



# Waldo County Soil and Water Conservation District

## Journal 2020 - 2021

### Table of Contents

- A Look at Our Work..... 2**
- Financials..... 5**
- People..... 3-4**
- Agriculture and Community..... 6-7**
- Conservation Certification..... 8-10**
- Education..... 11**
- Conservation Assistance..... 12**
- Conservation Corps..... 13**
- Plants for a Changing World..... 14-16**
- Shrub & Tree Sale.... 17-18**
- NRCS..... 18**
- Thank You ..... 19**
- Our Mission..... 20**

### Letter From the Chair

In 2020, the Waldo County Soil and Water Conservation District had to rethink how we were going to do things throughout the County due to the COVID-19 pandemic, while keeping our clients safe. We pivoted to mostly virtual in our monthly meetings, annual meeting, and outreach with our younger clients in local schools. Our annual spring tree and shrub sale was cancelled but we were able to sell some of our trees and we put the rest in grow bags to over winter them. We are planning to have our tree and shrub sale this spring at Sue Hunter’s farm property in Unity.

The District was the sponsor of a grant request for the Friends of Lake Winnecook in Burnham, Troy, and Unity and was awarded a grant to update the Watershed Based Management Plan over the next two years. The previous 10 year plan was completed in 2006/2007. The plan will identify sources of run off contributing to the phosphorus loading of the lake. The grant is made possible through the Maine DEP and the EPA. It will be a comprehensive study of the non-point sources of pollutants entering the lake from the lake’s shore frontage, rivers, and streams.

Tom Mullin joined us our Administrative Director after Jenny Jurdak stepped down to take a job out of state. We thank her for her work for the District. Tom is off to a great start, having a excellent background in environmental issues.

He will be working with Aleta McKeage, our Technical Director. Aleta has been involved with many non-profits, civic organizations and schools in the Belfast area. She has also mapped many area properties for invasive and recommends the best ways to control them.   
--Andy Reed, Chair, Board of Supervisors



## A Look at the District's Work in 2020



- Conservation Land Certification program was implemented for local landowners. The program was presented nationally and will be implemented by the Knox Lincoln Soil and Water Conservation District in 2021.
- The Conservation Land Certification checklist was used by 2 schools to provide home learning experiences for their students.
- Our staff and interns completed invasive plant management surveys on 766 acres of production lands in Waldo County as a part of the NRCS Conservation Innovation Grant, in partnership with the Maine Natural Areas Program.
- We provided a Grow and Plant a Tree program to families with children learning at home, with over 150 people participating.
- The District continued the Report a Tree citizen science program to track growth and survival of adaptive tree species and species experiencing decline due to invasive insects and pathogens.
- Our staff provided online instruction to students at Belfast Area High School.
- Two Unity College students completed a 10-week internship with the District where they learned skills in field science, forestry, ecology, GIS, horticulture, agriculture, outreach and invasive plant management.
- The District provided 698 hours of Conservation Assistance to 23 organizations and landowners.
- We created an educational YouTube Channel and added 6 videos on eco-landscaping practices.
- The District assisted several community groups in creating the Wales Park Community Garden in Belfast, providing soil assessment, a garden design, site acquisition and preparation, planting as well as serving on the steering community. The Garden's mission is to create an accessible urban garden with demonstrations and education on growing food and pollinator gardens.
- We continued our work to develop an arboretum in City Park, donating a kiosk, updating the map and guide, creating educational activities and a plan for additional trees and shoreline landscaping.
- The District assisted the statewide Envirothon program in organizing and fundraising.
- The District partnered with the Schoodic Institute at Acadia to continue research on assisted migration and adaptive forestry at 4 research plots in Belfast.
- We provided consultation on urban forest and street tree management to the city of Charlotte, NC, whose program was later featured nationally in *Forestry Notes*.
- We installed a lead tackle depository at Lake Winnecook as a part of our Love our Lakes Program, in cooperation with Maine Audubon Society's Fish Lead Free program (*photo above*).
- The District submitted a successful application to the State of Maine to initiate and manage a project to update the Watershed Management Plan for Lake Winnecook.

*Cover photo: Wales Park Community Garden in Belfast, by Elizabeth Venturo*

# People

## Meet Our New Administrative Director

Tom Mullin joined the staff of the Waldo County Soil and Water Conservation District in late August.

He came to the District after serving on the faculty of Unity College for 21 years as an Associate Professor of Parks and Forest Resources. With a BS in Horticulture from Va Tech and a Master's in Business/Public Administration from George Mason University combined with years of non profit board and management experience, he brings lots of knowledge and experience to the table for the citizens of Waldo County.

“I look forward to working with the supervisors, farmers and land owners of Waldo County in the years to come. It's a beautiful part of the state and I am eager to be part of the process to keep it that way” said Tom in a recent interview.

Welcome Tom to the Waldo County Soil and Water Conservation District!



## Conservationist of the Year

At the 2020 Annual Meeting of the Waldo County Soil and Water Conservation District, Chairman Andy Reed was pleased to present the 2020 Conservationist of the Year award to Penny and Jeff Stevens and their Wind Gate Farm of town of Knox.

In presenting this most coveted award, Chairman Reed noted “ Each year the Waldo County Soil and Water Conservation District recognizes a farmer, agricultural or natural resource business or landowner for their outstanding leadership in demonstrating the conservation of our natural resources is a vital part of our lives.”

The Stevens have operated Wind Gate Farm for four decades and have been an exemplary land and water conservation leaders. Their dairy operation and associated farmland have been a model for others in not just the county but the state of Maine. Three generations of Stevens Family can be seen on the farm if you were to stop by.

The integrated use of no till farming techniques along with best practices for dairy herd management, land use and other agricultural practices have seen them honored by Cooperative Extension and other state agricultural organizations. Congratulations to Jeff and Penny

## A Profile of Supervisor Donald Cox

Don Cox has been a tremendous asset to our work here at Waldo County SWCD. As both a Supervisor and Associate Supervisor, he has brought deep expertise in conservation district work. Don retired in 2004 after 45 years as an Electronics Engineer and Project Manager.

Don has worked with Conservation Districts since 1975, bringing 45 years of experience to the table. He served as a SWCD supervisor in North Carolina and chaired numerous SWCD State Association committees. During this time, Don receive numerous awards, including the President’s Award for his tireless efforts on the Nutrient Sensitive Waters Committee. This work led to the N.C. Agricultural Cost Share Program being extended statewide. He also received the “Outstanding Layman Award” from the N.C. Chapter of the Soil and Water Conservation Society (Hugh Hammond Bennett Chapter).

Don’s record of leadership with SWCDs is extensive. In 1991, he served as Chairman to the Educational Committee for the N.C. Association of Soil and Water Conservation Districts. The Soil and Water Educational Program, “The Envirothon” was approved this year and came into fruition. From 1993 to 1995, he served as Chairman of the Natural Environment Committee (N.C. Association of Soil and Water Districts Standing Committee). He has also served as Area Representative for the Natural



Environment Committee (N.C. Association of Soil and Water Conservation Districts Standing Committee), and as Chairman of the Legislative Committee. During this work, Don encouraged local district participation in the legislative process, delivering a presentation at the Supervisors Training each year on Legislative process and participation. From 2007 to 2009, he served as an appointed member of the NC State Soil and Water Conservation Commission.

Don Cox has served Waldo County SWCD as a supervisor or associate supervisor from 2012 to present, and we will forever be grateful for his expert guidance in developing the dynamic and effective program we have today in our District.

## 2020 Staff and Supervisors

### Board of Supervisors

- Andrew Reed, Chair
- Harold Larrabee, Vice Chair
- Susan Hunter, Secretary
- Donald Cox, Supervisor
- Gene Randall, Treasurer
- Brian Baker, Associate Supervisor
- Kym Sanderson, Associate Supervisor

### Staff

- Aleta McKeage, Technical Director
- Tom Mullin, Administrative Director

### Natural Resource Conservation Service Staff

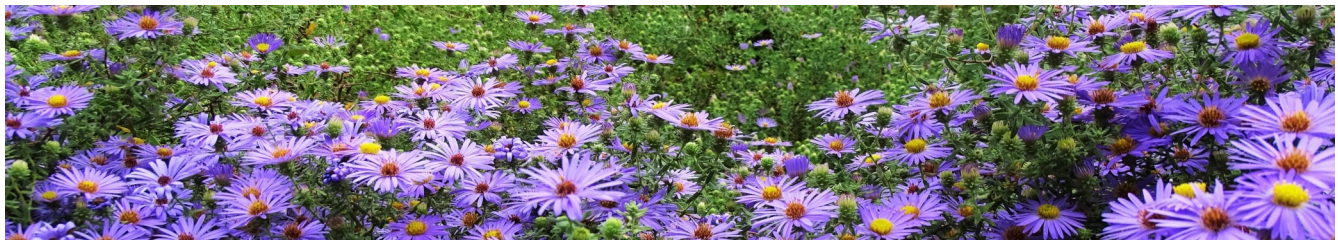
- Ron Desrosiers, District Conservationist
- Jorge Ortiz-Montalvo, Soil Conservationist

# 2020 Financial Report

As of 12/31/2020	Actual Year to Date	Footnotes	2020 Budget	Year-to-Date % of Budget
<b>Income:</b>				
Waldo County	\$ 13,000.00	1	\$ 26,000.00	50.0%
Maine Dept. Ag	25,000.00		25,000.00	100.0%
Workshops/Projects	-	2	8,000.00	0.0%
Cty/State Mtngs - Ticket Revenue	-		400.00	0.0%
Donations	377.69		-	
Build. Maint.	12,277.86		14,000.00	87.7%
Tree/Trout Sale	4,421.25	3	12,000.00	36.8%
Misc. & Interest	45.84		500.00	9.2%
Grants	2,948.50		-	
<b>Total Income</b>	<b>\$ 58,071.14</b>		<b>\$ 85,900.00</b>	<b>67.6%</b>
<b>Expenses:</b>				
Payroll	\$ 15,727.60		\$ 20,000.00	78.6%
Taxes/Audit	1,895.98		3,500.00	54.2%
Insurance	40.40		550.00	7.3%
Mileage	325.56		900.00	36.2%
Office Supplies/Audit	775.97		600.00	129.3%
Workshops/Education & Outreach	4,577.00		1,800.00	254.3%
County/State Meetings	134.91		1,200.00	11.2%
Donations & Dues	3,150.00		2,500.00	126.0%
Build. Maint.	9,783.45		11,000.00	88.9%
Tree/Trout Sale	6,090.71	4	9,400.00	64.8%
Misc.	36.00		250.00	14.4%
Contracted Services	31,824.00		33,500.00	95.0%
Website	81.16		350.00	23.2%
<b>Total Expenses</b>	<b>\$ 74,442.74</b>		<b>\$ 85,550.00</b>	<b>87.0%</b>
<b>Net Profit (Loss)</b>	<b>\$ (16,371.60)</b>	5	<b>\$ 350.00</b>	<b>-4677.6%</b>

**Footnotes:**

1. Due to COVID pandemic delays, the second \$13,000 payment was not received in 2020.
2. Anticipated grants were not awarded.
3. Tree Sales reduced due to the COVID pandemic.
4. Expenses exceeded income because many preorders could not be cancelled.
5. If the second payment of \$13,000 had been received in 2020, Net Income would have been <\$3,371.60>.



# Agriculture and Community

## 2020 Annual Gathering

The Waldo County Soil and Water Conservation District's Annual Meeting was held virtually this year on December 4th, 2020. While we wished we could have had this gathering in person, we still had a great crowd and an outstanding speaker.

The meeting featured a talk on the expanding role of drones for research in determining the water quality of lakes and ponds. Dr. Jim Killarney, formerly of Unity College has partnered with Dr. Kevin Spigel and Dr. Kathleen Dunkel on developing new methods for determining water quality via remote sensing devices like drones. Funded by a grant from NASA, their research provided some foundational knowledge about Unity Pond as well as developed techniques that will be used by other researchers in the future.



*Unity Pond Researchers viewed from their drone.*

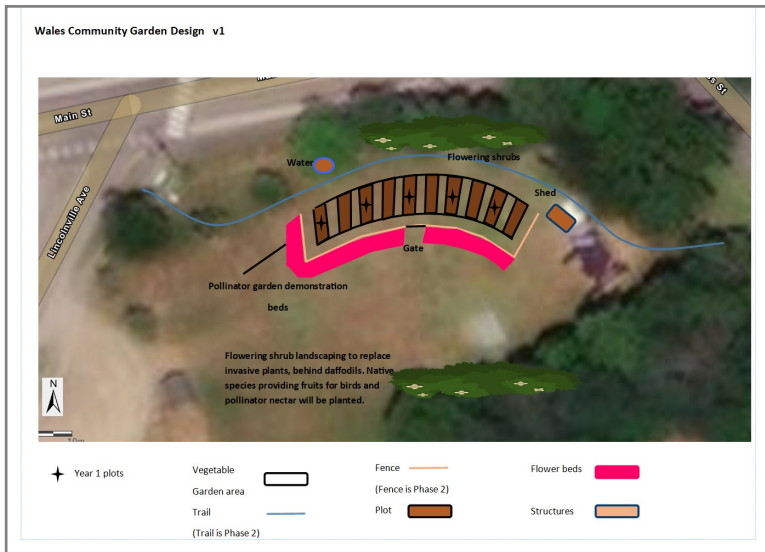
During the event, the award for Conservationist of the Year was presented to Jeff and Penny Stevens of Wind Gate Farm for their contribution to the conservation practices in the county.

## Our Partners

In 2020, we had the privilege of collaborating with many excellent partners in the Midcoast. Once again we worked with the Maine Natural Areas Program on invasive plant assessments. We also partnered with area land trusts, including Coastal Mountains Land Trust and Midcoast Conservancy. We worked closely with the City of Belfast to enhance educational activities in the City's parks. We provided outreach and educational resources for community groups including the Belfast Free Library and the Belfast Garden Club. The District worked with area educational institutions, including RSU 71, The

Ecology Learning Center, the Waldo County Technical Center, and the UMaine Cooperative Extension. We also partnered with conservation organizations including Waldo County Trails Coalition, Knox-Lincoln Soil and Water Conservation District, the National Association of Conservation Districts, the Natural Resources Conservation Service, the Maine Forest Service, Mecklenburg Soil and Water Conservation District- Charlotte, NC, Schoodic Institute at Acadia, and Maine Audubon. In addition, we assisted the Hersey Retreat landowners group and Maine TradeHers/Hunter Green Farm LLC.

## A Community Garden and a YouTube Channel



A little over a year ago, two members of the Belfast Garden Club approached the District and talked about their vision for a Community Garden right in Belfast, one that would be accessible to people living in town that had no place to grow food. They also envisioned the garden as a place where people could learn about growing, with educational plots where some produce would be grown and donated locally. They asked for some help in getting started, and we began a process of seeking a site on public land in Belfast and getting approval for the garden.



Thanks to many community members working together, this went from an idea to a beautiful garden in a public park less than 6 months later (*bottom photo*). As it turns out, there were plenty of ways our District was able to help. We worked with the city and the Parks Commission to select a site, we tested the soil for suitability, which included assessing contaminants such as lead, and we even created a design that was used to create the garden (*top image*). One of the highlights of the design was a pollinator garden that wrapped around the food plots and which would make sure the garden looked very beautiful all season. Several Master Gardeners worked together with Garden Club volunteers, the District and Honey Petal Plants to donate and plant hundreds of flowers that feed bees, butterflies and birds. Our goal was to teach about pollinator gardening, so we labeled all the plants.

Where does YouTube come into all this? Well, as another way to use the project to teach about gardening, pollinators and eco-landscaping, we filmed a series of short videos about these topics as we worked in the Community Garden, which gave us the first content for our new District YouTube Channel... and also gave us a chance to start learning about making and sharing videos. Check out the short videos on pollinator gardening at [YouTube.com: Waldo County Soil and Water CD channel](https://www.youtube.com/channel/UCWaldCoilWaterCD).



# Conservation Land Certification

## A New Conservation Land Certification for Landowners

Sandi Cirillo has long been interested in restoring the ecosystems on her rolling property of meadows and wetlands (See her story on page 10), and has reaped her reward enjoying the wildlife that has moved in, including mink, muskrats and herons. In 2020, Sandi completed her land certification with Waldo SWCD, and her property has been designated a Certified Conservation Landscape.

Her work in 2020 was part of the rollout of our pilot Certified Conservation Land program. We began with a nationwide webinar in June through NACD (National Association of Conservation Districts), after piloting it with interested landowners. Districts around the country expressed support for the idea and were interested in our model. In 2021, we will expand the program into Knox and Lincoln Counties in collaboration with the Knox-Lincoln Soil and Water Conservation District.

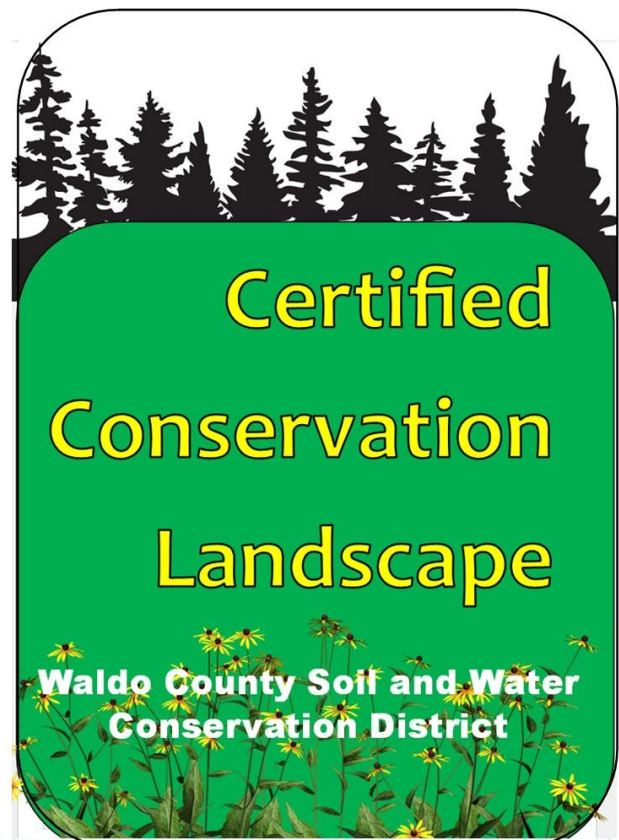
The program is based around simple, easy to use checklists which landowners can use to assess which conservation practices they are already doing on their land and which they'd like to implement, with the District providing help along the way. There is no pass or fail, people can do a few things at a time and be awarded a certification at different levels. A sign can be posted in your yard, woodland or farm when you have completed the process (sign design at right).

Our checklist is also a good way for families to explore conservation and do projects together, and can be used at schools to assess and create schoolyard habitat. Although several organizations have similar programs focused on wildlife habitat, ours is different in that it brings together all sorts of practices that SWCDs advocate beyond just habitat, also including sustainability, planting, soil and water

conservation, invasives, and resource use.

Besides a list suitable for yards and school properties, we have provided a checklist for woodland owners to use. This checklist will be especially useful for family woodlands which are managing woodlands on a smaller scale and do not need a formal, commercial level certification.

We would love to have more residents complete our certification, so please let us know if you are interested. Personalized guidance and property visits are available free of cost to interested landowners, schools, municipalities and land trusts. Please contact us if you would like to certify your property as a Conservation Landscape.





## Core Criteria for a Healthy Landscape

Below is a sampling of our land certification checklist for residential and school properties. You can certify your land whether you have a large or small property, and there are different items for each criteria depending on what type of property you have. Even if you don't plan to complete a certification with us, you can use the checklists to decide conservation practices you'd like to do on your land. The core criteria are the same for all:

### Our 5 Core Criteria

1. Provide wildlife habitat.
2. Practice soil and water conservation.
3. Control invasive species.
4. Plant for ecosystem support.
5. Implement organic practices.

For each of these, there is a list of specific things you can do. You don't need to do everything listed, but can select the items you already have or that you want to begin doing.

**For example, for Criteria 1, Provide wildlife habitat, there are many options in the residential checklist (not all items for each are shown):**

#### 1. A. Add food plants that produce:

- ◇ Seeds
- ◇ Edible berries
- ◇ Nuts
- ◇ Other fruits
- ◇ Sap

#### B. Add supplemental feeders

#### C. Grow plants that produce pollen or nectar, ideally during all months of the growing season

#### D. Provide clean water sources

#### E. Provide shelter for wildlife:

- ◇ Wooded area
- ◇ Bramble patch
- ◇ Rock pile or wall
- ◇ Roosting box
- ◇ Dense shrubs or woodland thickets
- ◇ Evergreens
- ◇ Brush or log pile
- ◇ Burrow
- ◇ Meadow
- ◇ Water garden, pond, wetland
- ◇ Amphibian house
- ◇ Stems of plants left in place in winter
- ◇ Leaf litter
- ◇ Mature trees
- ◇ Nesting boxes,
- ◇ Caterpillar host plants
- ◇ Dead trees
- ◇ Bare soil

So many options exist for implementing just the first criteria on our list! Of course, the options for woodlands look quite different, and incorporate harvest practices. Either way, our certification can be your guide.

Check out the conservation checklists at

<https://waldocountysoilandwater.org/land-certification/>.

# Conservation Land Certification

## My Thoughts on Landscape Sustainability by Sandi Cirillo

I am the proud owner of 3 acres of very diverse land and habitat in the town of Searsport. I've lived here for 7 years now and it never ceases to amaze me how Mother Nature shows me her little secrets to increase the productivity of my varying habitats. Many years back my Dad instilled a love of the land in me when I was just a young girl and that philosophy of sustaining and improving our natural environment has stayed with me all my life. He taught me many different garden "tricks" to increase productivity of the plants on my land and how to develop a symbiotic relationship with all plant, insect and animal life. I have mostly grassland, some woody areas with mature trees and two small streams on my land. Every year part of the land is bushhogged to encourage the growth of diversity in plant species. A marshy area on the property provides abundant native species to attract a great variety of birds and wildlife including deer which have used this area for the past three years as their birthing area for delivering their new fawns. I also have a few invasives which I am learning how to control through trial and error, mostly hand digging and pulling them out. In this way I have been able to control loosestrife and patches of Canada thistle in my grassland area.

I also have multiflora rose shrubs near one of my streams and through constant diligence and thoughtful planning, I have been able to get rid of some of it— although it does have a way of coming back through its underground root system and is a constant "thorn" in my side. It is extremely invasive and I am trying a new approach this year, partitioning off a smaller area of my front yard habitat and covering that area with tarps for the winter and spring to see if I can smother the roots. We'll see how this works; it is a work in progress and who knows what will result. In the past I have used a bit of Roundup to kill the roots of an invasive stand of Norway maples in my wooded area. I am confident they will not return but do not like using pesticides unless absolutely necessary for the health of the surrounding vegetation. I also encourage people who visit me to choose native species

for their gardens and sometimes offer helpful hints about the invasives I am learning slowly but surely how to conquer.

Being a lover of pollinators, I am always choosing plants that will help to keep our insects and birds happy. I have planted much milkweed and this summer/fall was the



first year since I bought this property that I finally saw monarch caterpillars on the plants. I am hoping they will return next year as I keep up my mission to provide a comfortable feeding ground for them.

This year's project will focus on getting rid of the last stand of loosestrife I have on my property by physically pulling it out by its roots, the only way to truly get rid of it for good. I am forging ahead with plans to increase my flower gardens in my backyard with native species, and planting a dyers garden filled with plants that I can use in the natural dyeing process for coloring the wool fiber I work with in creating my original fiber artwork. I think being a fiber artist who works with many natural plant materials and spends time teaching others about plant dyes has enabled me to increase my own knowledge of what is beneficial to sustain a continuity of diversified habitat and life. I am enthusiastic about wanting to protect this strong and yet sometimes fragile environment we all live in.

# Education

## Families Plant and Grow Tree Seedlings

When we had to cancel our plant sale, we thought long and hard about what we could do in place of it to get plants to people and create some kind of positive outreach about planting and growing during this difficult season. We hatched a plan to get families planting and growing tree seedlings, and since many children were at home learning, we wanted to provide activities where families could learn together about growing trees, and observing nature.

We had purchased tree seedlings with the plan to offer adaptive trees (adaptable trees perhaps suitable for growing in our area in the future). Our hope is that people will grow them and let us know how they are doing. We used these as the seedlings given to families. The trees included white oak, tulip poplar, shagbark hickory and black walnut.

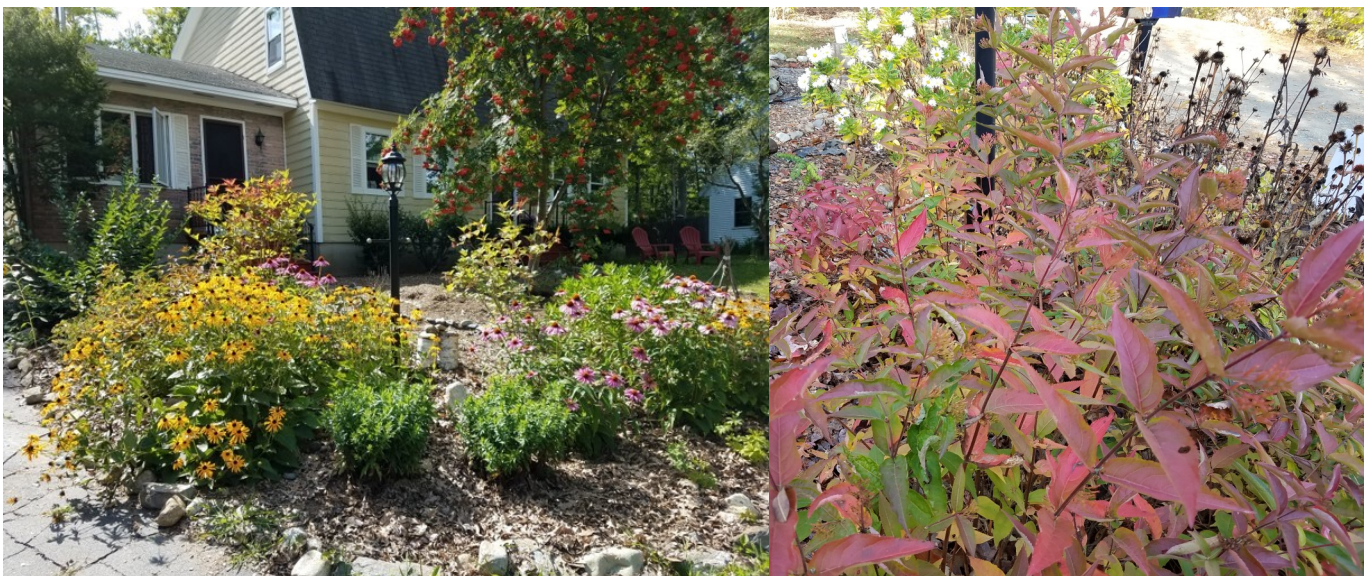
Each family received a booklet with activities to complete, and students could do things such as drawing or photographing the leaves of their tree, measuring its height twice per year, creating a picture showing its relationship with other living things, reporting data on their tree such as its health, browsing and more. The



guide included planting instructions and links to Project Learning Tree activities.

The program was a great success, with over 60 families planting 130 trees. We followed up with another giveaway of tree seedlings provided by the Maine Forest Service, which included white pine, spruce, and red maple seedlings, with more than 100 trees distributed.

*Photos below: One of our land certification participants has converted most of her front yard to a pollinator garden that includes shrubs, native perennials, a decorative water feature, pathways and rocks.*



# Conservation Assistance Program

## A New Watershed Management Plan for Lake Winnecook

In 2020 the District was approved to receive a grant from the Maine Department of Environmental Protection (Maine DEP) for \$45,508 to develop an updated Watershed-Based Management Plan (WBMP) for Lake Winnecook (Unity Pond) located in the towns of Burnham, Troy, and Unity, Maine. The purpose of the Watershed-Based Management Plan Project is to create a comprehensive plan with well-developed implementation strategies that effectively improve the water quality of the lake over the next 10 years. The project will locate and make recommendations on non-point sources of pollutants entering the waters of the watershed and Lake Winnecook. This is a two-year study and plan that will allow projects to be funded using DEP 319 funds over the next ten years.

The project will be a collaborative effort involving the Maine DEP and the Waldo County Soil and Water Conservation District working with the Center for Wildlife Studies, Friends of Lake Winnecook, the towns of Burnham, Troy, and Unity and residents of the lake watershed. These organizations and community volunteers will work together to collect a variety of data, including information about lake water quality and watershed hydrology, non-point source pollution problems, condition of septic systems, and the external and internal phosphorus load. This effort will bring together a diverse group of watershed stakeholders to develop locally-supported water quality targets and watershed goals and action strategies for restoring the pond.

The project will be administered by the Waldo County Soil and Water Conservation District. The



District has contracted with EcoInstincts as the managing environmental consultant after a competitive bid process. EcoInstincts will complete a historical water quality analysis, develop a watershed nutrient loading model and provide a management options analysis. They will provide technical leaders for the watershed survey and write the Watershed Based Management Plan. The District will assist with this effort, and will complete a survey of forest cover and agricultural use in the watershed.

The Maine Department of Environmental Protection will administer project funding, serve as the project advisor, and provide technical support. The DEP will play a large role in coordinating the watershed and septic survey and will provide technical leaders for the survey. The USDA Natural Resources Conservation Service will assist with an agricultural survey and landowner meetings. The US Environmental Protection Agency (US EPA) will provide project funding and work plan guidance.

## Conservation Corps Going Strong

Students faced a lot of changes in 2020, with the loss of in-person learning experiences perhaps being the greatest challenge they faced. In view of that, we decided to offer our field internship this year and see if we received interested applicants. It turns out that college students were very eager to keep progressing in their education, and we had many applicants. Our conservation internship is an experience in all types of outdoor work related to environmental science, resource management and agriculture, and has been a popular experience for students from Unity College and the University of Maine for years. Besides being a great way for students to build a broad skill set, it has also been a way for the District to offer many hours of conservation assistance in the field and build relationships in the community.

This year, we expanded the program, partnering with Knox-Lincoln Soil and Water Conservation District to implement the program across all three counties. This allowed our 2020 interns Alex Chaney and Sarah Louden, both from Unity College, to experience our work in two Districts and at new sites such as the Merryspring Nature Center. It was also a great way for staff members from each District to work closely together. The collaboration was a great



success, and Knox-Lincoln and Waldo SWCDs hope to partner together again on this and other programs in 2021. Alex and Sarah spent many hours mapping and collecting data on invasive plants on area farms and production forests for our Conservation Innovation Grant Program, a partnership with NRCS and the Maine Natural Areas Program. They also created buffer plantings and managed habitat demonstrations and trees in the City Park Arboretum in Belfast, collected data for our adaptive forestry research, and worked on Hunter Green Farm in Unity managing a hemp crop and learning basic farming skills such as driving a tractor, irrigation, mulching and weeding.



# Planting for a Changing World:

## Native Trees, the Future, and Assisted Migration

If you have lived south of Maine, you may already know and love some of the plants you'll see in our plant sale this year. My childhood was filled with memories of the pink flowers of redbud, and the lush tulip shaped leaves of tulip poplar (also called yellow poplar or tuliptree), and picking up black walnuts and hickory nuts to crack and eat. We would also venture to collect pawpaw fruits in the woods to eat their sweet pulp once they were good and ripe. In Maine, we have plenty of other trees we love, including oaks and pines. Some of these will continue to grow well here, and others are likely to decline. Maybe some of these southern species will become plants we love and grow here in Maine as we lose boreal species.

Our forests are changing, for many reasons, not just a warming climate but other effects including diseases and invasive insects...which are likely to get worse as the climate of Coastal Maine gets warmer. Meanwhile, those of us who love wildlife, heat our homes with wood or harvest timber want to keep the Maine forests thriving in spite of all this. This is something we can work on with a sense of hope. People all over the northern forests from Maine to Minnesota are working on new ways to help forests



to adapt. One very active area of research and practice now is studying assisted migration, or moving trees (and other species) northward to help them migrate with the changing climate. This can also help us ensure that we have a healthy population of trees that can fill roles in our ecosystems such as wildlife food sources in the future. Moreover, we need trees that can produce timber.

There are some interesting, fun tools you can use online to explore what may happen with trees, both those that grow here now and those that live further south. The Climate Change Tree Atlas, <https://www.fs.fed.us/nrs/atlas/tree/>, has maps you can click on to see trees' current ranges and where they might grow in the future. There is a simple chart at [https://forestadaptation.org/sites/default/files/NE\\_EastMaine\\_Species\\_final.pdf](https://forestadaptation.org/sites/default/files/NE_EastMaine_Species_final.pdf) where you can see some species that may be suited to being in the future forest of Maine. Scientists have used models to predict which trees might thrive and grow in Maine in the next century and the findings are summarized in the one-page chart. Some species, which are common south of Maine, appear poised to grow well here and have a lot to offer. These include walnut, hickory, tuliptrees and others.



## Native Trees and the Future, continued

We can use this information to plant now and grow for the future... and thus learn more about how well these trees might do here. Of course, we need to learn about potential effects, both positive and negative, on our ecosystems as we consider whether to plant new species here. But with the potential for losing many of our native species, we might in fact decide to introduce these species if they are viable. Our District has picked some of the potentially adaptive trees and will have seedlings available in the spring. You can let us know how the trees are doing over time, and it will be a big help in our research on adapting Maine's forests. Read on to learn about a few of these trees.



Photos: Facing page: Chestnut oak, 5 feet tall in second year of study on our research plots. Top: Sweetgum peeking out of 4 foot tree tube used to provide deer protection.

## Trees of the Future Forest



**White Oak** (*Quercus alba*) This beautiful, large, functional tree is a Maine native whose native range extends nearly to our area—thus, planting it here could be considered an experiment in range expansion. It has great potential as a tree for our area, providing high quality lumber and sweet acorns that are excellent food for wildlife. As a yard tree, white oak develops a beautiful round, spreading form and has beautiful oak leaves with rounded lobes. Planting oaks is one of the best ways to support our native butterflies and moths as hundreds of caterpillar species feed on them, and white oaks are particularly important in this respect.

**Tulip poplar, Tuliptree** (*Liriodendron tulipifera*) This tree has a very nice form both when young and when older. It is our second largest eastern tree after sycamore, growing to tremendous size in the southern US. As a yard planting, it has a symmetrical, slightly conical form, with unique, large leaves that become yellow in the fall. As it grows taller, it has a very straight, clear bole. It is a good lumber tree, is fast growing, and shows great potential to adapt and thrive in our area. Its beautiful, tulip-like flowers appeal to pollinators, and it produces small, soft seeds which provide wildlife food similar to ash trees, which are likely to die out due to the invasive insect emerald ash borer.



Continued next page

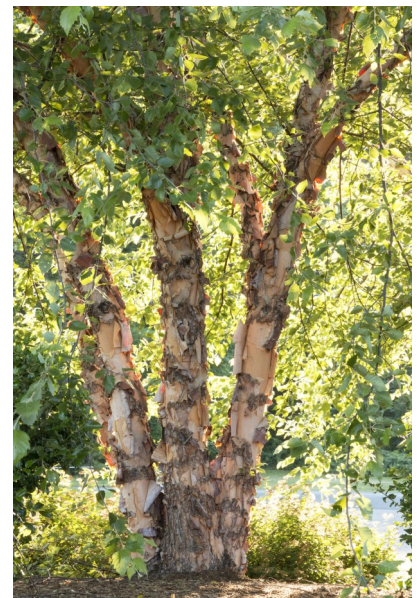
## Trees of the Future Forest continued

**Shagbark hickory** (*Carya ovata*) The bark of this tree is unique and ornamental, with gracefully curving, peeling strips. Its leaves and twigs are also attractive, and it produces very tasty, edible nuts that feed wildlife and people. With the loss of chestnuts and beechnuts, nutritious, edible nuts are an important ecosystem component that we need here. Its unique peeling bark provides important natural habitat for the bats that help us control mosquitos. Hickory wood is strong and beautiful, and is an excellent fuelwood. Hickory regenerates well after harvest from stump sprouts. It is not native to our area, but shows potential to be able to grow here and adapt to a variety of conditions. It likes to grow in dry upland sites.



**Black walnut** (*Juglans nigra*) This sturdy tree produces prolific, edible walnuts. Its lumber is highly valued, and it is also used for veneer. Although it is not native to our area, it is successfully grown here and in similar climates. It is an adaptable tree, and like hickory, has potential to provide mast (nuts) food for wildlife, to replace lost chestnut, butternut and beech nut crops...and of course walnuts are delicious and edible.

**River Birch** (*Betula nigra*) The river birch is one of our most beautiful birches, and is becoming very popular as a landscape tree. It has multiple trunks and a peeling bark that shows shades of black, grey and orange. Many scientific models predict that our native paper birch and grey birch will decline as the climate warms. Birches are an important “pioneer” species, or one that comes in quickly when there is an opening to create the first stage of a new forest. Birches also provide important food for birds and beneficial insects. River birch, a more southern species, may be suited to filling this role as other birches decline. It is adaptable and can grow in wet and dry areas.





## Our Plant Sale is Back in 2021

In March of 2020 the pandemic hit and most folks were not thinking about buying plants. No one was sure what would be safe in terms of public gatherings, and to err on the side of safety we did not want to have an event with the public being in contact with our staff, volunteers and each other, so we cancelled our plant sale. We were able to make lemonade out of lemons though, and offered a free tree seedling program for children and families with some of our purchased plants. Each family received educational activities for planting and growing a tree. Some area schools offered the program to their students. See article on page 8.



We will be doing something like this again this year, with students planting and studying trees. And anyone who purchases a tree seedling can participate in our citizen science program to help us learn about species that have potential to thrive here and help restore the forests of Maine. You can report how your trees are doing and provide valuable data. We will have some interesting species you can grow, including redbud, pawpaw, white oak, shagbark hickory, tuliptree, black walnut, blackgum and river birch. And as always, we'll also have some of the best landscaping shrubs for beauty and attracting wildlife as well as carefully selected varieties of fruit trees.

A lot has happened since last spring, and we have had time to make changes to ensure safe delivery of plants to the public in 2021. We have a fully outdoor venue for our sale, with social distancing and procedures for picking up plants to minimize close contact.

Do you need help selecting plants? We have plant ecologists and expert horticulturalists to help you select plants... just let us know what your needs are. These experts will also be available the day of our sale, April 24. Online ordering and our colorful catalog will be available on March 1st on our website, [www.waldocountysoilandwater.org](http://www.waldocountysoilandwater.org). Your purchase helps fund the District's educational and conservation programs. See the full list of plants we are offering on page 18.



## Plants Available at Our Spring Sale 2021

### Apples

Winter Banana  
Wealthy  
Ashmeads Kernel  
Goodland  
Wolf River  
Mantet  
Honeycrisp  
Martha Crab ( great eating)  
Radiant Crab (ornamental)

### Pears

Dutchess of Berry  
Comptessa Clara Frijis-Sub  
Seckel-sub

### Plums

Underwood  
Pollinator  
La Crescent

### Highbush Blueberry

Blue Ray  
Duke

### Peaches

Golden Jubilee

Elderberry

### **Landscape Plants**

#### Shrubs

Red twig dogwood  
Virginia rose  
Sweet pepperbush  
Bayberry  
Spicebush

#### Trees

Tuliptree  
Pussy willow  
Shagbark hickory  
Black walnut  
White oak  
Blackgum  
Beach plum  
River birch  
Redbud  
Pawpaw  
American chestnut  
American persimmon

Perennials A wide variety will be offered by Honey Petal Plants



Spicebush (*Lindera benzoin*)

Redosier (red twig) dogwood  
(*Cornus sericea*)

## Natural Resources Conservation Service

2020 saw the continued collaboration and partnership between the NRCS Belfast Office and the District. Whether it is meeting with citizens, hosting workshops, providing back up office help, the NRCS and the WCSWCD are true partners for the county residents and land owners

District Conservationist Ron Desrosiers noted that in this past year the office developed conservation plans for 94 farms in the county. Forty-five of them were approved for funding to aid in contract implementation for best practices for the health of agricultural and forest lands.

2021 will see the District and the Belfast Office collaborate even more in getting the word out to the county residents about their services. Through a grant from the Federal Government and the Maine Association of Conservation Districts, the farmers, forest owners and citizens of Waldo County will learn more about the programs, services, and outreach of the respective organizations. Both the citizens and the landscape will benefit for sure.

## A Special Thank You to...

A big thank you to those of you who volunteered your time and resources to our programs. We couldn't have done it without you.

**Harold Larrabee**

**Donald Cox**

**Gene Randall**

**Andy Reed**

**Sue Hunter**

**Brian Baker**

**Ron Desrosiers**

**Jorge Ortiz Montalvo**

**Cloe Chunn and David Thanhauser**

**Beverly Roxby**

**Alex Chaney**

**Sarah Loudon**

**Dr. James Killarney**

**Jack Shaida**

**Matthew Bonner**

**Ruth Huettnner**

**Carol Weymouth**

**Kevin Michaud**

**Nicole Caruso**

**Morten Moesswilde**

**Roberta Tatro**

**Rick Kersbergen**

**Waldo County Technical Center**

**Waldo County Commissioners**

**Natural Resource Conservation Service**

**Knox-Lincoln SWCD**

**Maine Department of Agriculture, Conservation & Forestry**

**Maine Forest Service**

**Maine Natural Areas Program**

**University of Maine Cooperative Extension**

**The City of Belfast Parks and Recreation Dept.**

**Belfast Bay Watershed Coalition**

**Maine Association of Conservation Districts**

**National Association of Conservation Districts**

**Maine Audubon**

**MOFGA**

**Schoodic Institute**

**Coastal Mountains Land Trust**

**Belfast Garden Club**

**Hunter Green LLC**

**Friends of Lake Winnecook**

**Honey Petal Plants - Astrid Bowlby**

## Don't miss out on our 2021 Programs:

- School yard habitat and pollinator education
- Conservation land certification
- Invasive plant management demonstration
- Conservation internships
- Conservation assistance for landowners
- Unity Pond Surveys and Planning (see pg. 12)
- Agriculture education at Maine TradeHers
- Pollinator Pathways
- Citizen Science with Report a Tree
- Field Workshops on the Future Forest
- Native plant and fruit tree sale (see pg. 17- 18)
- Fish Lead Free and LakeSmart programs

**Waldo County Soil and  
Water Conservation  
District**

46 Little River Dr.

Belfast, ME 04915

207 - 218 - 5311

855 -884 -2284 Technical  
Assistance

[waldocountysoilandwater.org](http://waldocountysoilandwater.org)

Email:

[tmullin@maineconservationdis  
tricts.com](mailto:tmullin@maineconservationdistricts.com)

## Our Mission

The District provides leadership, information, education and technical assistance to conserve, improve and sustain our natural resources through partnerships with individuals, businesses, organizations and government agencies.

You can support the District's important conservation mission in many ways. We welcome you to volunteer with us (indoors or out), provide input through joining our supervisory board, or to help through donations, which may be earmarked for specific work. Our many services in conservation assistance and education are available to all residents, land owners and organizations in Waldo County.



To:

Waldo County Soil and Water  
Conservation District  
46 Little River Drive  
Belfast, ME 04915