



Final Report

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Soil Savers

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Executive Summary

The goal and purpose of the Soil Savers grant was to reach a diverse community and educate on the importance of soil health and how it is a necessity in everyday life. Soil health is extremely important whether we are discussing agriculture, streams, landfills, stormwater or septic systems. Soil has many functions including water purification, medium for plant growth, recycling organic wastes and habitat for soil organisms. The goal of the Soil Savers program was to reach out to landowners, farmers, government officials and students to educate and assist them on making better decisions for the land, whether it is for a large agricultural process or a small household composting project.

The process we took with Soil Savers to achieve this goal was open community trainings with experts in many different aspects of soil health, school programs, a community event with conservation organizations in a popular park along Halfway Brook in the Champlain Watershed, assisting municipalities and a soil program at a public library. We reached out to local schools, newspapers and social medias to inform the community of the Soil Saver events.

We now have established Soil Saver programs for elementary students up through landowners and farmers. With the proper equipment that includes soil test kits, soil probes, augers and sifters, our office plans to continue with school programs and assisting landowners on soil health and spot testing.

We have completed the Soil Savers grant according to the plan of work and timeline given of December 2014. The high school program went very well due to the hands on activities and connecting the program to real world applications. We had each student bring in a soil sample from home and use soil test kits for analysis. The students then analysed their results and determined nutrient amendments needed and also with plant nutrient charts, determined what type of vegetables could be grown. We also had the students use soil probes and compare soil test results.

The community trainings were very success and the attendees all had very positive feedback. The trainings covered a wide variety of soil health topics including farms with barnyards and pastures, cover crops, no till, composting, soil structure with physical and chemical properties, erosion, nutrient runoff and invasive species.

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1 Project Introduction

The Soil Savers program is an education and outreach program with the goal of promoting and expanding the importance of soil health in all aspect of life. The program provided soil health education along with the multitude of supporting topics (invasive species, erosion, stormwater, vegetation, farming, etc.) to elementary school age children, middle school, high school, residential landowners, farmers and municipal officials. The purpose of this program was to expand the knowledge and necessity of soil health through soil science, environmental quality, agricultural activities and urban impacts. Our partnering organizations included the Essex County Soil & Water Conservation District who presented on soil conservation for farms, SUNY Adirondack provided a facility and small diversified farm for presentation use, the USDA-Natural Resources Conservation Service (USDA-NRCS) presented on soil health, the LCBP and NEIWPC provided the funding, the NYS DEC provided a facility for presentations, the Town of Queensbury Parks and Recreation Department allowed us to use Hovey Pond Park for an educational event, the Glens Falls Crandall Library provided a facility for a presentation, the Lake George High School provided a classroom for Soil Savers, and the Queensbury Middle School allowed us to present on soil health at their science days on the campus recreation trials.

2 Tasks Completed

Task 1: A press release for the Soil Savers grant with a Soil Health and Nutrition training was sent to Post Star, Adirondack Almanack, Adirondack Journal, Chronicle, SWCD website and Facebook. The press releases brought residential landowners, municipal officials and farmers to our Soil Health and Nutrition presentation by USDA-NRCS.

Task 2: Media coverage of the Soil Savers grant and educational opportunities were sent to the local newspapers and SWCD website and Facebook for the Soil Health training and Conservation Celebration. The education events for Dirt Detectives, Queensbury Science Days and the Lake George High School Soil Saver were posted to the SWCD Facebook with photos and outreached to the community through the Glen Falls Public Library.

Task 3: Photos of each Soil Saver event were taken to show the participation and how the events were setup and organized.

Task 4: The school presentations we held were for the Queensbury Middle School and the Lake George High School. For the Queensbury Middle School we created a soil health handout and using the Emriver, we taught the students about erosion, soil health, soil properties, and nutrient runoff. For two Lake George High School Environmental classes, we presented on soil science followed by soil analysis. Each student brought in a soil sample from home and we had soil test kits for N,P,K and pH. We also held a Soil Savers "Dirt Detectives" program at the Glens Falls Crandall Public Library. First we presented on the importance of soil with activities on the properties of sand, silt and clay followed by our soil insect bins for the students to explore.

Task 5: We held a Soil Health and Nutrition training with residential landowners, municipal officials and farmers. Scott with USDA-NRCS presented on soil nutrients, organic matter, compaction, runoff, cover crops and crop rotation. We had 61 RSVP's and 50 attendees. We had a diverse attendance that lead to great questions and discussions and we were able to



Dirt Detectives



Soil Health and Nutrition

cover multiple applications of soil health and the importance of each.

Task 6: Our community outreach was a Conservation Celebration at Hovey Pond Park along Halfway Brook in the Town of Queensbury. A press release was sent to local newspapers and SWCD social medias. We educated the Champlain Basin community with soil health and composting handouts, we setup our Emriver to educate on erosion, nutrient runoff and stormwater. Five conservation organizations joined to educate the community including SWCD, Trout Unlimited, Lake George Association, The Fund for Lake George, Town of Queensbury and The Rotary Club of Glens Falls.



Conservation Celebration

Task 7: Our public education for landowners included an education event at the SUNY Adirondack campus with Tiffany from Essex County SWCD and Dr. Tim Scherbatskoy, Professor of Ecology. The event was on farm planning with the main focus on soil conservation and health including cover crops, nutrient runoff, no till, erosion, and composting. We also had a soil health information setup at the Warren County Tree & Shrub handout to inform landowners and small farms on soil health with handouts on planting guidelines, invasive species, cover crops, crop rotation and building soil structure.

3 Methodology

The methodology behind the Soil Savers grant was to reach a diverse community and educated them on the importance of different aspects and application of soil health. We achieved this education through bringing in presenters with different backgrounds and applications of how soil health is significant in their field. For each event we reach out to communities, municipalities, colleges and schools in the Champlain Basin. We used our SWCD Facebook and website and local newspapers and their calendars to promote our events and trainings.

4 Quality Assurance Tasks Completed

Not Applicable

5 Deliverables Completed

All deliverables in the plan of work were completed. Our Soil Savers grant press release and events were sent to local newspapers and posted on social medias from March to November. All of our events were photo documented for reporting and will be submitted with the final report. In school trainings for students went very well for the Lake George High School and Queensbury Middle School. Along with the school programs, we held a soils class for elementary age students at Crandall Public Library with sand, silt and clay activities and soil insect bins for the students to explore. We will be continuing the high school soil health program due to the success and requests from additional schools. We planned and setup our school trainings in March and continued to present and hold three programs through September. Our Soil Health and Nutrition workshop at the end of March



Emriver Setup at Con. Celebration

was very successful with USDA-NRCS presenting and 50 attendees. We had a press release and held our community outreach Conservation Celebration in April with five partnering conservation organizations that setup displays. Our public education with soil health, invasive plants and approved agronomic practices went very well with our soil health informational setup at our Warren Co. SWCD Tree & Shrub handout in April, our SUNY Adirondack public training in May and Town of Queensbury Pine View Cemetery composting assistance for increased soil health in July. The last deliverable is the final report in December.

6 Conclusions

The Soil Savers program that has been established will continue moving forward after the grant with the trainings and programs that have been designed and equipment that is now available. Soil Savers came at a great time when soil health is becoming a wide spread topic among our communities in the Champlain Basin. The attendance for our programs was exceptional and after the each program we received numerous calls and emails with additional requests.

One of our main goals we accomplished was educating students from elementary through high school. We establish an interest in soil science with real world applications and hands on activities. The more soil activities to show the importance of soil in our everyday lives, the better the programs were. With elementary students, we use hands on activities with sand, silt and clay followed by how soil is created with soil and insect bins the students were able to explore in. With the high school students we had each student bring in a soil sample and we used simple soil tests to test for N, P, K and pH. From the soil test results, we came up with soil amendments and had charts for vegetables that would grow well in each soil. We also use the Emriver to educate students on soil erosion and nutrient runoff in the Champlain Watershed and how it is all connected with stormwater. The Emriver also demonstrates the importance of vegetation on stream banks to hold our precious topsoil in place and prevent erosion and sediment to our waterbodies.



Dirt Detectives- Insect bins



Lake George High School- Soil testing

The *Opportunities for Action* played a major role in writing and implementing the Soil Savers grant. Task 3.3.1 to promote a better understanding and appreciation of the Champlain Basin was part of all of our programs and was especially important during our Emriver demonstrations when attendees were able to actually see and understand the erosion and runoff process to waterbodies in the watershed. Task 4.5.4, .6, .11 to reduce phosphorus inputs to the Champlain Basin was discussed throughout our entire grant due to differing regulations in Warren County's Champlain Basin where Lake George has ban phosphorus and other areas around Halfway Brook have not. We discuss phosphorous inputs and why it is important to test your soil to find out what nutrient are needed based on science to reduce nutrient runoff. Task 5.12, .13 reducing contaminants to the Lake Champlain ecosystem taught through our composting sections and how it's important to reduce waste, recycle and build soil health. Tasks 3, 4, 5, 6 and 7 all had composting sections as part of the program or event.

7 References

8 Appendices

Appended Documents:

Attach any articles, press releases (which should acknowledge partnership with LCBP), a list of acronyms and published documents pertaining to this project

Photos: Email or mail a CD to your Project Officer with any photo documentation you have of your project with proper photo credit that LCBP can use in future publications.

Electronic Data: Email or mail a CD to your Project Officer with any electronic datasets you have generated through your project.