

Trees for Woolwich and TWEEC

(Township of Woolwich Environmental Enhancement Committee)

2020 “Hind-sight” (and a look ahead)

2020: the Year of the Numbers!

On so many levels 2020 was all about the numbers - they are going up.. or down.. or flattening. How many people can gather? How many more days of this? How many vaccines? How many jobs lost?



Fall planting with employees of Ricoh

New Format!

To make the newsletter easier to read, it is now organized with links at the bottom of each section to provide more details related to the section. Just click on the link to see more.

At Trees for Woolwich we too have looked at our numbers and they are encouraging!

33,000 Trees and Counting

2020 marked the release of the video on the tree planting efforts in Woolwich - the how and the why. Have a look on youtube - [33,000 trees and counting](#)



Benefits ascribed to urban trees include:

- Carbon sequestration
- Air pollution removal
- Air temperature reduction
- Reduced building energy use
- Absorption of ultra violet radiation
- Improved water quality
- Reduced noise
- Stormwater diversion
- Increased property value
- Improved physiological and psychological well being
- Community cohesion

Trees planted in 2020: 633

Despite a shutdown for the spring planting season, **6** plantings happened in the fall with **633** trees planted by **167** volunteer attendances. Covid protocols were put in place which made things a bit more cumbersome but we made it happen safely! **453** of the



trees came from our own tree nursery, and the rest were purchased from local nurseries. For planting locations and species [read more](#)

Bloomingtondale community center planting Sept 2020

Environmental Benefits: 1170 tonnes of carbon capture plus storm water and pollutants will be absorbed.

We have developed a model which allows us to calculate the benefit of each tree we plant. Trees sequester carbon in branches, roots and soil as they grow, as well as diverting storm water and absorbing air pollutants like ozone and fine particles. Planting trees is one way to reduce the green house gases which are causing our climate change. Benefits vary substantially from one species to another. Who knew that honey locust was the king of carbon capture while white pine sequesters less than one third of honey locust? [Click here](#) for time lines and numbers.

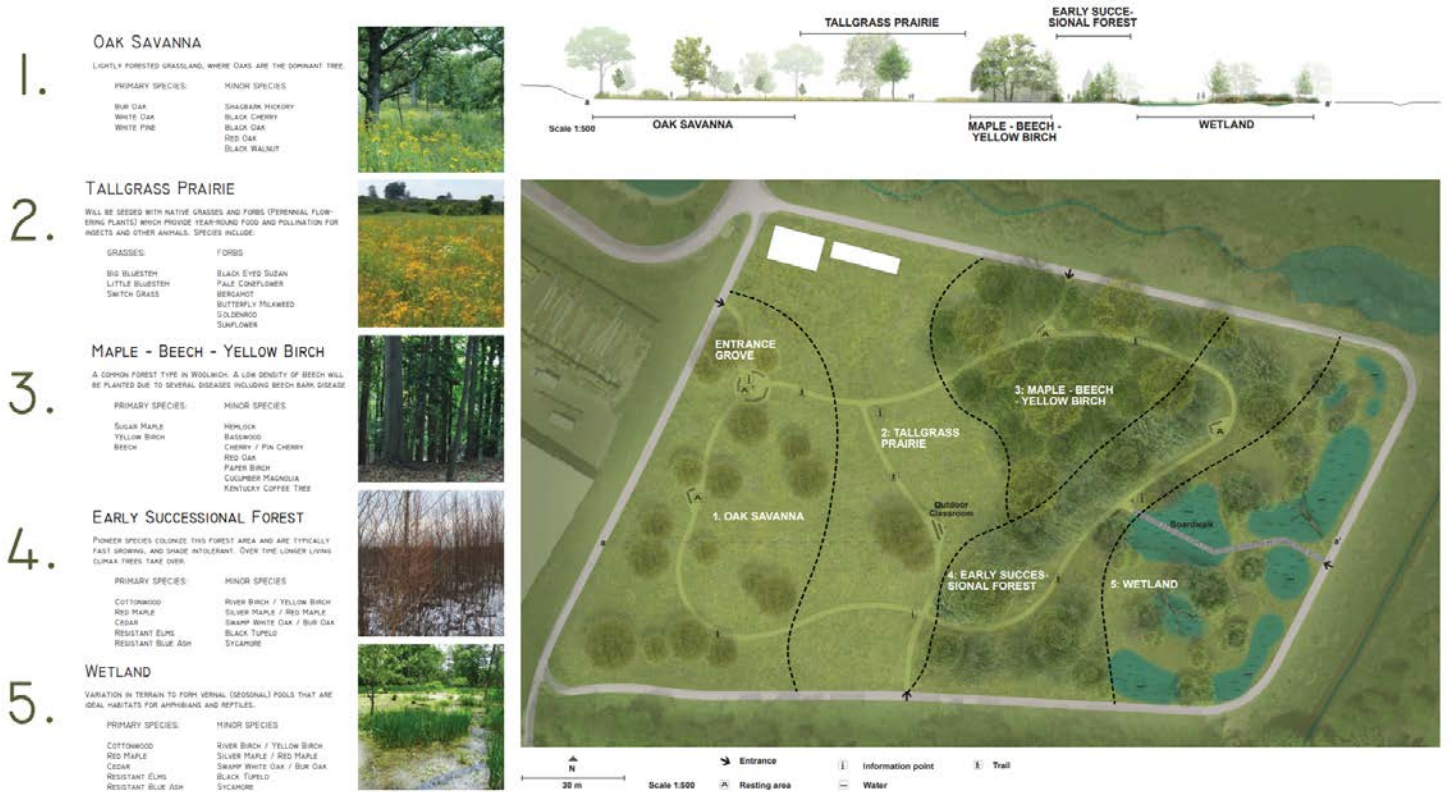
The Habitats- Our biggest Reforestation Project yet!

1200 new trees and a legacy for the community.

2020 marked the birth of our most ambitious project so far! On **6** acres of Township land, Mark Schwarz has designed a planting which will showcase **5** different native habitats. Several of these have become extremely rare due to urban development and agricultural pressures.

Situated at the south end of Elmira, off Southfield Drive beside the Lions Ring Trail, it will include the 5 habitats shown in the figure below.

This project will be developed, and the trees and grass lands planted over the next 4 years.



For maps, pictures and details [click here](#)

Tree Nursery Expands – 2077 trees



2020 saw the shade area of our nursery double in size, making room for **27** native species giving a total of **2077** trees in pots of varying sizes. **453** small trees were harvested in 2020 for use in Woolwich planting projects. The irrigation system was upgraded to support more trees and different watering cycles. [Read more](#)

Seedlings in the Classroom - a Covid casualty for 2020

In February 2020 TWEEC volunteers prepared 34 seed trays with soil mix and seed that has been sprouted (“scarified” is the technical lingo) ready for planting. These were distributed to enthusiastic classrooms around the Township, where the children in grades 4 and 5 planted and tended the seeds. Sadly Covid intervened... [read more](#)

Top 6 carbon sequestering trees in our region

Ranking at 40 years old

- Honey Locust
- Paper Birch
- Ohio Buckeye
- Black Cherry
- Swamp White Oak
- Black Walnut

Saving Trees – 665 trees pruned



In addition to planting trees it is important to ensure the viability of the trees we already have, or recently planted. Pruning, mulching and watering are vital!

[Read more](#)

Greening Woolwich Businesses- first business onboard

In the fall of 2020 we initiated a program to assist Woolwich industries to green up their properties. This program will provide expert planting plans, trees and planting help to businesses. The businesses can benefit in a number of ways at the same time as helping the community increase its tree cover.

We recognize **Lanxess** as the first industry to get involved! They want to plant trees on a piece of land on Arthur St. S. in Elmira, which is now an unused patch of grass. Keep your eye out for the planting coming this spring.

For all the details on how the program works [click here](#)

We Couldn't Do It Without You! Lots of Appreciation!

All of this would not be possible without the enthusiastic support of many people and organizations. **1200** volunteer hours went into planting and planning alone! In addition to community volunteers, we had employees from Ricoh and Enviro Stewards donate a half day of their time to planting.

Many more hours went into the nursery and pruning programs.

Premier Rentals, Earthscape Landscaping and Dennis Martin of Winterose Farm and councilor Larry Martin provided equipment to make the labour a bit easier.

The Grand River Conservation Authority (GRCA), through Meghan Clay, is an ongoing support, providing both expert advice and financial resources.

The Township of Woolwich, through Ann Roberts, the ever conscientious Environmental Coordinator, continues to support our efforts in so many ways.

This year we have had an increase in donations from the community, private citizens who recognize the importance of this work. Every tree counts and every dollar helps! We have made donations easier by linking with [Canada Helps](#). (Just choose "Trees for Woolwich")

Thanks to all who gave of their time, talents and resources!

Want to get Involved? It's very satisfying!

This year there will be lots of opportunities to get involved!

- training in tree pruning and inventory
- tree planting
- tree watering
- helping tend the nursery
- help with promotion and organization.

We have an outlet for every talent! Just get in touch with Ann Roberts aroberts@woolwich.ca 519 514 7027 or Inga Rinne irinne@sentex.ca or 519 212 1352.

We guarantee a sense of satisfaction!

2020 Plantings

A summary of our tree planting events is below.

Tree Planting Location	# volunteers	# Trees and Shrubs Planted
Southpark Woods	45	155
Cribit Seeds property	9	32
Bloomindale park	25	61
Doug Knetchel Farm	20	147
Durant Road	3	12
Lions park	17	54
Living Snow fence	13	80
Adjacent to the tree nursery	10	50

This year **33** different native species were included in our plantings. Okay, there was only **1** Bitternut and **2** disease resistant elms but it included **62** white pine, **133** white spruce as well as some Carolinian species such as Kentucky coffee tree and Redbud. These Carolinian trees are at the north end of their range but as our climate changes and winters get milder they will become more numerous in our area. [Back to top](#)

Environmental benefits from the 2020 planting

The trees planted in 2020 alone will capture **450** tonnes of carbon dioxide, divert **2.9** million litres of stormwater, and absorb **4.4** tonnes of pollutants from the air over the next 40 years. If we look at the 80 year time frame the numbers are exponentially better. By then **1604** tonnes of carbon dioxide will be captured, over **11** million litres of stormwater diverted and over **19** tonnes of pollutants absorbed.

Obviously this carbon capture takes time but it demonstrates the importance of continuing to plant in order to get cumulative benefit.

Climate Action Waterloo Region has calculated the carbon output of Woolwich Township operations in 2017 at **1864.7** tonnes/year. 80 years from now this year's planting alone will have sequestered **86%** of the current annual carbon footprint of the township operations.

Conclusion: If we plant this many trees every year for the next **40** years the township would be well on its way to being carbon neutral! To be fair we actually need to plant extra because not every tree survives and we can't afford to wait **80** years. We are in this for the long haul though! Other carbon reduction strategies are needed, we can't rely on trees alone.

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Habitats Project

Preparation started for this project in 2019 with activities to get the weeds under control. (Thanks to our long time farmer and volunteer Dennis Martin.) We chose tilling and planting rye grass and clover to choke out the weeds.



Site Location east of Union St and south of Southfield Drive by the Lion's Ring Trail



Here is the starting point – an open meadow that was previously farmed.

For many people a tree is a tree, without realizing that trees are part of a community too- a unique collection of plants and creatures that create a mutually supportive environment which allows them to thrive. So in the Habitats you will see 5 different plant communities. Within those are some species that have been all but wiped out here.

This area once had abundant population of huge elms which were obliterated by Dutch Elm disease. Years of work and research have now bred a disease resistant elm which we will feature along with some Carolinian species, which are at the north end of their range here. With climate change and warmer weather moving north, our area is their natural habitat. For example the tulip tree with gorgeous yellow blossom and the Kentucky coffee tree will do well here.



Mature elm tree



Tulip tree blossom

Historically Significant Tree Species

In the mid 1880's there was a tree census done in our township and every tree type which was catalogued then will be included in our habitats. In all there will be over 30 species planted, for a total of about 1200 trees and a nod to our natural heritage.

This fall **2** acres of tall grass prairie were seeded and **50** sample trees were planted and armed with tree guards to keep hungry rodents at bay. It will take about 3 years for the prairie to develop its deep roots and flower but come and see the beginnings this summer. Plantings this spring will include the oak savannah area and the maple beech forest.

Our goal in creating this is 4 fold:

1. To increase the tree cover in accordance with the goal adopted by council in early 2019 to increase the tree cover in Elmira from 16 to 30% for all the good reasons you already know.
2. To provide a recreational green space for the township. Covid has brought home to all of us as never before the importance of people having access to green space and some of the conflicts that occur when spaces get crowded.
3. To inform people about the varying habitats and incredible biodiversity which can exist in natural areas. There will be paths through the different areas with some signage to help people understand what they are seeing. Benches and a shelter for an outdoor classroom will further enhance the area.

4. To assist with the carbon reduction to which the township has committed itself. We now have a model that lets us calculate the impact of every planting, tree by tree. This project alone will capture **1170 tonnes** of carbon over 40 years, divert **6.8 million litres** of rainwater runoff and remove **6 thousand kg** of pollutants from the air. [Back to top](#)

Tree Nursery

The nursery has been gradually expanding since its inception 10 years ago. Our expertise, under the direction of volunteer John Mathers, has been growing with each positive and negative experience. Winter animal predation has been a big issue. The mice and voles like to burrow into the soil and munch away on the roots. To discourage this, the trees are wrapped up in nice white blankets of plastic in the fall. In addition to discouraging animals, it reduces the extent to which the trees are dried out in the winter by wind.

In 2019 we abandoned the trench system where all the pots were lined up in trenches. The area of the nursery was doubled and the expansion area covered in landscape fabric with the pots lined up on top of it. Then the trenches were smoothed out and that area covered in cloth as well. Now we have lots of room.

2020 also saw the expansion of the automated solar powered watering system for the nursery, designed by volunteer Matt Cowan. We can now set timers to water **6** different areas independently depending on the needs of particular trees. With no power available, ingenuity came to the fore to create a solar option. Hand watering 2000 trees was simply not feasible! This system has saved many hours of volunteer time required to open and close and monitor the valves for the irrigation systems.



Solar powered pumps, valves and timers for irrigation circuits

In the spring the recently purchased hoop house will be assembled and it will give the delicate seedlings better shelter and a faster start in the spring.

A big thanks goes out to John Mathers who has devoted many hours to making the nursery the success that it is.

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Seedlings in the Classroom

Participating schools in 2020 were:

- Riverside
- St Jacobs
- John Mahood
- St Teresa
- Floradale
- Breslau

The plan was to have the seedlings return to the nursery in May in order to continue their life at the nursery until they were big enough to plant out. Like so many other plans, Covid interfered! The schools were shut down but some schools were very creative. At Floradale school, a teacher and the principal took seed trays home and nursed them along. At Breslau a devoted janitor saw to it that the seedlings were watered. Sadly many others perished from lack of water so far fewer seedlings were returned to the nursery this year.

High hopes for 2021! If the schools are reopened seed trays will be ready to go. If not (and we have learned it pays to have a Plan B). Plan B is to expand our **Fostering Future Forests** program. This is a home based program where “foster parents” take 1 or more trays of seedlings to their home and tend them over the spring and summer. If you would like to be a foster parent please contact John Mathers 519 669-9089 Jmathers127@gmail.com.
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Tending young trees at the nursery under the new shade structure

Saving the Trees We Have

For 2 years TWEEC has offered a 3 session tree pruning seminar where a certified arborist trains volunteers to recognize structural problems which will limit a tree's life. From rubbing branches to double leaders to poor structure - all these things can often be remedied and you can practically hear the tree sigh with relief! The township hired a junior arborist who oversaw the program and volunteers pruned **665** trees and mulched **80** trees. No aerial work here as it was all done from the ground!

Stay tuned! Training will be offered in spring 2021. Let us know if you would like to get involved in this satisfying task. You'll never look at a tree the same way again!

Beat back the Weeds!



St Jacobs Mennonite Church youth volunteered their time to cut back the grass and weeds from small trees newly planted along the Kissing Bridge Trail. Remulching those trees also helps to keep competition down. A conscientious crew for sure!

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Maintenance is less sexy than planting but every bit as important. The Southpark Woods Stewards under the leadership of Audrey Gleeson worked hard last spring to keep the highly invasive weed, garlic mustard, under control in Southpark Woods. The removal of 1000 dead ash trees opened up the canopy and allows invasive species to flourish. Hand pulling garlic mustard will be an ongoing job for several years until the canopy recovers. It is also very satisfying to see the piles accumulate!



Identifying Garlic Mustard

Tree Inventory

In 2019 we began a tree inventory program which identifies the species, and uses specific criteria to assess the health of a tree. This information should let us anticipate which trees will need replacement or more specialized care. In 2020 **427** trees were inventoried. Progress will be contingent on recruiting volunteers to continue the work.

Educating Homeowners

As trees were pruned, adjoining homeowners were provided with door hangers, to tell them about the tree care and help homeowners understand how to properly mulch trees and encourage the watering of newly planted trees. If everyone takes pride in the survival of their street trees we can look forward to lushly shaded streets!



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Greening Woolwich Businesses

Trees at your Workplace



Have you thought about the benefits that trees could provide your business environment? The **"Greening Woolwich Businesses"** program is an initiative of **Trees for Woolwich** which will work with businesses to develop a plan and plant a number of trees on your premises.

Trees for Woolwich is a volunteer organization whose encouragement and participation has resulted in over 34000 new trees in Woolwich Township. Increased tree cover has environmental, financial and social benefits for everyone in our community. You can help. Every tree counts!

Trees can reap benefits for your business.

- Moderate the temperature around your premises, and provide shade and screening resulting in lower heating and cooling costs
- Get your employees involved. Planting can be a great team building experience
- Create areas where workers can enjoy lunch or a break
- Shade asphalt to improve its longevity
- Provide cost effective means of enhancing your company image and property value
- Give a clear demonstration that your business is community minded and thinking of the future



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How does the “Greening Woolwich Businesses” Initiative Work

Trees for Woolwich will manage the planning and execution of tree planting. We will:

- Discuss your goals and budget with you
- Have qualified experts create a planting plan specific to your site and goals
- Provide you with a report on the environmental benefits of your planting, including carbon sequestration, water runoff and energy savings
- Source trees at wholesale cost – a 50% saving
- Manage logistics of planting - order and have the trees and mulch delivered for planting day
- Facilitate the planting day event with experienced volunteer planters to lead, and provide all necessary equipment

Commitment from Your Business

- Pay the wholesale cost of the trees
- Provide some planting volunteers to assist with the planting
- Undertake maintenance, primarily watering for a 2 year period. Frequency depends on site and weather conditions.

Take the Next Step.

Let’s talk about how we can get together to benefit your property, employees, community and the environment, and work towards a planting plan for 2021.

Contact: Mark Schwarz mark@earthscapeplay.com with questions or to get started



This initiative is supported by the Township of Woolwich

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