# Trees for Woolwich and TWEEC

**(Township of Woolwich Environmental Enhancement Committee)**

## 2021: Our Achievements and our Plans

### 2021: Pandemic drags on but we march forward

While our healthcare system struggled, our greening initiatives may have benefited from the fact that our volunteers had limited other activities available to them! 2021 was a banner year with a record number of trees planted and marked the first year we saw some really big trees planted with machines, lots of smaller ones continued to be hand planted.

*St Jacobs Mennonite Church planting at Bloomingdale planting*


*Spading trees in at the Nature Reserve*

## We're Movin' on Up! Progress in 2021

**20** planting events were organized, starting April 30 and going all the way to December 10th! (yes you can plant in December if the frost holds off) with a total of **5047 trees** planted. Additionally, the GRCA planted 8915 around the township and the Elmira Lions planted 110. The Township replaced 117 and planted 21 new street trees for a grand total of **14,093**! This brings our total count of trees planted in Woolwich to **48,755** since we started in 2011. And our biggest year ever!

## What Got Planted? The right Tree in the Right Place- we hope

Every planting site has unique soil conditions, drainage, stresses from predators or mowers and string trimmers. Dutch Elm disease and Emerald Ash borer have taught us the dangers of monoculture. Ecologists and experience have shown us the need for diversity to support local wildlife and create a sustainable ecosystem. Trees, native to the area, have a much higher survival rate and support far more diverse wildlife. So we try to plant what will survive in that spot whether a park, a forest or a roadside. Diversity is the key!

This year 39 different species were planted. Some are the familiar maple, pine, black walnut and cedar. Our Covid Heroes Grove in the Nature Reserve houses a variety of native flowering shrubs such as dogwood, serviceberry and nannyberry. Bitternut Park is now, fittingly, the home to some bitternut trees and disease resistant elm.

In recognition of changing climate patterns, some trees that are at the far northern end of their range were also included in our plantings - Carolinian species such as PawPaw, Tulip tree Eastern Redbud and Kentucky Coffee tree.

Tulip Tree

Paw Paw

Eastern Redbud

Kentucky Coffee Tree

The size of trees planted was also very diverse. From 20 cm tall seedlings, planted with one shovel thrust, to 8 metre high giants spaded in with big equipment and experienced crew donated by Earthscape Landscaping. So… some plantings are an exercise in patience and anticipation, while a few create “instant forest”.

The size of tree depends on the site, availability and, of course, on the budget. The bigger the tree, the more care they need! 450 of the trees planted came from our very own tree nursery which is managed by volunteer John Mathers with help from many volunteers. Jump to nursery report

## **Who planted?** Lots of people

A whole cross section of the community got involved. We have our regular committed group of volunteers but each year more people join the ranks and more organizations reach out to help. The Maryhill/Ariss Lions Club joined us in honour of the 100th anniversary of Lions. Neighbours came out to plant in Bitternut and Crane Park in Elmira, and the Stevanus farm in Bloomingdale. 2600 seedlings were planted by a professional crew along the Health Valley Trail in St Jacobs. The youth group, Wild Outside, joined us at Bolender Park. Our MP Tim Louis and his daughter came out to help at the nature reserve, too.

*Tim and Brooklyn dig in*

*Audrey Gleeson and Matt Cowan protecting each tree from deer and bunnies*

This year some local companies stepped up to the challenge and with support from us, provided some shade on their own properties. **Toyota Boshoku** employees and our volunteers added 40 trees.

*Toyota Boshoku employees get a tree planting lesson*

**Lanxess** had 25 trees planted on the east side of Arthur St in front of the old pumping station. **Google** provided a team to help plant the Covid Heroes grove in the Nature Reserve in September.

**The Township of Woolwich** spread out the planting pleasure by giving away 680 free trees to any Woolwich resident who showed up at the Memorial Centre over 2 days in the fall. Urban property owners got 1 tree and rural residents got 3. They came from all over the township!

This summer we were fortunate to have lots of help from 3 students (hereinafter referred to as "The Boyz") hired by **Earthscape** to spend some of their time planting, mowing and watering….so much watering! Mousa, Kaden and Ali, under the direction of Mark Schwarz, provided so many hours. See more on Mark and his Boyz

## **Where** were they planted?

It is often a challenge to find planting sites. This year sites were located in or near St Jacobs, Elmira, Winterbourne, Maryhill, Conestogo, and Bloomingdale. We are very committed to the survival of our trees and in the present climate new trees need at least 2 years of watering (and possibly weeding) in order to get a decent survival rate. Our plans are often constrained by finding the resources (people) to water. Credit goes to John Osbourne, the neighbour who agreed to water the Crane Park trees and the consortium of neighbours who are watering at Bitternut Park.

*Neighbours planting in Bitternut Park*

**A Note of Caution:** While we are planting more trees than ever, we do need to realize that we also lose many trees each year. The emerald ash borer has resulted in the loss of thousands; Mother Nature takes some down; development, both urban and rural, takes their toll. Bottom line is you need to plant a lot of trees to increase canopy cover.

## **Why** did we plant?

- Trees eat greenhouse gasses that cause climate change – for breakfast
  Carbon capture for our 5047 trees equals 2286 tonnes after 40 years and 9060 after 80 years. That is the equivalent of taking 496 cars off the road in 40 years and 1969 cars in 80 years. Detailed report of environmental benefits

- Trees boost our mental health while raising our physical health

- Trees clean the air so we can breathe more easily.
  This years plantings will capture 28 tonnes of pollutants over 40 years and 130 tonnes after 80 years Detailed report of environmental benefits

- Trees give a home to the wildlife we love
- Trees cool down your life, and could even save it
- Trees filter your water, making your drinking supply cleaner and more reliable
- Trees help save energy by screening wind in winter and shading in the summer
- Trees prevent our soil from blowing into the next county


*Lundy Road in 2006*
*before roadside planting*


*Lundy Road 14 years later*
*in 2020 showing healthy*
*tree growth*

# Big New Venture- Elmira Nature Reserve


The goal of the nature reserve is to rehabilitate 67 acres into ecosystems that existed here

before settlement, and provide natural space within walking distance of Elmira. This takes Trees for Woolwich to a whole new plane from trees to ecosystems.

In 2020 we had embarked on our biggest restoration project to date, with the 6 acre Habitats plan, designed to showcase 5 different native habitats. It quickly became obvious, at least to Mark Schwarz, who had designed the Habitats, that there were far greater opportunities in the surrounding land.

In April 2021 Township Council gave approval for a 67 acre Elmira Nature Reserve. This land includes the Habitats and so much more! Our dreams had just ballooned and 2021 was a year of tremendous progress. Little did we know the complexities of restoring the ecology of an area which had been part of a farm (and part of a swamp) and then abandoned for many years. Tremendous potential and tremendous work!

Under the direction of project manager Mark Schwarz, a man known for his indefatigable energy and boundless enthusiasm, much was accomplished.

## Nature Reserve Impact Summary

- 565 trees planted by volunteers- mulch and guards installed. 90 trees, 20-30 ft. tall, spaded in
- Increased carbon capture, flood control and air pollution reduction as per detailed report Read more about Environmental Benefits
- Active watering to achieve 96% survival rate for trees- hurrah!
- Invasive species control- buckthorn and phragmites reduced and biodiversity increased
- Informational signage created and installed
- Tall grass prairie weeded and mown
- New paths mowed to improve public access
- approximately 1100 hours of volunteer time to plan and execute all this
- Public use of Nature Reserve for recreation tripled from previous year
- Total budget for 2021 was $22,600. Much labour and machinery was donated by Earthscape with some assistance from Conestoga Contracting.

## **Rehabilitation:** It's not just about planting - it's about maintenance and the war on invasive weeds**.**

This land was not a blank slate. Formerly, cattle grazed in the woods, a field had grown corn, and

storm water pond construction had reworked the landscape and drainage. Then the land lay untended for years. As a result the field became a giant weed bed and invasive species infested the area. Phragmites proliferated in the wet areas and European buckthorn took hold in the wooded areas with a vengeance. Both these species, left unchecked, will expand to the exclusion of all other native species, creating a foreign monoculture which provides little benefit to native wildlife and is so dense human access is excluded.

## Invasive Plants

In order to create a sustainable ecosystem the invasives had to be removed. Numerous methods were used depending on the site and the size of the infestation. In the nature reserve we are dealing with Phragmites, Buckthorn, and Manitoba Maples (which invaded Ontario from the Prairies)

Phragmites is recognized as a tall reed with a fluffy seed head. It grows prolifically in wet areas, and out competes native species. The only viable means of eliminating phragmites is cutting and spraying with herbicide. We discovered that digging the plants only encourages its spread.

*Phragmites*

Read more on how we are managing buckthorn

European Buckthorn came originally from Europe, and has proliferated on the edges of agricultural land. It can be controlled mechanically and chemically – smaller trees can be pulled by hand with a buckthorn puller – this is hard work but rewarding. We were assisted in this by the students from the Canadian Wildlife Federation' "Wild Outside" program, and the ELAWS students from Elmira District Secondary School.

*Buckthorn thicket with no native undergrowth*

*Hand pulling Buckthorn*

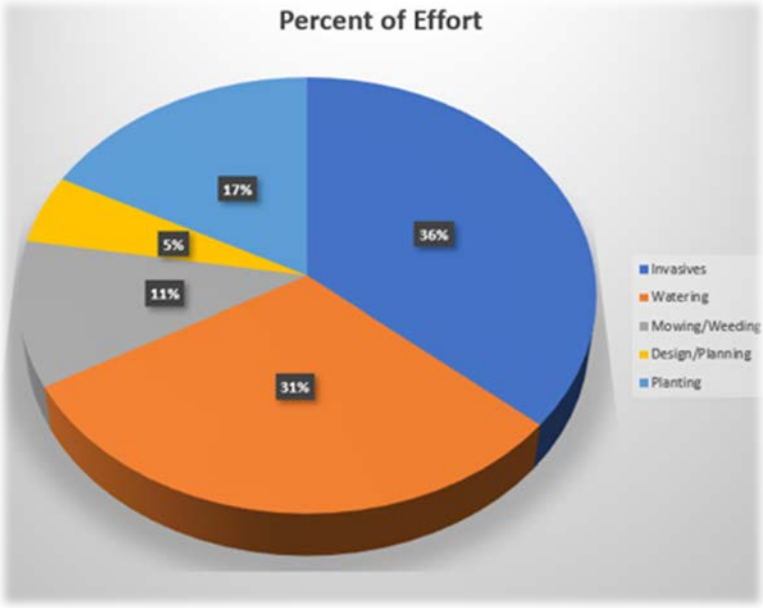
Bigger buckthorn called for bigger solutions. With the use of a forest mulcher,Mark, Earthscape crew and volunteers cleared almost 13 acres that had been reduced to nothing but buckthorn. Video Forest Mulcher at work

In 2022, 2000 native trees will be planted to reforest the buckthorn area. Battling regrowth from old buckthorn seeds will be an ongoing challenge for several years.

## Watering and Pruning

There is no point in planting trees that don't survive. In our present climate, summer drought makes it imperative that newly planted trees are watered for at least 2 seasons. Watering frequency depends on the soil and the weather. The 450 trees planted in the Habitats area where the soil is sandy needed water twice a week during dry periods. It took 2 workers 12 hours per week to water this summer using fire hose. A huge commitment which couldn't have happened without the contribution of some fit and dedicated volunteers led by Mark Schwarz and the Boyz. That diligence led to a 96 percent survival rate by the end of the season.

### Here is how the work in the Nature Reserve shook out




Not sure where removing beaver dams which were flooding our land came into this breakdown.

# Tree Nursery

As the supply of trees becomes tighter and tighter our tree nursery looks ever more important. This year's upgrade was the new hoop house. This will shelter germinating seeds and seedlings in the spring, out of reach of that unexpected frost, and will extend growing time in the fall.


*New hoop house (green house) for extended growing capability*

459 nursery trees were planted out in various locations this year. Thanks to additions from seeds collected and now growing, as well as the Seedlings in the Classroom program, and some donations, we now have about 3000 trees , 34 different species, quietly sleeping in the nursery. Spring will tell us how good our survival rate is. Frost takes its toll but hungry rodents do more damage!

*Now I lay me down to sleep!*

*All tucked in for the winter – safe from rodents*

# Seedlings in the Classroom…and beyond

After being shut out by covid in 2020, the program was able to function on a limited basis in 2021. John Mahood and Riverside schools participated. The children planted bur, red, and chinquapin oak acorns in seed trays which we provided at the end of February. They then lovingly tended them until May when they came out to the nursery where keen volunteers potted them up.

*Pupils watering their acorns with eye droppers*

The seniors at Chartwell Homes also tended several trays of Oak seedlings.
See news coverage on seniors Partly as a nod to covid, several seed trays of birch, hickory cedar, spruce and white pine were entrusted to “foster families” who faithfully watered and watched over the trays before returning them to the nursery in the fall. All this helps to increase our tree stock from local seed.

# Donations Fund our Work

As much as volunteers put in many hours of labour, financial resources are needed to make this work happen. We are fortunate that businesses, organizations and individuals have joined us to support the increase in canopy growth and the habitat restoration.

- **Earthscape**, **Toyota-Boshoku** and **Lanxess** as founding partners have all continued their multi year funding which makes future planning so much more realistic.
- **Trillium Insurance** made a donation to us as part of their carbon reduction strategy.
- A **new** corporate donor, **Wallenstein Feed**, got their employees involved in choosing us a recipient and we hope to see some of them out at the planting of pines and elms along the entranceway to the nature reserve this spring.
- **Erb Street Mennonite Church** has provided funds from their solar power revenue to increase tree planting.
- In kind equipment donations make our work so much easier. **Earthscape**, **Conestoga Contracting** and **Premier Equipment** have stepped up to help.
- The Township of Woolwich provides the unfailing work of Ann Roberts to support our efforts, as well as the watering for some of the parks and giving away trees.
- The **Region of Waterloo** has been a generous supporter over the years and lends us the expertise of **Albert Hovingh**, their environmental planner.
- The **Grand River Conservation Authority** continues to provide both valuable expertise and funds.

# What's new for 2022!

## Roadsides

Public land is scarce in Woolwich, but we sure have lots of rural township roadsides- 335 km of them to be precise. Roadside plantings have a checkered history in Ontario but they go back to 1863 when Ontario enacted legislation *'An Act to encourage the planting of trees upon the highways in this Province, and to give a right of property in such trees to the owners of the soil adjacent to such highways.'* While subsequently repealed, successor legislation granted landowners a 24 cent bonus (half paid by the municipality half by the province) for every tree planted along the road which survived 5 years. read more on the history

Many of the towering maples which grace our roadsides were thanks to incentives like this, but sadly many have succumbed to age, development and neglect. In 2022 several landowners along Floradale Rd and one on Lerch Rd have agreed to partner with Trees for Woolwich to begin to replant some of our lost roadside canopy.

Back in 2006 before Trees for Woolwich existed, TWEEC did the first roadside planting on Lundy Road in Winterbourne. These before and after shots give us a chance to see the potential. Much credit for the success of that planting goes to neighbour, Dennis Martin, who watered and pruned.



*Lundy Road 14 years later*

## **Nature Reserve** … the work continues

Big plans for the big property this year!

# ELMIRA NATURE RESERVE

Trees for Woolwich

## CAROLINIAN FOREST WALK

Carolinian Forest is a highly biodiverse deciduous forest stretching from the Carolinas to southern Ontario. The Carolinian forest zones ends south of here near London, but climatic changes mean that many Carolinian species are now establishing themselves northward in Woolwich.

Key indicator tree species include Tulip Tree, Sassafras, Sweet Chestnut, Bitternut Hickory, Swamp White Oak, American Sycamore, and Walnut. All these species can be found along the Forest Walk - see if you can find them!




Because of the high fertility of this forest type, much of the original habitat has been developed and populated. Forest cover has been reduced from 80% to 11%, and the habitat has been fragmented. Invasive species such as buckthorn and phragamites threaten many of the remaining Carolinian species.

Over one third of the 350 threatened or endangered species in Canada live primarily in the Carolinian zone. Some of the animal species you can expect to find here are Opossum, Red Bellied Woodpecker, and Eastern Hognose Snake.

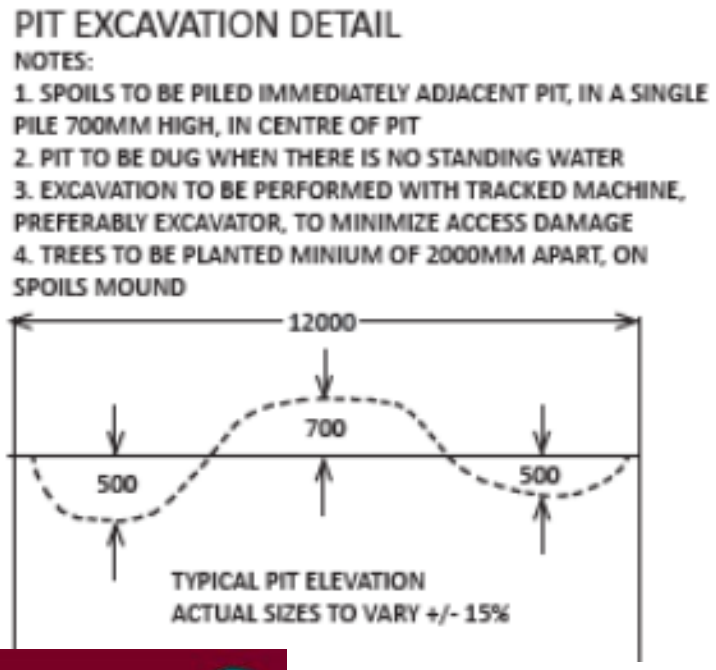
The good news is that forest cover is making a comeback. Forest cover in Southern Ontario has doubled from its low point of 11% in the early 1900's. The Elmira Nature Reserve is one example of this progress. Most of this Reserve was formerly marginal farmland, and is now returning to its pre-development forested state.

The mission of Trees for Woolwich mission is to restore tree cover in the Township to 30%. Restoring habitat will bring many of these species back to our region



# Waterside Walk Restoration

There is no rest for the enthusiastic. Work started promptly in January of 2022 when Earthscape brought in an excavator to enhance our wetland with a pit and mound construction. The pits that are created will encourage more water to remain and provide habitat for amphibians. The mounds will be refuges for trees which might otherwise be flooded out.




## Elsewhere on the Reserve

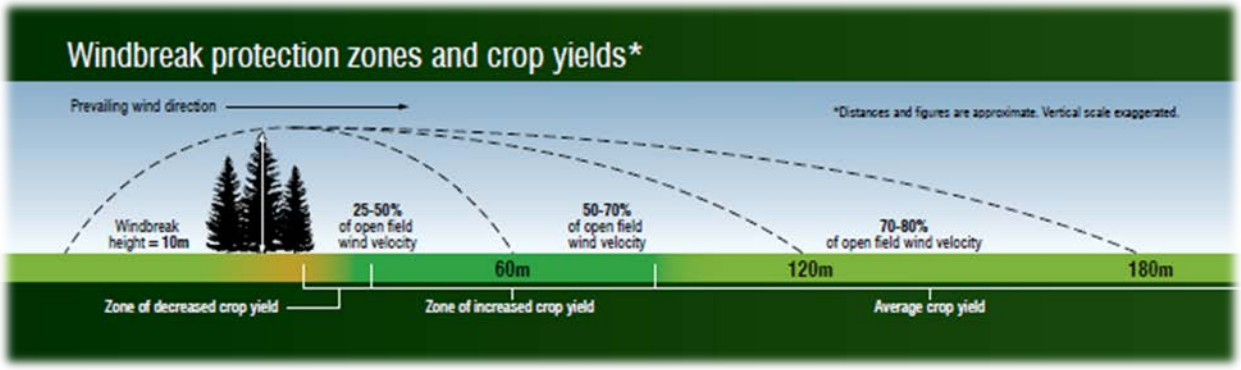
- With the help of volunteers and Mark's summer students, about 2000 trees will be planted to fill in some of the holes left by the buckthorn removal and increase the species diversity in varying habitats.
- Allees of pine and elm will be planted to mark both reserve entrances
- Last year's trees will require another season of watering, paths need mowing and new informational signs will pop up.
- The war on invasives will continue until we are victorious!

## Parks

We hope to increase the canopy cover on 2 more Elmira Parks this summer, Bristow Creek and Ann Street Park. Planting plans are in the works, but keeping the trees alive with regular watering is key. Crane and Bitternut Parks, which were planted last year, are being tended by neighbours who have rotated watering by attaching our hoses to their outside taps. This year we are looking for neighbourhood partners for Ann St and Bristow. If this is your neighbourhood and you would like to make trees happen please get in touch.

## Windbreaks

We will assist several farmers who have made the commitment to plant windbreaks on their land to help reduce erosion and to alleviate wind damage and create more uniform snow coverage on a field. Routinely evergreens, pine and spruce are used to form a screen of trees for this purpose.




*Credit: Grand River Conservation Authority*

## More Pruning

For several years, we trained teams of volunteer pruners to care for the smaller street trees. Careful pruning will extend a trees health and therefore life expectancy and mulching protects them. It also helps to ensure safety and sight lines on the roads and sidewalks. Assisted by Mark Bauman who was hired to do some of the larger trees, all the urban trees had been pruned by 2021. So… we are back to the beginning. The trees that were pruned back in 2019 will be reviewed this year and many will require some pruning. This is all in an effort to preserve the tree canopy we already have.

## Lots of Ways to Help!

Time and Effort

All of this would not be possible without the enthusiastic support of many people and organizations. Planting, watering, mowing, potting up seedlings are all labour intensive and many hands make for…lighter work. Heavy equipment like mowers, tractors and skid steers accomplished much that shovels never could. Corporate equipment was provided by Earthscape and Conestoga Contracting, and along with Matt Cowan on his brand new tractor☺, and the ever faithful Dennis Martin, with his more experienced tractor, much was accomplished.

This year there will be lots of opportunities to get involved as a volunteer

- training in tree pruning
- tree planting
- tree watering
- helping tend the nursery
- help with promotion and organization. Can you help with newsletters of social media?

We have an outlet for every talent! Just get in touch with:

Ann Roberts aroberts@woolwich.ca 519- 514 -7027 or

Inga Rinne inga@rinne.ca 519- 212 -1352.

We guarantee a sense of satisfaction!

## Donations: Yes Please!

We have made donations easier with our link to Canada Helps (just insert Trees for Woolwich). Many new donors have joined us this year. Some have been very creative!

Rachel Babor of **Inner Compass Yoga Studio** in Elmira got 2022 off to a great start by raising $2000 for Trees for Woolwich by offering online yoga classes in return for a donation. People from all over the country jumped on board.

The hiking group, Limestone Ladies, banded together to donate trees in memory of their friend, Sarah Bradshaw.

*Rachel and her daughter Meadow*

Ever more individuals have appreciated the importance and urgency of this work as climate change, or just enjoy the beauty of trees. Whatever the reason, thank you for joining the team! Hope to see many of you in the spring!

***Newsletter written and edited by Inga Rinne and Matt Cowan***

# Carbon Capture and Long Term Environmental Benefits
# Tree Planting in 2021

In 2021, 3631 trees were planted in Woolwich Township. These ranged from small plantings of 12 trees to larger ones with 500. 42 species were planted, ranging from large trees like oak, maple, elm and hickory to smaller ones like dogwood and service berry.

Trees for Woolwich calculates the environmental benefits from its tree plantings, looking at tonnes of CO2 sequestered, kilograms of air pollutants absorbed by the trees and litres of stormwater absorbed. The benefits are calculated over 40 year and 80 year periods.

For the 3631 trees planted in the township in 2021, the 40 year and 80 year expected benefits are listed below.

| | | 40 year benefit | 80 year benefit |
|---|---|---|---|
| Carbon Dioxide | Tonnes | 2286 | 9059 |
| Stormwater | Litres | 14 million | 58 million |
| Air Pollution | Tonnes | 28.2 | 129. |

**Carbon Dioxide** – Trees sequester carbon dioxide in their trunks, branches roots and leaves. During its life, this also puts carbon into the soil. To put it in perspective, an average car produces 4.6 tonnes of CO2 annually, so the 80 year benefit is the equivalent to taking 1969 cars off the road for a year.
**Stormwater** – Trees absorb water through their roots, and breath it out through their leaves. A tree will reduce stormwater runoff through this process, and reduce erosion, flooding and the need to process the runoff.
**Air Pollution –** trees will absorb air pollutants like ozone, carbon monoxide, Sulphur dioxide through their leave, intercept particulate matter like dust ash and smoke.

## Mark Schwarz- Volunteer Extraordinaire

Mark is the founder of Earthscape Landscaping and Earthscape Play in Wallenstein. Originally a systems design engineer, he gave that up in 2005 to follow his passion for plants and trees. As he recently handed off some of his responsibilities to his son Ben, he discovered he still had lots of ideas and energy so he joined Trees for Woolwich in 2019.

He was the right man at the right time! We had this opportunity, 6 acres of township land, an abandoned field. What we needed were ideas and expertise. Mark created the design for the Habitats in 2019 to reflect 5 different native habitats which are increasingly rare. Once he got to work on that he realized the potential for the land surrounding the Habitats and the Elmira Nature Reserve was born!
As a volunteer, Mark became the project manager for the Reserve. He has devoted endless hours to organizing the work plan for the Reserve, watering, mowing. His enthusiasm is infectious and his energy is awesome. What he doesn't already know, he is determined to find out. He reaches out to other organizations such as Tall Grass Prairie Ontario, St Ignatius Reserve or the GRCA. In order to ensure he has the very latest information and expertise, Mark has been taking master's level course on Habitat Restoration.

His personal commitment has extended to the Earthscape corporation which is not only a founding sponsor to the Reserve, it has contributed experienced crews and expensive equipment which made spading in big trees, removing beaver dams, and cutting buckthorn. Realistically these are tasks which could never be done by hand.

**Social Enterprise at Work- "The Boyz"**

Mark has used the work at the Nature Reserve as an opportunity for a social enterprise to give youth at risk skills and work experience. He collaborated with Adventure for Change, a Waterloo based community group working with refugees and new Canadians. This summer he hired 3 teens who have had few advantages and less guidance. One, an orphan from Eritrea, another - a new Canadian from Guinea. He provides them with a real work experience, takes the time to teach them skills both practical and personal. Especially initially, they needed lots of supervision. He even goes to pick them up each day! You get one free "oops I overslept" but next time, if you are not ready at 8 - you have missed the bus. Another lesson.

*The Boyz at rest*

Hard work is occasionally mixed with new experiences for them, like a trip to the farmer's Market, whitewater canoeing, and a trip to the beach. Two of the boys will be back this summer and their admiration and respect for Mark is obvious.

Watching them flourish over the summer has been one of the joys of going out to the Reserve. They gained confidence, skill and pride in what they could do. Okay, they all got tired of watering but who wouldn't!

Trees for Woolwich is so grateful to have Mark's energy and passion directed at our trees! We have many more dedicated volunteers- stay tuned for further profiles of the people who help make it all happen.

*"C'mon guys – bet back to work"*

# **INVASIVE:** European Buckthorn (Rhamus Cathartica)

*Buckthorn forms a gnarly dense forest with no room or light for other species.*
*Buckthorn is a serious invasive species in the township. It is the first to take over areas that were formerly cultivated or grazed and left fallow. Trees for Woolwich undertook eradication in two areas.*

Trees for Woolwich had two buckthorn rehabilitation projects in 2021.

A small plot (1/4 acre) in Bloomingdale was treated by cutting and pulling down the trees, piling the branches and trunks, and pulling out the stumps with a tractor. 75 native trees were planted to replace the buckthorns and hopefully dominate that small area.

The Elmira Nature Reserve has a serious buckthorn invasion covering almost 1/5 of its area (12 acres). Many man hours and machine hours have been put into eradicating it in 2021. Its canopy is a dense tangle with other buckthorns, such that when you cut one off at ground level, it does not fall over, but remains standing. These areas were "attacked" with a forest mulcher – a giant mulching drum attached to a big skid steer. The mulcher shreds the tree from the top down to the stump, reducing it to chunky mulch to line the forest floor and contribute to the nutrients of the soil.


## "Fun Facts" about European Buckthorn:

- Buckthorn was imported from Europe as an ornamental plant in the 1700's.
- You could buy buckthorn seeds at a nursery in Philadelphia in 1807, with the identification "Indigenous to the United States of America"
- The Buckthorn seed / berry is poisonous to humans and most animals It has a strong and lasting laxative effect when ingested. With birds, it encourages their digestive systems to spread the seeds widely.
- Buckthorns are dioecious, meaning that there are male trees and female trees. The female trees are the troublemakers that produce the berries that reproduce the plants widely. The male trees are benign, and will not reproduce on their own.
- Buckthorn seeds in the ground will stay dormant for up to five years, waiting for the right conditions to germinate.
- Buckthorns are among the first to leaf in the spring and the last to drop their leaves in the fall. The leaves remain green for the entire season. This gives them the advantage of dominating the leaf cover early in the season, making it difficult for other plants to compete
- Buckthorns will grow to a height of about 30' and diameter of up to about 8 inches.
- Buckthorn is tasty for cows and goats. In a field that is actively grazed, it would be very unusual to find any inside the fence. RARE in Cambridge has hired in goats to help eradicate a patch of buckthorn
- Buckthorn wood is hard and has very interesting orange colouring. It works easily and finishes to a very smooth surface. (It has a slightly unpleasant odor when working it.) It is good for cutting boards and other small things.

*Slice of European buckthorn waiting to be made into a cutting board.*

# Controlling Buckthorn

Buckthorn will be the first plant to take over areas at the edges of fields or pastures that are no longer being used for grazing. It spreads quickly and easily. Usually a variety of control methods have to be used to eradicate it. Much has been written about buckthorn control. The Upper Thames conservation authority has a good 4 page article on various methods of control, and worth a read if you are interested Upper Thames Buckthorn monograph

Simply cutting down a buckthorn tree is not effective. The stump will sucker with a dozen strong shoots within a month of cutting it, and these will thrive.

**Mechanical control:** This is a process to physically remove the plants. Smaller plants can be pulled by hand using a special purpose puller "Puller Bear". (Trees for Woolwich has several of these and happy to show volunteers how to use them.) These work on small trees – up to about 1-1/2" diameter and 8' high. Larger trees require a chain saw to cut them down and a tractor to pull out the stump. The cleaned out area will have lots of seeds ready to germinate, so mowing several times a year will be required for several years to cut back the new growth, until the plants give up and native species start to take over .

**Chemical control:** Chemicals such as Roundup or Garlon are used commercially to control the trees. These chemicals must be introduced to the plant either through the leaves, or bark, or in the case of a stump, painted on a freshly cut stump. Chemical control is quite effective

**Planting Native Species:** After the buckthorn trees have been removed, plant tree species to take over the area, and help them along for the first few years by keeping the buckthorn shoots at bay.