ID), Stone Environmental, Town of Franklin and the Franklin Watershed Committee.

Note: In addition to the project costs, the Town will be responsible for the continued operations and maintenance of these projects. This project has not yet been funded. These sites were identified in the 2014 Franklin Stormwater Master Plan.

BRIDGEMAN VIEW FARM

Photo Credit: Denise Smith

Practice: Various Agronomic Practices to conserve soil and water.

Costs: Grassed Water Way—$7,500
Precision Feed Tracker—$3,000
No Till Planter—$5,000
Grassed Buffer Plantings—$228/acre (avg.)
Cover Crops—$86.50/acre (avg.)
Manure Injector/Injection

Funders: Some of the projects have been self funded, however UVM Extension, NRCS, and Farmers Watershed Alliance (FWA) have helped with some of the initial costs.

Project Team: Tim Magnant, FWA, UVM, NRCS

Note: Tim has really adopted a whole farm management system to improve soil and reduce nutrient loss. Implementing all of these practices takes commitment and an understanding of the nutrient cycle. This requires education and technical training for land managers and farmers.

ROCK RIVER ACRES

Photo Credit: Denise Smith

Practice: Strip cropping, cover crops and corn residue

Cost: Strip Cropping
Cover Crop—$86.50/acre
Corn Residue—FREE
Conservation Reserve Program (CRP) - $150/acre/Year (Avg.)

Funder: Self Funded and NRCS

Project Team: Farmer, NRCS, UVM Extension, FNLC, FWA

Note: Adrian Rainville has largely implemented most of the conservation practices on his own. Due to his location next to the Rock River, there was a targeted outreach from both State and Federal Agencies to address high phosphorous loads in the Rock River. There are still resources available to farmers willing to implement conservation practices in this watershed.

WINDFALL ACRES

Photo Credit: Brian Jerose

Practice: WASCoB and Edge of Field Monitoring Project

Costs: WASCoB costs varies with the site. FNLC total project budget was $46,000 for 5 WASCoBS.

Edge of Field Monitoring is a 3 year study $1,000,000 for 14 stations ($24k/station/year). This includes construction, instrumentation, operation, data analysis and lab costs.

Funders: AAFM, NRCS, LCBP

Project Team: FNLC, AAFM, NRCS, LCBP, Stone Environmental, DEC, Agrilabs Technologies, Fitzgerald Environmental

Note: These are the types of projects that we need more of in order better understand which practices are going to work, the sustainability of the practices, and maintenance expectations. The Edge of Field Monitoring Project has given technical advisors a better understanding of which practices work best on the fields and how management decisions can affect water quality.

LAROCHE FARM

Photo Credit: Brian Jerose

Practice: WASCoB and Buffer Strip

Cost: WASCoB costs varies with the site. FNLC total project budget was $46,000 for 5 WASCoBS.

Buffer Strip—$228/acre

Funder: AAFM and self funded

Project Team: Matt Laroche, FNLC, AAFM

Note: This project was installed close to 3 years ago. Within the first year, sediment was evident, showing the importance of this system. The Laroche's have since taken measures to install a grass buffer strip and seed down the fields.

HANNA AND DURKEE ROAD

Photo Credit: Denise Smith

Practice: Improved ditching and bank stabilization

Costs: $60,000

Funders: Possible Ecosystem Restoration Program (up to $75,000) or Better Back Roads (up to $10,000)

Project Team: Town of Highgate and FNLC

Note: This project was identified in the Stormwater Master Plan for the Town of Highgate. The Town paid to scope the project and FNLC applied for funding on behalf o the town in the first round of the 2015 ERP. The project however was not selected for funding. In the meantime, the adjacent private property owner has moved his animal fence out of the town right of way in order to prevent further degradation of the bank. We are waiting to see what happens to the adjacent property because the landowner passed away and there may be a sale pending.