



City Council Agenda Item Report

FROM: Scott Herbert – Public Works Superintendent

MEETING DATE: December 23, 2025

SUBJECT: Mt. Baldhead Revegetation

DESCRIPTION:

The PPW Committee and City Staff continue to refine details related to the Council Priority to revegetate the Mt. Baldhead slope.

BUDGET ACTION REQUIRED:

N/A

COMMITTEE/COMMISSION REVIEW:

N/A

LEGAL REVIEW:

N/A

SAMPLE MOTION:

Discussion only.

Mount Baldhead Revegetation Project Charter

Goal: Revegetate Mount Baldhead with native trees and forbs.

Objectives

- Remove invasive species
- Ensure minimal dune erosion
- Install replacement plants with the highest possible survival chances.

Participants

Saugatuck Staff – Scott Herbert and Michelle Gibson

Lead PPW Committee Member - Nancy Kimble

External Resources –Allegan Conservation District (ACD)

Potential Vendors – Outdoor Discovery Center and Kalamazoo Nature Center

Saugatuck City Council – All current Council members

Background

A significant population of the invasive plant, Asian bittersweet, was identified on the eastern slope of Mount Baldhead in 2012. In 2013, to eradicate bittersweet, targeted herbicide was applied. Unfortunately, the herbicide did not perform as anticipated, and nearly all plant species in the application area died. New plants were subsequently installed but the survival rate of the new plantings was low. As a result, the plants are relatively sparse in this area and many of those are invasive plants. There are also erosion concerns.

Scott Herbert contacted the Allegan Conservation District (ACD), and their staff surveyed the site to determine the presence of invasive species. A report was prepared that identified the invasive species currently inhabiting the site. The next step is to remove the invasives and replace them with appropriate natives. ACD staff are not available for invasives removal and new plantings. Instead, their report will be provided to vendors that are able to treat the invasives, recommend new plants, and perform the installation.

Scott was able to locate historical records that documented the trees that existed previously but that did not survive the herbicide application. This report will be provided to all identified vendors.

Approach

- Identify qualified vendors that can remove invasive species
- Provide vendors with historical records and ACD report on current invasive species
- Receive proposals from vendors for invasive plant removal and installation of appropriate native plants
- Evaluate proposals for cost effectiveness and risk mitigation (drought conditions, deer browse and human traffic)
- PPW Committee will select proposal with greatest success chance and recommend to City Council

Project Exclusions

Other areas of Mount Baldhead are excluded from this project.

Project Risks and Mitigation:

Risks: The most significant risk is poor survival rate of plantings

Mitigation: Carefully evaluate each proposal to ensure each known risk is minimized. Monitor conditions of plants for the first 2-3 years after installation and adjust mitigation measures as appropriate.

Target End Date: 12/31/2026

Charter Date: 12/12/2025

Charter Prepared by: Nancy Kimble

PROPOSAL FOR CONSERVATION SERVICES



This proposal was created for:

City of Saugatuck – Mount Baldhead Park
Mt Baldhead Park Trail, Saugatuck, MI 49453

General Background and Scope of Work:

The purpose of this proposal is to restore ecological health at Mount Baldhead through targeted invasive species management and the replanting of native dune vegetation. Previous control efforts done by a separate contractor inadvertently caused mortality to significant canopy cover and reduced dune stabilization, creating openings now dominated by invasive plants. Following a recent survey of the site, our team recommends the following management and replanting plan for 2026:

1. Invasive Species Management (see Appendix A for map)

- Several highly invasive species are present that threaten the integrity of the dune habitat, including: garlic mustard, multiflora rose, Asian bittersweet, Japanese barberry, tree-of-heaven, phragmites, and black locust.
- Our management approach will prioritize **safe and targeted** control methods that avoid unnecessary herbicide use and prevent damage to surrounding vegetation. Hand pulling will be implemented where practical, while cut-stump and hack and squirt treatments will be used to ensure precise and minimal herbicide applications. When foliar applications are necessary, they will be applied selectively and with safeguards to prevent off-target impacts.
- Includes procurement of all necessary permitting to apply herbicides through EGLE and MDARD.
 - **Note:** Many of the invasive species listed above typically require sustained and repeated management to successfully control. Effective treatment generally requires repeated management efforts over a period of multiple years to achieve meaningful reduction or eradication. Our team will continue to monitor the population annually and will provide updated pricing and management recommendations each year. The allows for adaptive management strategies based on observed changes in site conditions and treatment efficacy year-to-year.

2. Dune Revegetation

- Large areas of exposed soil across the dune north of the stairway currently face high risks of erosion and rapid recolonization by adjacent invasive species. To stabilize these areas, prevent further invasive spread, and enhance both habitat quality and aesthetics, we propose installing a diverse mix of native trees, shrubs, grasses, and forbs in the vacant space.
- Species selection will highlight erosion control, drought tolerance, and deer resistance, recognizing the heavy browsing pressure present at this site. Plantings will be matched to each micro-site's soil and sunlight conditions to maximize survival rates and ecological value.
 - **Trees:** Sugar Maple (*Acer saccharum*), Tulip Poplar (*Liliodendron tulipifera*), Basswood (*Tilia americana*), White Pine (*Pinus strobus*), Oak (*Quercus spp.*), Bladdernut (*Staphylea trifolia*), Serviceberry (*Amelanchier spp.*), etc.
 - **Shrubs:** Witch Hazel (*Hamamelis virginiana*), Sand Cherry (*Prunus pumila*), Ninebark (*Physocarpus opulifolius*), Spicebush (*Lindera benzoin*), Arrowwood Viburnum (*Viburnum dentatum*), Northern Bush Honeysuckle (*Diervilla lonicera*), Sweet Fern (*Comptonia peregrina*), etc.
 - **Forbs/graminoids:** Canada Wild Rye (*Elymus canadensis*), Bottlebrush Grass (*Elymus hystrix*), Little Bluestem (*Schizachyrium scoparium*), Beach Grass (*Ammophila breviligulata*), Sand Reed (*Calamovilfa longifolia*), Penn Sedge (*Carex pensylvanica*), Columbine (*Aquilegia canadensis*), Hairy Puccoon (*Lithospermum carolinense*), Dotted Mint (*Monarda punctata*), Flowering Spurge (*Euphorbia corollata*), etc.

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- Approximately **500** native plants will be installed throughout the unit, including, bare-root, 1-3 gallon, and 4" plugs.
 - Protective exclusion measures such as tree tubes and four 900 ft² sections of 6'-tall exclusion fencing will be implemented where applicable to prevent herbivory and physical damage to developing plantings (See *Appendix B* for layout).
 - Informational signage will be installed in high-traffic and erosion-prone areas to encourage public awareness, limit off-trail usage, and protect restoration efforts (See *Appendix B* for examples).
 - **"Sensitive Habitat Area – Keep Out"** signs (4"x6") will be placed at key intervals and potential access points throughout the unit as needed.
 - A total of four (4) **"Restoration in Progress"** signs (2'x3') will be placed in key locations to minimize off-trail use and reduce disturbance from hikers.
 - In addition to the live plantings, a custom native seed mix highlighting dune-adapted forbs and graminoids will be seeded following invasive species management efforts to enhance diversity and further stabilize exposed soils.

Project Timeline:

- Invasive species management ongoing during the 2026 growing season
- Live plantings and native seeding will be phased as invasive species treatments allow, from spring through early fall of 2026
- Signage and exclusion fencing will be installed immediately following planting.

Project Budget:

- **Invasive Species Management in 2026 - \$10,000** (billed in June 2026) ☐
- **Dune Revegetation (500 plants) - \$11,860** (billed in June 2026) ☐

***PLEASE CHECK THE APPROPRIATE BOXES ABOVE TO INDICATE ACCEPTED SERVICES**

Note: *This proposal accounts for pricing of all labor, materials, and equipment necessary in order to perform the outlined invasive species management plan. If additional work is required beyond the scope of this proposal, we will provide written notification and pricing will be determined on a time and materials basis.*

Exclusions: This proposal does not account for:

- Installation of exclusion fencing beyond what is outlined in this proposal.
- Production and installation of signage beyond what is outlined in this proposal.
- Installation or management of irrigation features.
- Removal of standing dead plant material following invasive species control measures.
- Replacement of damaged lawn, landscape plants, trees or shrubs as a result of nearby invasive species control measures.
- Replanting of native vegetation following invasive species control measures (unless otherwise stated on the proposal).

**** We are happy to assist with any of the above items upon request through a separate proposal. For custom signage inquiries or quotes, please contact: dylana@outdoordiscovery.org.**

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Qualifications:

ODC Conservation Services staff are highly qualified conservation professionals.

- ODC Network, and its subsidiaries, is a fully insured 501c3 and carries an extensive liability policy to conduct habitat improvement services in Michigan
- State licensed herbicide applicators with certifications in Forest Pest, Right-of-Way, and Aquatic pesticide application
- Combined 25+ years experience in invasive species management
- Successfully restored over 250 acres of native prairie
- Successfully installed over 25 native gardens and landscape beds
- Manage 2,000+ acres of high quality natural area
- Experienced Michigan flora and fauna identification
- Advanced wetland delineation certification
- Experienced GIS professionals

We appreciate the opportunity to submit this proposal. We look forward to discussing the opportunity further with you. Please do not hesitate to ask questions or clarifications. If you choose to accept this proposal, please sign and return a copy.



Tanner Bricker, Conservation Services Director
ODC Network
517-398-7800

If you wish to accept this proposal, please initial each page, as well as sign and date below:

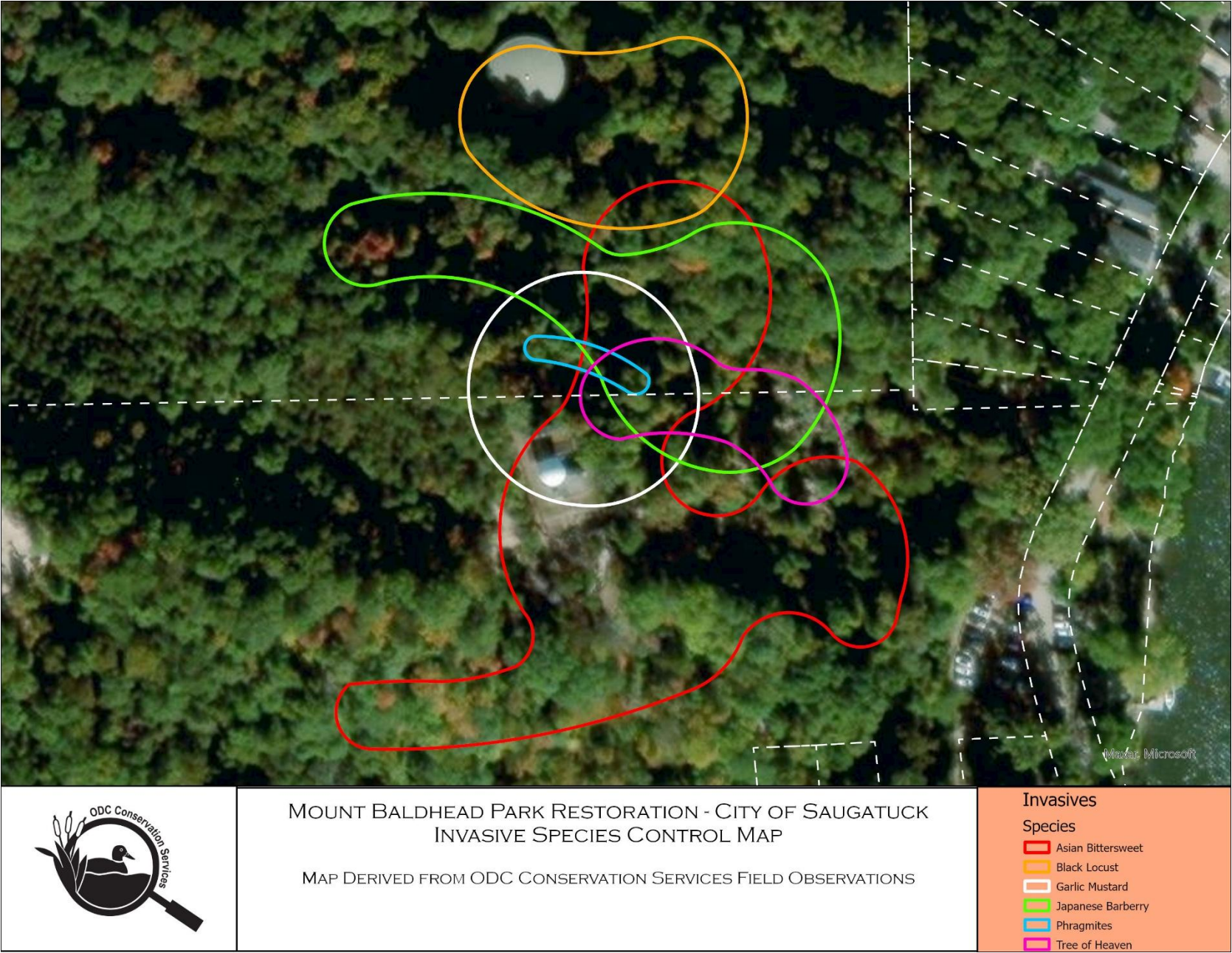
Signature of Authorized Property Owner/Manager

Date



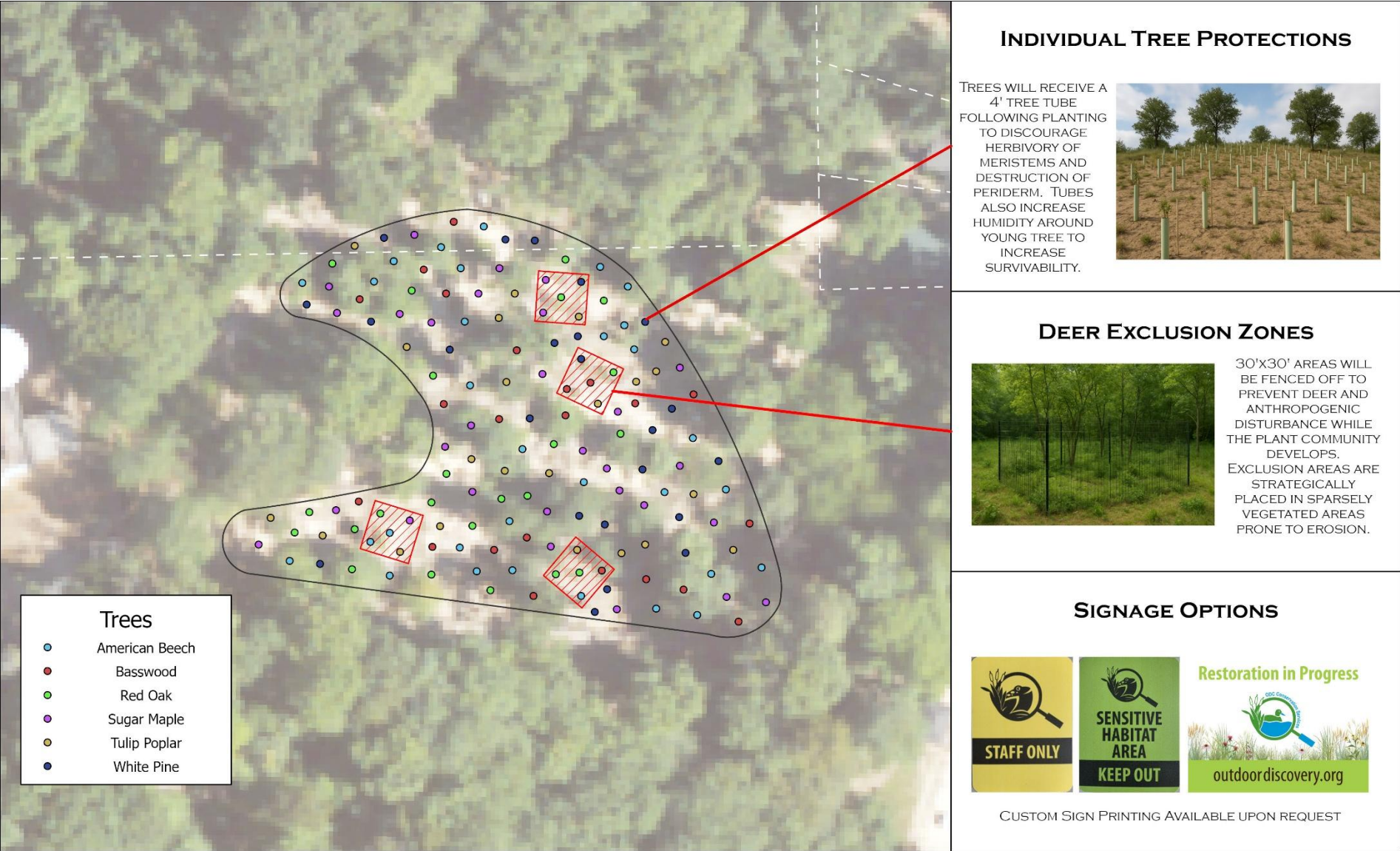
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Appendix A: Map of Surveyed Invasive Species



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Appendix B: Replanting Zones and Tree Exclusion Areas



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Kalamazoo Nature Center
7000 N. Westnedge Avenue
Kalamazoo, MI 49009
Ecological Services
269-978-6872
ecoservices@naturecenter.org

PROJECT WORK PLAN AND ESTIMATE FOR

City of Saugatuck
Scott Herbert
102 Butler St. P.O. 86
Saugatuck MI, 49453
(616)886-8408

Date: 9/2/2025

TOTAL ESTIMATE

\$10,107.00

scott@saugatuckcity.com

Client Name	Project Description	Project #	Estimate good for
City of Saugatuck	Invasive Species Management at Mt. Baldhead Backdune	26001 A	90 days

Day	Description	Qty	Units	Cost	Line Total
	Herbicide and Equipment	3	days	\$ 60.00	\$ 180.00
	Labor: Project Lead	25.5	hours	\$ 75.00	\$ 1,912.50
	Labor: Supporting Crew of 4	102	hours	\$ 65.00	\$ 6,630.00
	Mileage: Truck + Trailer	306	miles	\$ 2.00	\$ 612.00
	Project Management (3hr/day)	9.00	hours	\$ 75.00	\$ 675.00
	Administrative (1.5hr/mth)	1.5	hours	\$ 65.00	\$ 97.50

Site Lead: Luke Allison/Kyle Martin
Site Address: Mt. Baldhead - 769 Park Street Saugatuck, MI 49453
Service Description: 3 days of invasive species management on the east facing back dune habitat of Mt. Baldy. KNC staff will perform foliar treatment of smaller invasive species such as Jap. Barberry. For larger species such as Tree of Heaven, Privet, and Bittersweet stem injection techniques will be utilized to minimize any off target impacts and soil drift.
Area (acres): 3.25
of Workers: 5
of Work Days: 3

Labor	\$ 9,315.00
Mileage	\$ 612.00
Equipment	\$ 180.00
Supplies	\$ -
SUBTOTAL	\$ 10,107.00

GRAND TOTAL \$ 10,107.00

This is an estimate, actual invoices will be based on specific costs and quantities of materials purchased and actual labor time spent on the project.

View Full Terms and Conditions in the Client Agreement. The Project must be accepted by signing the Client Agreement before work can begin.

For questions regarding this estimate or to set a work schedule, please contact

Proceeds from our client services ensure the sustainability of KNC's longstanding bird observatory, programs that engage the community in wildlife research, and the



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City of Saugatuck
Scott Herbert
102 Butler St. P.O. 86
Saugatuck MI, 49453
(616)886-8408

Date: 9/2/2025

TOTAL ESTIMATE

\$23,514.50

scott@saugatuckcity.com

Client Name	Project Description	Project #	Estimate good for
City of Saugatuck	Revegetation of Mt. Baldhead Backdune	26001 C	90 days

Day	Description	Qty	Units	Cost	Line Total
	Equipment: Planting tools	3	days	\$ 60.00	\$ 180.00
	Labor: Project Lead	28.5	hours	\$ 75.00	\$ 2,137.50
	Labor: Supporting Crew of 5	142.5	hours	\$ 65.00	\$ 9,262.50
	Mileage: Truck + Trailer	306	miles	\$ 2.00	\$ 612.00
	Supplies: Dune grass sprigs	20000	sprigs	\$ 0.35	\$ 7,000.00
	Supplies: Bare root trees/shrubs + tree guards	150	seedlings	\$ 8.00	\$ 1,200.00
	Supplies: Custom backdune seed - Native Connections	31	lbs	\$ 1,400.00	\$ 1,400.00
	Supply Pickup/handling & transport			\$ 500.00	\$ 500.00
	Project Management	15.00	hours	\$ 75.00	\$ 1,125.00
	Administrative	1.5	hours	\$ 65.00	\$ 97.50

Site Lead: Luke Allison
Site Address: Mt. Baldhead - 769 Park Street, Saugatuck MI, 49453
Service Description: KNC staff to purchase, transport, and plant dunegrass, bare root seedlings, and seed to revegetate the backdune face of Mt. Baldhead.
Area (acres): 1.5
of Workers: 6
of Work Days: 3

Labor	\$ 13,122.50
Mileage	\$ 612.00
Equipment	\$ 180.00
Supplies	\$ 9,600.00
SUBTOTAL	\$ 23,514.50

GRAND TOTAL	\$ 23,514.50
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KNC-Mt Baldy, Saugatuck-SMW-2025
Dune Seed Mix Summary
8/28/2025

											Hydrology					Shade Tolerance			Soil Type							
						% by native		Wetland		Conserv.	Dry	Dry-mesic	Mesic	Wet-mesic	Wet	Emergent	Full Sun	Part	Shade	Clay	Loam	Sand	Muck	Legume	Height (ft)	Color
Graminoids - Scientific Name	Common Name	PLS Oz/A	Total PLS Oz	Seeds per sq. ft.	% by weight	seeds	C-Value	Code	Status																	
<i>Calamovilfa longifolia</i>	Sand Reed Grass	4.00	8.000	0.83	4.35%	1.34%	10	UPL	-	X	-	-	-	-	-	-	X	-	-	-	-	S	-	-	3-6'	g
<i>Elymus canadensis</i>	Canada Wild Rye	32.00	64.000	3.82	34.78%	6.19%	5	FACU	-	X	X	X	-	-	-	-	X	X	-	C	L	S	-	-	5'	g
<i>Elymus hystrix</i>	Bottlebrush Grass	12.00	24.000	2.09	13.04%	3.39%	5	FACU	-	X	X	X	-	-	-	-	-	X	X	-	L	S	-	-	3'	g
<i>Koeleria cristata</i> (K. <i>macrantha</i> , <i>pyramidata</i>)	June Grass	4.00	8.000	18.37	4.35%	29.77%	9	UPL	-	X	X	-	-	-	-	-	X	X	-	-	L	S	-	-	2'	g
<i>Panicum virgatum</i>	Switchgrass	4.00	8.000	1.29	4.35%	2.08%	4	FAC	-	X	X	X	X	-	-	-	X	-	-	C	L	S	M	-	4'	g
<i>Schizachyrium scoparium</i>	Little Bluestem	8.00	16.000	2.75	8.70%	4.46%	5	FACU	-	X	X	X	-	-	-	-	X	-	-	-	L	S	-	-	3-4'	g

Herbaceous Forbs - Scientific Name

<i>Anemone cylindrica</i>	Thimbleweed	2.00	4.000	1.19	2.17%	1.93%	6	UPL	-		X	X	X	-	-	-	X	X	-	-	L	S	-	-	2'	wht
<i>Anemone virginiana</i>	Tall Thimbleweed	2.00	4.000	1.29	2.17%	2.08%	3	FACU	-		X	X	X	-	-	-	X	X	-	-	L	S	-	-	3'	wht
<i>Aquilegia canadensis</i>	Wild Columbine	3.00	6.000	2.62	3.26%	4.24%	5	FACU	-		X	X	X	-	-	-	X	X	-	-	L	S	-	-	2'	red
<i>Asclepias syriaca</i>	Common Milkweed	4.00	8.000	0.37	4.35%	0.60%	1	UPL	-		X	X	X	X	-	-	X	X	-	C	L	S	M	-	3'	pur
<i>Coreopsis lanceolata</i>	Lance-leaf Coreopsis	8.00	16.000	3.67	8.70%	5.95%	8	FACU	-		X	X	-	-	-	-	X	-	-	-	L	S	-	-	2'	yel
<i>Monarda punctata</i>	Horsemint	2.00	4.000	4.13	2.17%	6.70%	4	UPL	-		X	-	-	-	-	-	X	-	-	-	-	S	-	-	2'	pur
<i>Oenothera biennis</i>	Common Evening Primrose	6.00	12.000	12.40	6.52%	20.09%	2	FACU	-		X	X	X	X	-	-	X	X	-	C	L	S	M	-	6'	yel
<i>Solidago nemoralis</i>	Old-field Goldenrod	1.00	2.000	6.89	1.09%	11.16%	2	UPL	-		X	X	-	-	-	-	X	-	-	-	L	S	-	-	2'	yel
Forbs Oz per Acre		28.00																								
Forbs Lbs per Acre		1.75																								
				Forbs sds/sq ft	32.55	30.43%	52.76%																			

Woody Shrubs, Vines - Scientific Name

Woodies Oz per Acre	0.00	Woodies sds/sq ft	0.00	Total	0.00%	Total	0.00%
Woodies Lbs per Acre	0.00						

Annuals, Temp Nurse Crop, etc.	Common Name	Bulk Oz/A	Bulk LBs	Temp Seeds per sq. ft.
<i>Avena sativa</i>	Seed Oats	400.00	50.000	9.18
Temp Oz per Acre		400.00		Temp sds/sq ft
Temp Lbs per Acre		25.00		9.18

Total PLS Lbs/Acre 'Natives'	5.75
Total Lbs/Acre 'ALL'	30.75

Total Acres	2.00
Total PLS Lbs 'Natives'	11.50
Total PLS Lbs 'ALL'	61.50

# of Native Grass Species	6
# of Native Forb Species	8
# of Native Woody Species	0
# of Temp Species	1

Mix 'Natives'	weight (lbs)	seeds/sq ft	Avg C
Total per acre	5.75	61.70	4.93
% Forbs	30.43%	52.76%	FQI
% Woodies	0.00%	0.00%	18.44
% Grasses	69.57%	47.24%	

Mix 'ALL'	weight (lbs)	seeds/sq ft
Total per acre	30.75	70.88
% Forb Spp	5.69%	45.93%
% Woodies	0.00%	0.00%
% Grass Spp	13.01%	41.12%
% Temp Spp	81.30%	12.96%

NOTE: Species availability not guaranteed. Substitutions may be required. All species to be adjusted to 100% PLS (Pure Live Seed) as noted.

NOTE:



Native Connections
3815 N Westnedge Ave
Kalamazoo, MI 49004
www.nativeconnections.net