



Advisory Committee Meeting
February 19th 1–4pm
Douro–Dummer Municipal Office

Present: Lindsay Burt, Paul Finigan, Donna Peacock, Heather Ray, Jenn McCallum, Hayley Goodchild, Jessyka McArthur, Melissa Hewitt

Regrets: Rhonda Paulsen, Heather Watson, Karl Moher, Karen Jopling

Summary of Actions:

- ACTION – remove maximum committee size from Terms of Reference
- ACTION – GUP to email Gord Earle to find out who controls the dam in Warsaw
- ACTION – Hayley to pull together two format options based on what works best for the actions
- ACTION – Please save the date for a release/celebratory event (May 25th)
- ACTION – OC to provide a plant list of Warsaw Back Dam pollinator garden upon request
- ACTION – Send out Conservation Authority survey links with minutes
- ACTION – Committee to review proposed Peterborough Action Plan outlines. Think about any organizational changes they would like to see for the Warsaw plan and send ideas to Hayley.

1. Welcome and Introductions

2. Review draft Terms of Reference

- Hayley introduced the draft Terms of Reference and the document was reviewed as a group. Feedback requested.
- Discussion about boundaries and their flexibility – boundaries can be altered as per decision of the Advisory Committee.
- Edits offered: remove maximum # of members and just have minimum.
- Discussion about make-up of committee, and whether to extend list to include other representatives as required for quorum (e.g. community resident), decided to leave as is.
- Confirmation that after the one mentioned change the Final document can be circulated.

3. Engagement Report Back

- Hayley introduced the engagement summary document – the document was reviewed as a group. Document outlines major themes, what we have heard, locations of interest, and gaps. The priority titles can be changed, these are temporary organizational titles to help us make sense of the emerging themes.
- Have engaged with about 25% of the population
 - Lots (15) of one-on-one conversations with experts and residents (most time consuming, but most deep information gathering)
 - 2 outreach and tabling events
 - Survey (41 responses)
 - Event (Water Warsaw Gathering)
- Emerging Priorities:

1. Drinking water quality and quantity

- Highest ranked issue using a number of feedback measures (survey, Feedback Frames, etc.)
- Low wells identified as common issue, but usually only in connection with significant droughts (e.g. summer 2016)
- Iron and sulphur in water, expensive to treat

2. Watershed ecological health

- Also highly ranked among survey respondents, and interviewees—lots of interest in health of river, wetlands, wildlife habitat, etc.
- Watershed Report Card grades (once every 5 years) are aligned with other watersheds – so is an indicator of health comparison for all of southern Ontario watersheds
- Anecdotal observations: residents noticing changes in the sub-watershed (increase of geese #s, algae, etc.). Questions as to why? Discussion on development of Stoney Lake (where Warsaw water comes from), climate change impact, and lawn maintenance changes (geese love mowed grass) (other municipalities, such as Lakefield, have geese programs to deter geese from shorelines)

3. Community, identity, and place

- Water is central to people's identities and the sense of place and community in Warsaw.
- People spend a lot of time near/on the water.
- Central to how people think of themselves as community members.
- Suggestion to reword this priority as 'Personal responsibility/ownership/stewardship.' No decision made.
- Added info from group:
 - Fewer people swimming at the dock by the Church compared to years past due to algae (maybe last six years).
 - Does Health Unit test water at this site? GreenUP to follow up.

- Used to swim off the left hand side (other side was weeds), but now seems to be getting closer and closing off.
- Discussion about difficulties of identifying causes. Could be phosphorous, or climate change (or both)!
- Discussion about solutions: Lake Simcoe offers a good example. Solutions/mitigation could address issues despite causal factors (e.g. increase shade over water).

4. Flooding

- Not heard about as often as other themes, but with enough frequency that it is warranted.
- Despite limits to isolated pockets, the impact flooding can have, combined with projected increases in storm and precipitation activity through climate change, means we should address it. Likely to increase as an issue for the community.
- Priority area: Water St. between Mill and Ford
- Partners want to know more about hydrology
 - Noted that on Peterborough Street, sump pumps don't stop running in spring
 - Behind firehall/LCBO used to be a creek.
 - These areas are flooding worse in the spring.
 - Houses along Payne Line have low water, and use cisterns and truck in water, perhaps because it's all flowing downhill.
 - Question: who controls the dam? May be static. GU to look into it further.

5. Water education and empowerment

- Lots of excitement and interest about teaching youth more about water (to clarify, education doesn't need to mean *just* youth, can include adult education too)
- Interest in a better understanding of how water is connected

ACTION: Committee to review and think about any organizational changes to the themes they would like to see before Action Plan is created.

- Hayley presented a review of Baseline Data.
 - Most social and demographic data sourced from census (which is tricky because of boundary areas don't align exactly).
 - Some data has been calculated by GreenUP (with support from Trent student) through provincial well records, iTree Canopy, PWQMN, iNaturalist, ebird, EDmaps, QGIS, and impervious calculations. Emphasis that these are not perfect numbers because often this type of data is not usually captured at a neighbourhood level.
 - Watershed grade from Otonabee Conservation.
 - iNaturalist and ebird is a great citizen science tool to help people be more familiar with their natural surroundings.

4. Action Plan

- Have heard a number of action ideas from the community. Currently working on getting a sense of how ideas align with priority themes, ranking of ideas based on short/long term, etc.
- As outline of AP is being drafted these actions will be shared for comments/additions with the committee.
 1. Does 10 year time frame make sense for Warsaw?
 2. Preferred Format?
 3. Release
 4. Future actions include drafting the Action Plans, creation of maps/graphics, and period of review (GUP to lead these steps with Committee support, especially for the review)
- Review of Action Plan elements, as examples, from SUN Peterborough. Hayley stressed that the Warsaw Action Plans so NOT need to be just like the Peterborough plans, we can make them look anyway we would like.
 - Graphic based

- Provides baseline stats and neighbourhood history
 - Overview of the program (who, what, why) (super small section)
 - Long term outcomes associated with each theme (for Warsaw our theme is water)
 - Overall vision (conveys the major actions and summary of all the recommendations) – gets to the heart of the goals
 - Within the plan, each of the focus areas are explored.
 - Since ptbo action plans had multiple themes (not just water), and because some actions addressed multiple themes, it didn't make sense to organize actions according to main themes. Instead, we created different 'focus areas,' and showed how each focus area address multiple themes. For Warsaw, this element could stay, or be removed.
 - Celebratory element where achievements are showcased to encourage continued action
- Invited group to discuss:
 - What do you like about the existing AP format?
 - What don't you like about the existing AP format?
 - What kind of the tone, scope, and format do we want the Warsaw Water AP to have? What suits Warsaw?
 - Consensus
 - Keep graphic, colour, and visual elements
 - Keep it simple – more to the point of what to be accomplished and how everyone fits into it
 - Be open to other formats – Book or poster or brochure?
 - Need to know the actions before format can be finalized
 - Currently ~87 proposed in the list from outreach and needs more work to consolidate and assess them.

ACTION: Hayley to pull together two format options based on what works best for the actions and circulate them for feedback before starting the draft.

- AP Release
 - RBC recognition event
 - Combine with a planting demonstration project
 - Make a larger celebratory event
 - GUP proposed May 25th as a date for this event
 - Planting, then media release, then more planting (if necessary) No immediate conflicts with the date – time is needed. Likely an afternoon window.

ACTION: Please save the date for a release/celebratory event

- Discussion on volunteers, recommended to invite the schools. Could also invite Lions and the Knights and the optimist club and ptbo county stewardship to help volunteer.
- AP timelines
 - To ensure the AP's are ready for the release event would need a strict timeline. Does three weeks provide enough turn around for review (April 1–18th). Consensus reached for the proposed timeline.

5. Review proposal demonstration planting projects

- Two planting for the spring to reach out 500m² deliverable. In 2019 we installed (a rain garden and shoreline shrubs) 218m² (so remaining 282m²). Additional sites have been shared by the community (such as Lions Park and Warsaw United Church)

1. Warsaw Public School

- Site host agreement already signed (they maintain and provide volunteers, GUP to provide design and plants)
- Planned for May 13/14th
- Jenn shared a draft site design (based on 2019/2020 site visits).

- i. Northwest driveway trees likely to get moved in the design
- ii. Demonstration projects focused on water – so planting proposed along waterway (Northwest side) and focus on erosion control (due to water movement). Plants on south–west to prevent erosion and for stormwater capture.
- iii. Salt from snow pile could be of concern – recommendation to ensure trees in that area are salt tolerant
- iv. Jenn discussed that students are also not always ‘nice’ to new plantings. GUP, through another program called WOW, is working with an organization called Evergreen for best practice on protecting new plants that we hope to implement these suggestions
- v. Perhaps add some protection to the tree truck (orings?)

2. Warsaw Back Dam

- Tentatively May 25th
- 26 of 41 survey respondents said they spend time at Back Dam Park
- Proposal to plant along the ephemeral creek that runs through the park.
- Advised to leave a resident self–watering opportunity Existing pollinator garden that Otonabee Conservation planted in the past (2015)
- Suggestion to mark out the planting very clearly (especially due to the dry up in the summer) OR leave a few breaks that are obvious crossings with rocks or mulch
- Suggestion to ensure that plants near road are salt tolerant

ACTION: GUP to inquire with Otonabee Conservation about needed permits

ACTION: GUP to inquire with Township about signing of Site Host Agreement

ACTION: OC to provide a plant list upon request

6. New Business

- Announcement by Paul – two surveys out for folks to fill in (public and professionals). One with through the provide to advise the province. Another is through World Wildlife to obtain more information about how people use the data that Conservation Authorities collect.
- ALUS and East Central Farm Stewardship are taking applications for green projects from farmers who may be looking for financial assistance or advice. Talk with Paul in the next couple of weeks.

ACTION: Send out Conservation Authority survey links with minutes



Advisory Committee Terms of Reference

About GreenUP

Who we are

For 25 years, GreenUP has been central and eastern Ontario's leading organization focused on issues of environmental education, sustainability, and stewardship. A registered charity, we partner with individuals, businesses, other non-profit organizations and governments. Together we work to ensure that our region maintains its long standing track record of environmental leadership in Ontario and across Canada.

What we do

GreenUP is an active community organization offering dozens of programs and services to those living both full time and seasonally in the Kawartha Lakes region of Ontario. Our programs focus on facilitating positive action and provide the tools to make small changes in their home or cottage that can create a large and lasting impact on our environment.

Sustainable Urban Neighbourhoods (SUN) Warsaw

The impacts of climate change (such as more frequent and severe floods and droughts) will not impact all communities and residents equally. Understanding climate change impacts, opportunities, and solutions at a neighbourhood scale allows action and planning unique to the needs of each neighbourhood. The needs of urbanizing rural communities, like the Hamlet of Warsaw, vary greatly. Like other SUN neighbourhoods, Warsaw requires its own unique action plan. In 2019, thanks to funding from the RBC Foundation, GreenUP launched its SUN program in the Hamlet of Warsaw.

Located along the Indian River within the Township of Douro-Dummer, the SUN Warsaw program focuses on sustainable action with the goals of:

- Improving water quality
- Protecting and remediating the Indian River
- Increasing knowledge and awareness of water within the community



SUN Warsaw will be the first rural community to pilot the model and will be a prime example of how a rural community can advance sustainable renewal and climate action.

The GreenUP Sustainable Urban Neighbourhoods (SUN) program is a collaborative, neighbourhood-based solution for advancing sustainable renewal and climate action. SUN joins neighbourhood residents, municipalities, and other community partners to identify and support opportunities for sustainability through immediate, demonstrative impacts, visioning and planning for future action, and the sharing of skills and knowledge.

The specific deliverables for the SUN Warsaw program are as follows:

#	Indicator	Goal Qty	Goal Units	Goal Description	Baseline Qty	Baseline Units	Baseline Description
1	Area of shoreline/riparian greenspace/wetland/aquatic habitat remediated/stabilized as a direct result of this project.	250	m2	The anticipated remediation and planting of 250m2 of shoreline area associated with the implementation of the Quick Start projects, such as repairing and expanding buffer zones.	0	m2	Currently there are no plans to remediate the shoreline within Warsaw.
2	Number of people educated about water management in urban areas/urban water issues as a direct result of this project (through workshops, events, displays, presentations, classroom programs, resources, tools etc.)	250	people	The program will interact with, and increase the urban water issue knowledge of local residents and decision-makers within Warsaw.	0	people	Currently no water awareness is being strengthened in Warsaw.
3	Number of reports (ex: proposal, plan, strategy, policy) created about protecting urban waterways and storm water management.	1	reports	Community Action Plan to be developed and shared.	0	reports	Currently no plans for report creation.
4	Number of volunteers participating directly in this program/project	150	volunteers	The project goal is to have at least 150 volunteers directly participate in the project by volunteering at Quick Start events.	0	volunteers	There are currently 0 (zero) volunteers working on this project.
5	Area of land with improved filtration measures developed as a direct result of this project (ex: area depaved, SUDs installed, permeable pavement installed, rain garden installed, green infrastructure built).	250	m2	Improved filtration area through the anticipated installation of green infrastructure geared Quick Start projects, such as rain gardens.	0	m2	Currently no plans to improve filtration measures within Warsaw.

SUN Program History

In 2017, SUN launched in the City of Peterborough, working within two urban neighbourhoods, Peterborough’s Kawartha Heights and East City – Curtis Creek neighbourhoods. Between 2017 and 2019, SUN Kawartha Heights and East City – Curtis Creek collaborated with the City of Peterborough, neighbourhood residents, Otonabee Conservation, Nourish, and other partners. Funded by the Ontario Trillium Foundation, the three year Grow Grant has allowed GreenUP to successfully test the SUN model within a mid-sized City. Together, SUN Kawartha Heights and

East City – Curtis Creek have planted 1700 square metres, or over 18,000 square feet, of demonstration gardens and trees. This area is equivalent to one NHL sized hockey rink!

In 2019, SUN launched in the Hamlet of Warsaw, piloting the rural community as a neighbourhood due to its comparable size. Focusing on the sustainability of storm water (rain) and water quality, SUN Warsaw will be the first rural community to pilot the model, and will be a prime example of how a rural community can advance sustainable renewal and climate action. Thank you to RBC Environment Fund for funding towards this project.

SUN is modelled after the Toronto and Region Conservation Authority's Sustainable Neighbourhood Action Plan (SNAP) program. SNAP helps municipalities and organizations improve efficiencies, draw strong local community support, and build innovative partnerships for implementation of a broad range of initiatives in the public and private realms. By reframing environmental projects to incorporate greater social and economic outcomes, SNAP has helped to generate creative solutions that garner more support for implementation.

Program Links

- [SUN Warsaw](#)
- [SUN program website](#)
- [Sustainable Urban Neighbourhoods Brochure](#)
- [Sustainable Neighbourhood Action Plan \(SNAP\)](#)
- [Peterborough Examiner: SUN Shines in Peterborough](#)
- [Peterborough Examiner: Greening Peterborough Neighbourhoods](#)

Membership

Management of the SUN Warsaw program will fall under GreenUP as the legal authority (grant, bookkeeping).

The SUN Warsaw Advisory Committee is a formal collaborative, and membership within the Advisory Committee will include, but is not limited to, representation from the following organizations:

- GreenUP
- Township of Douro-Dummer
- County of Peterborough
- Otonabee Conservation

Members are expected to:

- Have at least one dedicated representative on the Advisory Committee
- Attend Committee meetings
- Engage in consensus-based decision making at meetings
- Receive SUN Warsaw program newsletters electronically via MailChimp



- Subject to availability, provide GreenUP staff with baseline data as requested, which might include historical, social, or ecological data pertaining to the Warsaw area. Separate data sharing agreements may be created to govern terms of use, if required through legislation and/or organizational policy.
- Advise GreenUP staff on program decision making, Warsaw community boundaries, and other items as requested
- Provide feedback on the SUN Warsaw Action Plan in a timely manner, so that the Water Action Plan can be complete and finalized by May 2020
- Attend planning and planting events as schedules allow (notably the Warsaw Water Gathering on January 29, 2020, from 5-8:00pm), and an RBC Recognition event (TBD).
- Inform GreenUP staff of upcoming events in Warsaw
- Connect GreenUP staff with community members for the purposes of gathering data towards the Action Plan

The Committee will include no fewer than 5 members.

The work of the collaborative is supported through two paid part-time Coordinator positions, whose roles at GreenUP are currently funded until May 31, 2020. These Coordinators are responsible for chairing and coordinating the SUN Warsaw Advisory Committee.

Meetings

The Advisory Committee will hold meetings throughout the years 2019 to 2020. The frequency of meetings can be adjusted as the committee sees fit throughout the year, but there will be approximately 4-5 meetings throughout this one-year time period.

Decision-Making

Members of the Advisory Committee will help to ensure the program meets the needs and interests of each stakeholder and the wider Warsaw community. The Committee will make recommendations regarding programming proposals and decisions using a consensus-based decision-making approach. GreenUP will align recommendations with program budgets and organizational capacity and will maintain final decision-making.

Review

The Terms of Reference will be revisited and renewed annually.

Date of Last Revision: February 18, 2020

Back Dam Park Planting Plan

Current site conditions

- Shallow, rocky soil
- Drought in summer
- Ephemeral stream that flows through the southwest side of the land
- There is a pavilion with a picnic table, a playground, and a garbage receptacle, as well as parking at the site. There is also a bridge that goes over the ephemeral stream on-site. Families use the site for swimming and to access the Indian River.
- Who maintains this space? Who mows the grass in the summer? Would there be a possibility for watering plants as they establish along the ephemeral stream?
- Will permitting be required from Otonabee Conservation to plant at this site?
- 76% (n=26) of 41 respondents to the Warsaw Water Survey use Back Dam Park for recreation
- Feedback from the Warsaw Water Gathering showed an interest in more shade, tree planting, and less mowing at Back Dam Park
- Otonabee Conservation has planted a pollinator garden along the southeastern side of the property, near the ephemeral stream

Site photos



Plants proposed for this site

Trees	Number
Hop Tree	2
Red Cedar	1
Total	3

Shrubs	Number
Fragrant Sumac	4
New Jersey Tea	9
Ninebark	8
Total	21

Wildflowers	Number
Butterfly Milkweed	13
Common Milkweed	6
Heath Aster	14

Purple Coneflower	5
Wild Bergamot	6
Total	44

Grasses	Number
Indian Grass	6
Little Bluestem	9
Prairie Dropseed	3
Total	18

Ferns	Number
Christmas Fern	10
Total	10

Total number of plants	96
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<i>Trees</i>								
<i>Common name</i>	<i>Scientific name</i>	<i>Sun or shade requirements</i>	<i>Height</i>	<i>Spread</i>	<i>Photo</i>	<i>Notes</i>	<i>Bloom time</i>	<i>Maintenance</i>
Eastern Red Cedar	<i>Juniperus virginiana</i>	Full sun	30-40 feet	20 feet		Tolerates saline soils, salt spray, deer, drought, erosion, dry soil, shallow-rocky soil, black walnut, and air pollution.	Non-flowering, but produces blue berries	Low maintenance.
Hop Tree	<i>Ptelea trifoliata</i>	Part shade to full shade	15-20 feet	15-20 feet		Tolerates drought, dry soil, and shallow rocky soil.	Blooms greenish white, fragrant, insignificant flowers in June. Produces showy fruit that can be used as a hop substitute.	Low maintenance. Prefers dry to medium moisture. Provides winter interest. <u>Species at risk in Ontario</u> (special concern status).
<i>Shrubs</i>								

Fragrant Sumac	<i>Rhus aromatica</i>	Full sun to part shade	3 feet	6 feet		Tolerant to rabbit foraging, drought, shallow-rocky soil, Black Walnut, and erosion.	Blooms yellow showy flowers in April.	Low maintenance. Grows in average, dry to medium, well-drained soil.
New Jersey Tea	<i>Ceanothus americanus</i>	Full sun to part shade	3-4 feet	3-5 feet		Tolerant to drought once established. Tolerates Black Walnut and shallow-rocky soils.	Blooms white, showy, fragrant blooms from May to July.	Low maintenance. Grows in average, dry to medium, well-drained soils. Not easily transplanted as it forms deep root systems.
Ninebark	<i>Physocarpus opulifolius</i>	Full sun to part shade	5-8 feet	4-6 feet		Tolerant to drought and erosion, medium maintenance, and requires dry to medium soil. Tolerates clay soil, shallow	Blooms white/pink, showy flowers from May to June.	Moderate maintenance. Grows in average, slightly acidic, dry to medium, well-drained soil. Prune after first bloom.

							rocky soil, and Black Walnut.		
<i>Grasses</i>									
Indian Grass	<i>Sorghastrum nutans</i>	Full sun	3-5 feet	1-2 feet			Tolerant to drought, dry soil, erosion, shallow-rocky soil, Black Walnut, and air pollution.	Blooms light brown flower with yellow stamens September to February.	Moderate maintenance. Grows in average, dry to medium, well-drained soils. Cut to the ground in late winter-early spring.
Little Bluestem	<i>Schizachyrium scoparium</i>	Full sun	2-4 feet	1.5-2 feet			Tolerant to deer, drought, erosion, Black Walnut, shallow-rocky soil, and air pollution.	Blooms purple-bronze, insignificant flower August to February.	Low maintenance. Grows in average, dry to medium, well-drained soils.
Prairie Dropseed	<i>Sporobolus heterolepis</i>	Full sun	2-3 feet	2-3 feet			Tolerant to deer foraging, shallow-rocky soil, Black Walnut, drought, dry soil, erosion, and air pollution	Blooms pink and brown, showy, fragrant flower August to October.	Low maintenance. Grows in average, dry to medium, well-drained soils.

Fern								
Christmas Fern	<i>Polystichum arcostichoides</i>	Part shade to full sun	1-2 feet	1-2 feet		Tolerates rabbit, deer, drought, heavy shade, erosion, shallow-rocky soil	Non-flowering	Low maintenance. Prefers organically rich, dry to medium, well-drained soils.
Wildflowers								
Butterfly Milkweed	<i>Asclepias tuberosa</i>	Full sun	1-2.5 feet	1-1.5 feet		Tolerant to drought, shallow-rocky soil, dry soil, erosion, and deer foraging. Attracts butterflies.	Blooms yellow-orange, showy flowers June to August.	Low maintenance. Grows in average, dry to medium, well-drained soil.
Common Milkweed	<i>Asclepias syriaca</i>	Full sun	2-3 feet	0.75-1 foot		Tolerant to drought, dry soil, shallow-rocky soil, erosion, and deer foraging; attracts butterflies.	Blooms pink-white, showy, fragrant flowers June to August. Produces seed pods in the fall.	Low maintenance. Grows in average, dry-medium, well-drained soils. Allow flowerheads to go to seed.

Heath Aster	<i>Aster ericoides</i>	Full sun	1-3 feet	1-1.5 feet		Tolerant to shallow-rocky soil, erosion, and drought.	Blooms white, showy flowers with yellow centers August to October.	Low maintenance. Grows in average, dry-medium moisture, well-drained soils.
Purple Coneflower	<i>Echinacea purpurea</i>	Full sun to part shade	2-5 feet	1.5-2 feet		Tolerant to drought, deer foraging, and shallow-rocky soil.	Blooms June to August. Purple-pink, showy Bloom.	Low maintenance. Grows in average, dry to medium, well-drained soils. Divide clumps if overcrowding occurs. Leaves and flower buds can be used to make herbal tea. Harvest coneflowers beginning in their second year.
Wild Bergamot	<i>Monarda fistulosa</i>	Full sun to part shade	2-4 feet	2-3 feet		Tolerant to drought, Black Walnut, dry soil, shallow-rocky soil, and deer	Blooms pink/Lavender showy, fragrant flowers from July to September.	Moderate maintenance. Grows in dry/medium, well-drained soils. Cut back in fall. Self seeds.

						foraging, attracts humming- birds and butterflies.		
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Warsaw Public School Planting Plan

Current site conditions

- Slope extends from school down towards north side of property by about 2 metres
- South side of property: slope extends down from school about 4 m to bottom of play area
- Drought in summer
- Ditch flows through the northwest side of the property
- There is a pavilion with picnic benches and a rain barrel east of the school building. South of the garden is a vegetable garden.
- Who maintains this space? Who mows the grass in the summer? Would there be a possibility for watering plants as they establish through the summer?
- Will permitting be required from Otonabee Conservation to plant at this site?
- Feedback from the Warsaw Water Gathering showed an interest in more shade through tree planting at the school. The school noted seasonal flooding at the northwest side of the property.



Site photos



Plants for Warsaw Public School

North side of property

Trees	Number
Basswood	2
Bur Oak	1
Hop Tree	4
Ironwood	2
Northern Hackberry	3
Red Cedar	4
White Cedar	13
Total	29

Shrubs	Number
Pagoda Dogwood	4
Red Osier Dogwood	6
Witch Hazel	3
Total	13

South side of property

Trees	Number
Hop Tree	3
Kentucky Coffee Tree	1
Red Cedar	2
Total	6

Shrubs	Number
New Jersey Tea	5
Snowberry	5
Total	10

Trees	Number
Basswood	2
Total	2

Total number of plants	60
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Trees

Common name	Scientific name	Sun or shade requirements	Height	Spread	Photo	Notes	Bloom time	Maintenance
Basswood	<i>Tilia americana</i>	Full sun to part shade	50-80 feet	30-50 feet		Tolerant to drought and attracts butterflies. Native to North America, but not in this region	Blooms in June, showy fragrant pale-yellow flowers	Low maintenance. Requires moist fertile soil, intolerant to air pollution
Bur Oak	<i>Quercus macrocarpa</i>	Full sun	60-80 feet	60-80 feet		Tolerant to drought.	Blooms in April, yellowish-green bloom, insignificant flowers, showy fruit. Can be up to 35 years until first acorn crop.	Low maintenance. Prefers dry to medium, well-drained soils. Adaptable to a wide range of soil conditions.
Eastern Red Cedar	<i>Juniperus virginiana</i>	Full sun	30-40 feet	20 feet		Tolerates saline soils, salt spray, deer, drought, erosion, dry soil, shallow-rocky soil, black	Non-flowering, but produces blue berries	Low maintenance.

						walnut, and air pollution.		
Hop Tree	<i>Ptelea trifoliata</i>	Part shade to full shade	15-20 feet	15-20 feet		Tolerates drought, dry soil, and shallow rocky soil.	Blooms greenish white, fragrant, insignificant flowers in June. Produces showy fruit that can be used as a hop substitute.	Low maintenance. Prefers dry to medium moisture. Provides winter interest. Species at risk in Ontario (special concern status).
Ironwood	<i>Ostrya virginiana</i>	Full sun to part shade	25-40 feet	20-30 feet		Common understory plant; if planted in full sun, it will benefit from 3" of mulch to retain moisture, Tolerates deer	Blooms insignificant red-brown flowers (male), or light green flowers (female), in April.	Low maintenance. Prefers average, medium-moisture, well drained soils

Kentucky Coffee Tree	<i>Gymnocladus dioica</i>	Full sun	60-80 feet	40-55 feet		Tolerant to drought and air pollution. Considered a species at risk in Ontario	Blooms May to June. Green-white showy, fragrant blooms. Showy fruit	Low maintenance. Requires moist, organically rich, well drained soils. Creates suckers
Northern Hackberry	<i>Celtis occidentalis</i>	Full sun to part shade	40-60 feet	40-60 feet		Tolerant to drought and air pollution.	Blooms green insignificant flowers from April to May. Produces edible fruit.	Low maintenance. Requires moist, organically rich, well drained soils.
White Cedar	<i>Thuja occidentalis</i>	Full sun to part shade	20-40 feet	10-15 feet		Tolerant to air pollution	Non-flowering evergreen tree	Low maintenance. Prefers average, medium moisture, well drained soil

Shrubs

Bayberry	<i>Myrica pennsylvanica</i>	Full sun to part shade	5-9 feet	5-8 feet		Tolerant to drought and erosion.	Blooms yellow-green, insignificant bloom (male) in May. Showy fruit. Requires at least one male to produce fruit.	Low maintenance. Prefers average, dry to medium, well drained soils. Tolerates wide range of soil conditions. Produces suckers.
Fragrant Sumac	<i>Rhus aromatica</i>	Full sun to part shade	3 feet	6feet		Tolerant to rabbit foraging, drought, shallow-rocky soil, Black Walnut, and erosion.	Blooms yellow showy flowers in April.	Low maintenance. Grows in average, dry to medium, well-drained soil.
Nannyberry	<i>Viburnum lentago</i>	Full sun to part shade	14-16 feet	6-12 feet	 <small>Copyright © Walter Muma</small>	Produces edible berries; tolerant to air pollution	Blooms white, showy flowers in May.	Low maintenance. Grows in average, medium, well-drained soils. Prune back after flowering.

New Jersey Tea	<i>Ceanothus americanus</i>	Full sun to part shade	3-4 feet	3-5 feet		Tolerant to drought once established. Tolerates Black Walnut and shallow-rocky soils.	Blooms white, showy, fragrant blooms from May to July.	Low maintenance. Grows in average, dry to medium, well-drained soils. Not easily transplanted as it forms deep root systems.
Ninebark	<i>Physocarpus opulifolius</i>	Full sun to part shade	5-8 feet	4-6 feet		Tolerant to drought and erosion, medium maintenance, and requires dry to medium soil. Tolerates clay soil, shallow rocky soil, and Black Walnut.	Blooms white/pink, showy flowers from May to June.	Moderate maintenance. Grows in average, slightly acidic, dry to medium, well-drained soil. Prune after first bloom.
Pagoda Dogwood	<i>Cornus alternifolia</i>	Full sun to part shade	15-25 feet	20-32 feet		Tolerates deer. Attracts birds and butterflies	Blooms yellowish-white, showy flowers from May to June.	Low maintenance. Prefers acidic, organically rich, medium moisture,

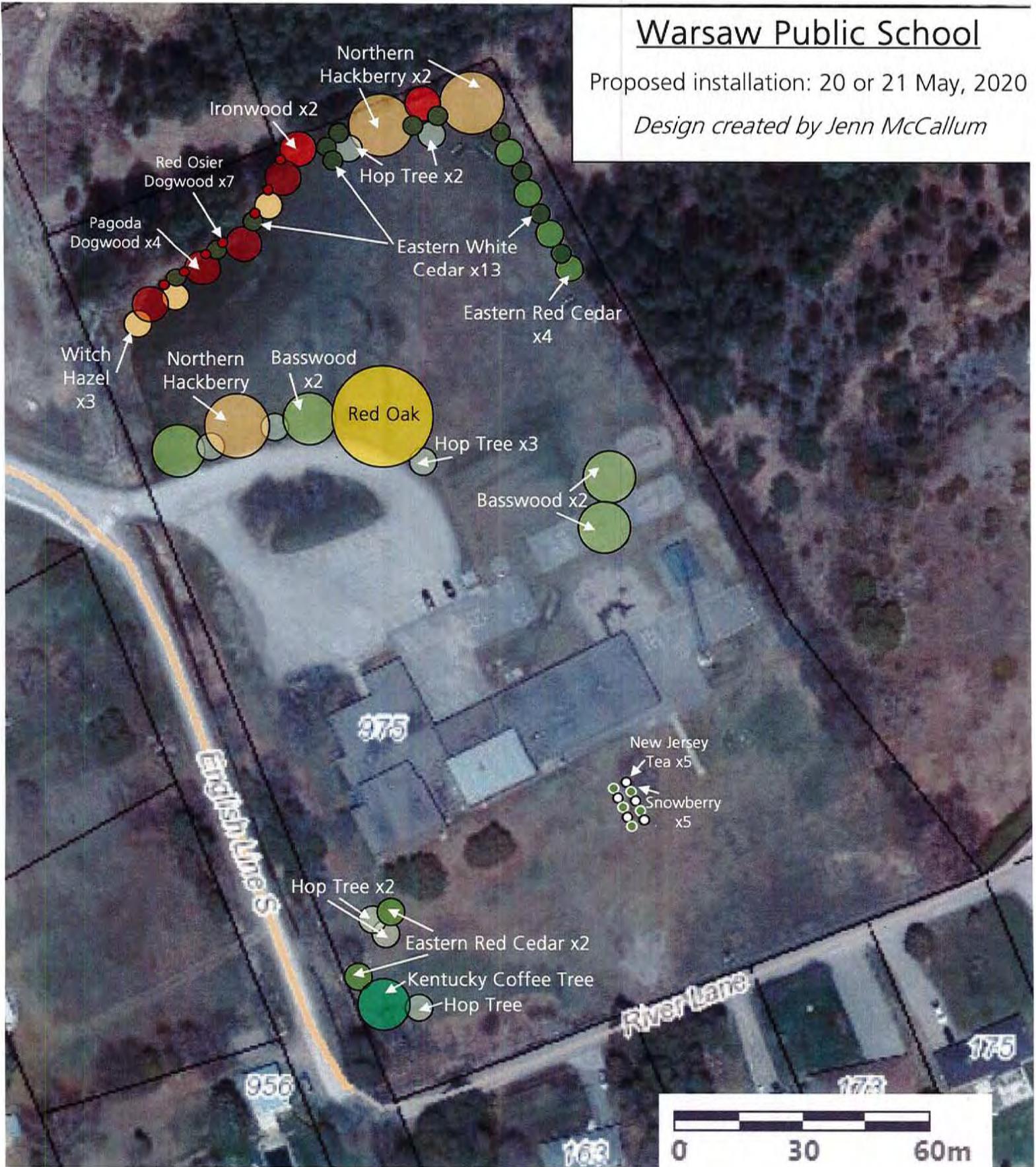
								well-drained soils
Red Osier Dogwood	<i>Cornus sericea</i>	Full sun to part shade	4-5 feet	4-5 feet		Tolerant to deer foraging, stabilizes the soil reducing erosion, and provides winter interest through its red stems	Blooms white, showy flowers from May to June.	Moderate maintenance. Prefers organically rich, fertile, moist soils. Pruning not required, but can prune back old stems in early spring
Snowberry	<i>Symphoricarpos albus</i>	Full sun to part shade	3-6 feet	3-6 feet		Attracts birds. Tolerates deer, drought, erosion, clay and dry soils.	Blooms pink, showy flowers June to July. Produces showy white berries in fall.	Low maintenance. Grows in average, medium, well-drained soils. Prune in late winter/early spring.
Spicebush	<i>Lindera benzoin</i>	Full sun to part shade	6-12 feet	6-12 feet		Tolerant to deer foraging and to drought	Blooms green-yellow, showy, fragrant flowers in April. Showy fruit.	Low maintenance. Grows in average, medium, well-drained soil

Spikenard	<i>Aralia racemosa</i>	Full sun to part shade	3-5 feet	3-5 feet		Drought tolerant	Blooms white, showy flowers June to August.	Low maintenance. Grows in average, medium moisture, well-drained soil. Plants will spread by self seeding and by creeping rhizomes
Witch hazel	<i>Hamamelis virginiana</i>	Full sun to part shade	15-20 feet	15-20 feet		Tolerant to deer, erosion, and clay soils.	Blooms yellow-orange, showy, fragrant flowers October to December.	Low maintenance. Grows in average, medium moisture, well-drained soils.

Warsaw Public School

Proposed installation: 20 or 21 May, 2020

Design created by Jenn McCallum



North side of property

Trees	Number
Basswood	2
Bur Oak	1
Hop Tree	4
Ironwood	2
Northern Hackberry	3
Red Cedar	4
White Cedar	13
Total	29

Shrubs	Number
Pagoda Dogwood	4
Red Osier Dogwood	6
Witch Hazel	3
Total	13

South side of property

Trees	Number
Hop Tree	3
Kentucky Coffee Tree	1
Red Cedar	2
Total	6

Shrubs	Number
New Jersey Tea	5
Snowberry	5
Total	10

Near playground

Trees	Number
Basswood	2
Total	2

Total number of plants	60
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Back Dam Park

Proposed installation: 25 May, 2020

Design created by Jenn McCallum

