



Improving Habitat in the Severn Sound Watershed

Funded by The Great Lakes Local Action Fund

2023



Great blue lobelia,
JT Payette Park

Severn Sound Environmental Association (SSEA) successfully obtained funding for a one-year “Improving Habitat in the Severn Sound Watershed” project through the Provincial Great Lakes Local Action Fund.

SSEA was the lead organization for the project and supported the Towns of Penetanguishene and Midland in naturalization and enhancement of habitat on municipal land. Approximately 18,770 m² of habitat was enhanced at two sites in Penetanguishene: Therrien Park and JT Payette Memorial Park.

Major project activities consisted of managing invasive species, planting and seeding native species to improve habitat for pollinators and wildlife, and engaging community volunteers. The naturalization projects will act as demonstration sites to educate and empower the community to take action, and improve habitat and native biological diversity, provide ecosystem services, and contribute to climate change mitigation and adaptation.

Therrien Park

In Penetanguishene, 4,490 m² was naturalized at Therrien Park, through planting of trees, shrubs and wildflowers, and seeding of native wildflowers and grasses. In addition, invasive species were managed, with removal of approximately 107 kg of invasive plant material.



107 Kilograms of invasive species removed

200 Native trees planted

91 Native shrubs planted

180 Native wildflowers planted

3.5 Kilograms of native wildflower & grass seed were spread

115 Volunteers participated in naturalization activities

Invasive Species Managed

- Garlic Mustard (*Alliaria petiolata*)
- Lesser Periwinkle (*Vinca minor*)
- Glossy Buckthorn (*Rhamnus frangula*)
- Manitoba Maple (*Acer negundo*)



Species Planted: Trees & Shrubs



- Eastern White Cedar (*Thuja occidentalis*)
- Red Pine (*Pinus resinosa*)
- Eastern White Pine (*Pinus strobus*)
- White Spruce (*Picea glauca*)
- Common Ninebark (*Physocarpus opulifolius*)
- Nannyberry (*Viburnum lentago*)
- Red Osier Dogwood (*Cornus sericea*)

Species Planted:
Wildflowers

- Blazing Star (*Liatrix spicata*)
- Blue Flag Iris (*Iris versicolor*)
- Blue Vervain (*Verbena hastata*)
- Boneset (*Eupatorium perfoliatum*)
- Cardinal Flower (*Lobelia cardinalis*)
- Cup Plant (*Silphium perfoliatum*)
- Cutleaf Coneflower (*Rudbeckia laciniata*)
- Giant Sunflower (*Helianthus giganteus*)
- Grass Leaved Goldenrod (*Euthamia graminifolia*)



New England Aster



Boneset

- Great Blue Lobelia (*Lobelia siphilitica*)
- New England Aster (*Symphyotrichum novae-angliae*)
- Ox-eye Sunflower (*Heliopsis helianthoides*)
- Philadelphia Fleabane (*Erigeron philadelphicus*)
- Pokeweed (*Phytolacca americana*)
- Smooth Blue Aster (*Symphyotrichum laeve*)
- Sneezeweed (*Helenium autumnale*)
- Spotted Joe Pye Weed (*Eutrochium maculatum*)
- Stiff Goldenrod (*Solidago rigida*)
- Swamp Milkweed (*Asclepias incarnata*)
- Virginia Mountain Mint (*Pycnanthemum virginianum*)
- Virginia Waterleaf (*Hydrophyllum virginianum*)
- Zigzag Goldenrod (*Solidago flexicaulis*)



Bare-root and potted native species that were planted in 2023 were well established by fall. Mulch mats were installed around shrubs to suppress weeds and help retain moisture; these mats will eventually decompose.

Long term management recommendations

- **Watering** would be beneficial in the 2024 growing season during periods of prolonged drought.
- **Mowing** of seeded areas can be considered after the third year of growth (2026) or once the majority of wildflowers have reached 1 m in height, and every few years thereafter. Periodic mowing can help promote new growth in the following season by spreading seeds.
- Mowing should be done once per year, in late May, so that food sources and cover are available to pollinators and wildlife in winter and early spring.
- Mowing should only be considered for the wildflower and seeded area only (i.e., not the area where trees and shrubs were planted). If using a trimmer, cut wildflowers to approximately 15 cm in height.
- **Invasive species** should be monitored and managed regularly; SSEA can provide invasive species support to the municipality.
- **Installing temporary fencing**/snow fencing around the tree planting area could be considered for winter, to prevent damage from snowmobiles if they travel through the park.

Naturalized Area



JT Payette Memorial Park

An area of 14,280 m² was naturalized at JT Payette Memorial Park through planting of shrubs, wildflowers and seeding of native wildflowers and grasses.



121 Native shrubs planted

230 Native wildflowers planted

19 Kilograms of native wildflowers & grasses were spread

47 Volunteers participated in naturalization activities

Species Planted: Shrubs

Common Ninebark (*Physocarpus opulifolius*)

Nannyberry (*Viburnum lentago*)

Red Osier Dogwood (*Cornus sericea*)



Species Planted:
Wildflowers

- Blazing Star (*Liatrix spicata*)
- Blue Flag Iris (*Iris versicolor*)
- Blue Vervain (*Verbena hastata*)
- Boneset (*Eupatorium perfoliatum*)
- Bottle Gentian (*Gentiana andrewsii*)
- Cardinal Flower (*Lobelia cardinalis*)
- Cutleaf Coneflower (*Rudbeckia laciniata*)
- Grass Leaved Goldenrod (*Rudbeckia laciniata*)



Wildflower planting area



Obedient plant

- Great Blue Lobelia (*Lobelia siphilitica*)
- New England Aster (*Symphyotrichum novae-angliae*)
- Obedient Plant (*Physostegia virginiana*)
- Ox-eye Sunflower (*Heliopsis helianthoides*)
- Pokeweed (*Phytolacca americana*)
- Prairie Ironweed (*Vernonia fasciculata*)
- Purple Stemmed Aster (*Symphyotrichum Puniceum*)
- Shallow Sedge (*Carex lurida*)
- Sneezeweed (*Helenium autumnale*)
- Spotted Joe Pye Weed (*Eutrochium maculatum*)
- Swamp Milkweed (*Asclepias incarnata*)
- Tall Ironweed (*Vernonia gigantea*)
- Virginia Mountain Mint (*Pycnanthemum Virginianum*)
- White Turtlehead (*Chelone glabra*)



Bottle Gentian

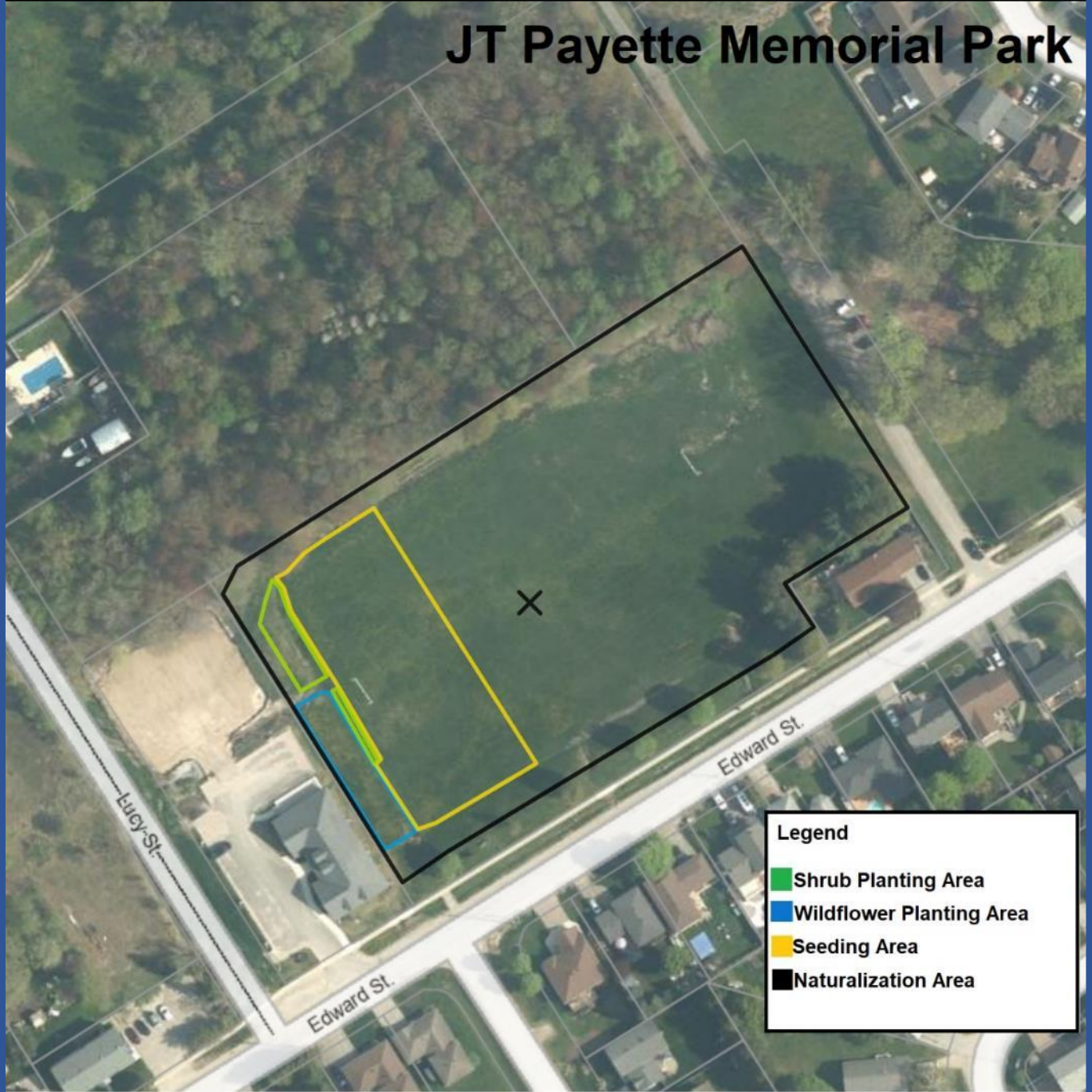
Bare-root and potted native species that were planted in 2023 were well established by fall. Mulch mats were installed around shrubs to suppress weeds and help retain moisture; these mats will eventually decompose.

Long term management recommendations

- **Watering** would be beneficial in the 2024 growing season during periods of prolonged drought.
- **Mowing** of seeded areas can be considered after the third year of growth (2026) or once the majority of wildflowers have reached 1 m in height, and every few years thereafter. Periodic mowing can help promote new growth in the following season by spreading seeds.
- Mowing should be done once per year, in late May, so that food sources and cover are available to pollinators and wildlife in winter and early spring.
- Mowing should only be considered for the wildflower and seeded area only (i.e., not the area where shrubs were planted). If using a trimmer, cut wildflowers to approximately 15 cm in height.
- **Invasive species** should be monitored and managed regularly; SSEA can provide invasive species support to the municipality.

Naturalized Area

JT Payette Memorial Park



Legend

- Shrub Planting Area
- Wildflower Planting Area
- Seeding Area
- Naturalization Area



Incidental Observations at Penetanguishene Sites



Mallard



Song Sparrow



*Black-Capped
Chickadee*



*Bumble Bee on Great
Blue Lobelia*



Sweat Bee



Magnolia Warbler



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Severn Sound Environmental Association (SSEA) successfully obtained funding for a one-year “Improving Habitat in the Severn Sound Watershed” project through the Provincial Great Lakes Local Action Fund.

SSEA was the lead organization for the project and supported the Towns of Midland and Penetanguishene in naturalization and enhancement of habitat on municipal land. Approximately 11,385 m² of habitat was enhanced at three sites in Midland: Edgehill Park, Ernest T Bates Memorial Park, and Little Lake Park.

Major project activities consisted of managing invasive species, planting and seeding native species to improve habitat for pollinators and wildlife, and engaging community volunteers. The naturalization projects will act as demonstration sites to educate and empower the community to take action, and improve habitat and native biological diversity, provide ecosystem services, and contribute to climate change mitigation and adaptation.



Common milkweed,
Little Lake Park

Edgehill Park

In Midland, 5,725 m² of habitat was naturalized/enhanced at Edgehill Park, through planting of shrubs and wildflowers, and seeding of native wildflowers and grasses.



Before naturalization activities



Naturalization activities in progress

149 Native shrubs planted

190 Native wildflowers planted

14 Kilograms of native wildflower & grass seed were spread

3 Volunteers participated

Species Planted: Shrubs

Bush Honeysuckle (*Diervilla lonicera*)
Common Ninebark (*Physocarpus opulifolius*)
Fragrant Sumac (*Rhus aromatica*)
Nannyberry (*Viburnum lentago*)
Red Osier Dogwood (*Cornus sericea*)
Silky Dogwood (*Cornus amomum*)



Species Planted: Wildflowers

Anise Hyssop (*Agastache foeniculum*)
 Bee Balm (*Monarda didyma*)
 Black eyed-Susan (*Rudbeckia hirta*)
 Blue False Indigo (*Baptisia australis*)
 Blue Stemmed Goldenrod (*Solidago Caesia*)
 Butterfly Milkweed (*Asclepias tuberosa*)
 Canada Anemone (*Anemone canadensis*)
 Canada Goldenrod (*Solidago canadensis*)



Purple Coneflower



Scarlet Bee Balm

Dotted Bee Balm (*Monarda punctata*)
 Eastern Figwort (*Scrophularia marilandica*)
 Evening Primrose (*Oenothera Biennis*)
 Flat Topped Aster (*Doellingeria umbellata*)
 Foxglove Beardtongue (*Penstemon digitalis*)
 Gray Headed Coneflower (*Ratibida pinnata*)
 Hairy Beardtongue (*Penstemon hirsutus*)
 Heart Leaved Foamflower (*Tiarella cordifolia*)
 Heart Leaved Aster (*Symphotrichum cordifolium*)
 Leadplant (*Amorpha canescens*)
 Ox-Eye Sunflower (*Heliopsis helianthoides*)
 Panicked Aster (*Symphotrichum lanceolatum*)
 Philadelphia Fleabane (*Erigeron philadelphicus*)

Purple Coneflower (*Echinacea purpurea*)
 Red Columbine (*Aquilegia canadensis*)
 Smooth Blue Aster (*Symphotrichum laeve*)
 Thimbleweed (*Anemone Virginiana*)
 Upland White Goldenrod (*Solidago ptarmicoides*)
 Wild Bergamot (*Monarda fistulosa*)
 Wild Chives (*Allium schoenoprasum*)



Common Milkweed
naturally established

Bare-root and potted native species that were planted in 2023 were well established by fall. Mulch mats were installed around shrubs to suppress weeds and help retain moisture; these mats will eventually decompose. Selected portions of the no-mow area were cut prior to seeding to help with seed-to-soil contact for a better germination rate.

Long term management recommendations

- **Watering** would be beneficial in the 2024 growing season during periods of prolonged drought.
- **Mowing** of seeded areas can be considered after the third year of growth (2026) or once the majority of wildflowers have reached 1 m in height, and every few years thereafter. Periodic mowing can help promote new growth in the following season by spreading seeds.
- Mowing should be done once per year, in late May, so that food sources and cover are available to pollinators and wildlife in winter and early spring.
- If mowing with a lawn mower, set the blades to the highest blade setting; if using a trimmer, cut wildflowers to approximately 15 cm in height.
- **Invasive species** should be monitored and managed regularly; SSEA can provide invasive species support to the municipality.

Naturalized Area



Ernest T. Bates Memorial Park

An area of 1,135 m² was naturalized and enhanced at Ernest T. Bates Memorial Park, through planting of trees, shrubs and wildflowers, and seeding of native wildflowers and grasses. In addition, invasive species were managed, with removal of approximately 90 kg of invasive plant material.



90 Kilograms of invasive species removed

140 Native trees planted

51 Native shrubs planted

191 Native wildflowers planted

5 Kilograms of native wildflower & grass seed were spread

45 Volunteers participated in naturalization activities

Species Planted: Trees & Shrubs

Eastern White Cedar (*Thuja occidentalis*)

Red Pine (*Pinus resinosa*)

Eastern White Pine (*Pinus strobus*)

White Spruce (*Picea glauca*)

Arrowwood (*Viburnum dentatum*)

Bush Honeysuckle (*Lonicera maackii*)

Fragrant Sumac (*Rhus aromatica*)

Silky Dogwood (*Cornus amomum*)



Arrowwood

Invasive Species Managed



Hedge & Field Bindweed removed

Field Bindweed (*Convolvulus arvensis*)

Bird's-foot Trefoil (*Lotus corniculatus*)

Broad-leaved Dock (*Rumex obtusifolius*)

Chicory (*Cichorium intybus*)

Glossy Buckthorn (*Rhamnus frangula*)

Hedge Bindweed (*Calystegia sepium*)

Hoary Alyssum (*Berteroa incana*)

Manitoba Maple (*Acer negundo*)

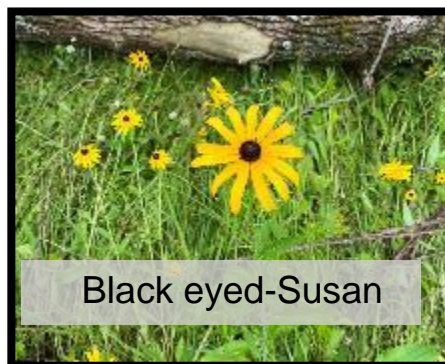
St. John's Wort (*Hypericum perforatum*)

White Mulberry (*Morus alba*)

White Sweet Clover (*Melilotus albus*)

Species Planted: Wildflowers

Black-eyed Susan (*Rudbeckia hirta*)
 Blue False Indigo (*Baptisia australis*)
 Blue Stemmed Goldenrod (*Solidago caesia*)
 Brown-eyed Susan (*Rudbeckia triloba*)
 Butterfly Milkweed (*Asclepias tuberosa*)
 Canada Goldenrod (*Asclepias tuberosa*)
 Dotted Bee Balm (*Monarda punctata*)
 Evening Primrose (*Oenothera biennis*)



Black eyed-Susan



Dotted Bee Balm

False Sunflower (*Heliopsis helianthoides*)
 Flat Topped Aster (*Doellingeria umbellata*)
 Foxglove Beardtongue (*Penstemon digitalis*)
 Gray Headed Coneflower (*Ratibida pinnata*)
 Harebell (*Campanula rotundifolia*)
 Heart Leaf Aster (*Symphyotrichum cordifolium*)
 Hoary Vervain (*Verbena stricta*)
 Lance Leaved Coreopsis (*Coreopsis lanceolata*)
 Leadplant (*Amorpha canescens*)
 Ox-eye Sunflower (*Heliopsis helianthoides*)

Purple Coneflower (*Echinacea purpurea*)
 Red Columbine (*Aquilegia canadensis*)
 Smooth Blue Aster (*Symphyotrichum laeve*)
 Sundrops (*Oenothera fruticosa*)
 Tall Coreopsis (*Coreopsis tripteris*)
 White False Indigo (*Pycnanthemum virginianum*)
 Wild Bergamot (*Monarda fistulosa*)
 Wild Chives (*Allium schoenoprasum*)



Smooth Blue Aster

Bare-root and potted native species that were planted in 2023 were well established by fall. Mulch mats were installed around shrubs to suppress weeds and help retain moisture; these mats will eventually decompose.

Long term management recommendations

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- **Invasive species** should be monitored and managed regularly; SSEA can provide invasive species support to the municipality.
- **Installing temporary fencing**/snow fencing around the tree planting area could be considered for winter, to prevent damage from snowmobiles if they travel through the park.

Naturalized Area



Little Lake Park

In Little Lake Park, 4,525 m² was naturalized and enhanced through planting of shrubs and wildflowers, and seeding of native wildflowers and grasses. In addition, invasive species were managed, with removal of approximately 90 kg of invasive plant material. Naturalization and enhancement activities were undertaken at the shoreline and in a newly established no-mow area located near the boat launch parking, and the recently established no-mow on Campbell Hill was enhanced with wildflowers.



90 Kilograms of invasive species removed

51 Native shrubs planted

276 Native wildflowers planted

5 Kilograms of native wildflower & grass seed were spread

5 Volunteers participated in naturalization activities

Species Planted: Shrubs

Arrowwood (*Viburnum dentatum*)
Bush Honeysuckle (*Lonicera tatarica*)
Fragrant Sumac (*Rhus aromatica*)
Silky Dogwood (*Cornus amomum*)



SSEA staff planting shrubs

Invasive Species Managed

Glossy Buckthorn (*Rhamnus frangula*)
Common Reed (*Phragmites*)



Common Reed managed by
SSEA staff



Glossy Buckthorn & Common
Reed removed

Species Planted: Wildflowers

Anise Hyssop (*Agastache Foeniculum*)
 Bee Balm (*Monarda didyma*)
 Black eyed-Susan (*Rudbeckia hirta*)
 Blue False Indigo (*Baptisia australis*)
 Brown-eyed Susan (*Rudbeckia triloba*)
 Butterfly Milkweed (*Asclepias tuberosa*)
 Canada Goldenrod (*Solidago canadensis*)
 Dotted Bee Balm (*Monarda punctata*)
 Eastern Figwort (*Scrophularia marilandica*)



Purple Coneflower



Flat Topped Aster

Evening Primrose (*Oenothera biennis*)
 Flat Topped Aster (*Doellingeria umbellata*)
 Foxglove Beardtongue (*Penstemon digitalis*)
 Grass Leaved Goldenrod (*Euthamia graminifolia*)
 Gray Headed Coneflower (*Ratibida pinnata*)

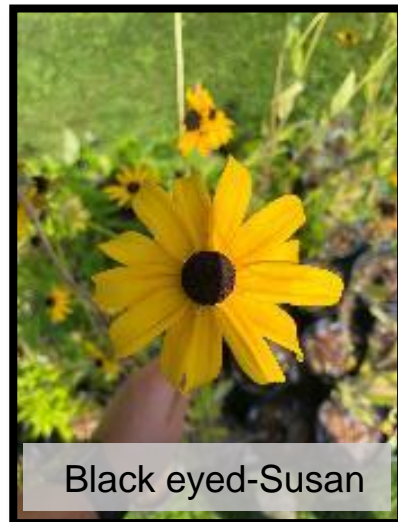
Hairy Beardtongue (*Penstemon hirsutus*)
 Heart Leaved Aster (*Symphotrichum cordifolium*)
 Ox-eye Sunflower (*Heliopsis helianthoidees*)
 Panicked Aster (*Symphotrichum lanceolatum*)



Butterfly Milkweed

Species Planted: Wildflowers

Purple Coneflower (*Echinacea purpurea*)
Red Columbine (*Aquilegia canadensis*)
Smooth Blue Aster (*Symphyotrichum laeve*)
Sundrops (*Oenothera fruticose*)
Thimbleweed (*Anemone virginiana*)
Upland White Goldenrod (*Solidago ptarmicoides*)
White False Indigo (*Pycnanthemum virginianum*)
Wild Bergamot (*Monarda fistulosa*)
Wild Chives (*Allium schoenoprasum*)



Black eyed-Susan



Planting area on Campbell Hill



Monarch on Purple Coneflower

Shrubs were planted as a border to the wildflower area of the Boat Launch site; wildflowers were planted and will self-seed on Campbell's Hill. Mulch mats were installed around shrubs to suppress weeds and help retain moisture; these mats will eventually decompose.

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Long term management recommendations

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Naturalized Area



Naturalized Area



Incidental Observations at Midland Sites



Killdeer



Small Heath Butterfly



Common Blue Damselfly



Blue Flag Iris



Monarch Butterfly



Adult & Juvenile Killdeer