Buhr Park Green Stormwater Features

Approximate Address: 2751 Packard

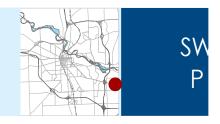




0 90 180 360 Feet

Buhr Park: Children's Wet Meadow I & Children's Wet Meadow Annex

Approximate Address: 2751 Packard





0 255 510 1,020 Feet

Year Built: CWM I- 1997, Annex- 2011 Designer: Tilton & Associates, Inc Aesthetic Level Required: Medium

DESCRIPTION:

The original children's wet meadow is located south of the path and the annex is located to the north. Both were built by the wet meadow team, Blossom Preschool, friends, neighbors and the Super Swampers. Support was provided by Wild Ones, Ann Arbor Parks & Recreation, the Water Resources Commissioner's Office, and the Ann Arbor Area Community Foundation. A controlled burn was conducted in the spring of 2016 north of the path. Stormwater runoff comes from overland flow.

MAINTENANCE NOTES:

Crown Vetch, Reed Canary Grass and saplings need to be removed regularly.



ACTIVITY	Monthly	Biannually	Annually	As Needed
Remove Trash	Х			
Remove Invasives	Х			
Remove Sediment				Х
Controlled Burns				Х
Herbicide				Х
Add/Divide Plants				Х
Collect Seeds		late summer & fall		
YEARLY ESTIMATE	HOURS	COST		
Supervisor Labor	24	\$977		
Volunteer Labor	40	\$800		
Equipment		\$118		
Controlled Burns		\$426		
Herbicide	0.75	\$27		
Contingency (10%)		\$243		

\$2,591

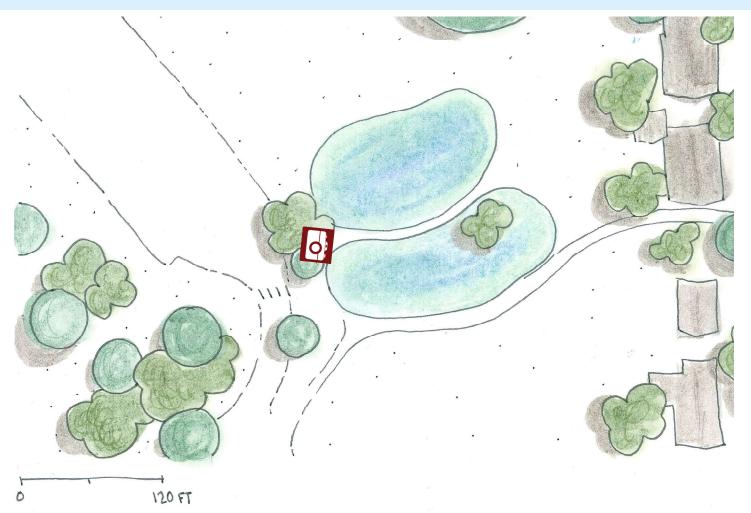
SUM

August 2014

Buhr Park: Children's Wet Meadow I

Site Plan

Acres: 0.58 SF: 25,417



NATIVE PLANTS TO LOOK FOR:

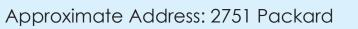
Perennials:

Bergamot (Monarda fistulosa) Big Bluestem (Andropogon gerardii) Blue Flag Iris (Iris virginica) Blue Lobelia (Lobelia siphilitica) Boneset (Eupatorium perfoliatum) Fringed Brome (Bromus ciliatus) Grass-leaved Goldenrod (Euthamia graminifolia) Great Blue Lobelia (Lobelia siphilitica) Joe Pye Weed (Eupatorium maculatum) Marsh Agrimony (Agrimona parisflora) Marsh Thistle (Cirsium muticum) Sedge (Carex comosa) Swamp Aster (Aster firmus) Swamp Milkweed (Asclepias incarnata) Wild Iris (Iris versicolor)

Shrubs and Trees:

Box Elder (Acer negundo) Elderberry (Sambucus canadensis) Gooseberry (Ribes grossularia) Paw Paw (Asimina triloba) Red Current (Ribes rubrum)

Buhr Park: Children's Wet Meadow II





SW



Year Built: 2004

Designer: Tilton & Associates, Inc. Aesthetic Level Required: Medium

DESCRIPTION:

This swale receives water from the ice arena building. The shape is tiered to slow water flowing down the slope. This project was completed by the Children's Wet Meadow team. A controlled burn was conducted in the spring of 2016. NAP will burn this rain garden regularly.

MAINTENANCE NOTES:

Invasive species include Tree of Heaven (Basal bark treatment), Honeysuckle, Canada Thistle and Yellow Sweet Clover.



ACTIVITY	Monthly	Biannually	Annually	As Needed
Remove Trash	Х			
Remove Invasives	Х			
Remove Sediment				Х
Controlled Burns				Х
Herbicide				Х
Add/Divide Plants				Х
Collect Seeds		late summer & fall		
YEARLY ESTIMATE	HOURS	COST		
Supervisor Labor	26	\$1,058		
Volunteer Labor	40	\$800		
Equipment		\$118		
Controlled Burns		\$576		
Herbicide	1	\$37		
Contingency (10%)		\$259		

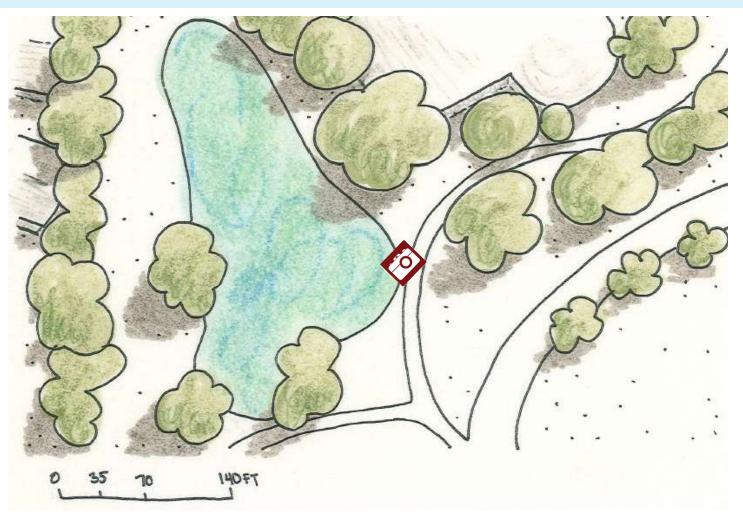
\$2,848

SUM

Buhr Park: Children's Wet Meadow II

Site Plan

Acres: 0.79 SF: 34,354



NATIVE PLANTS TO LOOK FOR:

Perennials:

Aster spp.

Bergamot (Monarda fistulosa) Blue Flag Iris (Iris virginica) Butterfly Milkweed (Ascepias tuberosa) Goldenrod (Solidago spp) Golden Alexander (Zizia aurea) Little Bluestem (Schizachyrium scoparium) Lupine (Lupinus) Prairie Clover (Dalea) Prickly Pear (Opuntia) Wild Geranium (Geranium maculatum) Wild Strawberry (Fragaria vesca)

Shrubs and Trees:

Box Elder (Acer negundo) Elderberry (Sambucus canadensis) Flowering Dogwood (Cornus florida) Honey Locust (Gleditsia triacanthos) Redbud (Cercis canadensis) Swamp White Oak (Quercus bicolor)

Buhr Park: Children's Wet Meadow III

Approximate Address: 2751 Packard





0 255 510 1,020 Feet

Year Built: 2010

Designer: Tilton & Associates, Inc. and Ann Arbor Parks & Recreation Aesthetic Level Required: Medium

DESCRIPTION:

This garden is the third addition to the Children's Wet Meadow project. This wet meadow was installed as part of the Stormwater Management Plan. A controlled burn was conducted in the spring of 2016. NAP will burn this rain garden regularly. Stormwater runoff comes from overland flow.

MAINTENANCE NOTES:

Take care when burning near plastic outlet structure. Invasives include Canada Thistle and Chickory.



ACTIVITY	Monthly	Biannually	Annually	As Needed
Remove Trash	Х			
Remove Invasives	Х			
Remove Sediment				Х
Controlled Burns				Х
Herbicide				Х
Add/Divide Plants				Х
Collect Seeds		late summer & fall		
YEARLY ESTIMATE	HOURS	COST	•	
Supervisor Labor	26	\$1,302		
Volunteer Labor	40	\$800		
Equipment		\$118		
Controlled Burns		\$796		

1.25

\$50

\$282 \$3,348

Herbicide

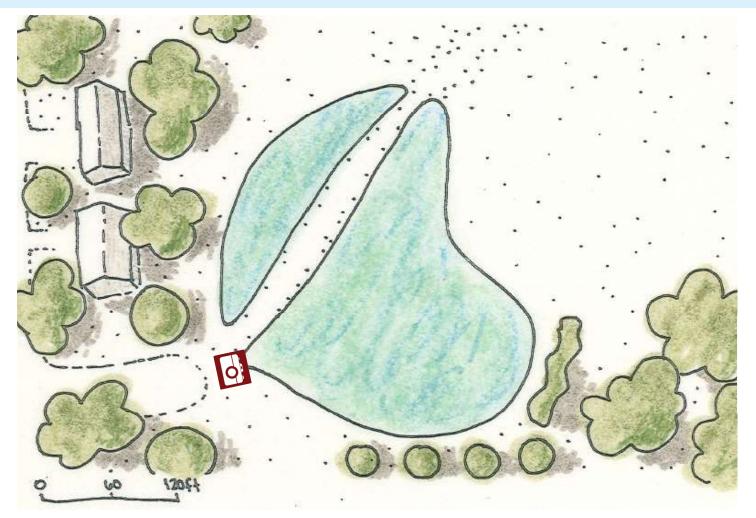
Contingency (10%)

SUM

Buhr Park: Children's Wet Meadow III

Site Plan

Acres: 1.09 SF: 47,476



NATIVE PLANTS TO LOOK FOR: Perennials:

Aster spp. Bee Balm (Monarda) Blue Flag Iris (Iris virginica) Golden Alexander (Zizia aurea) Goldenrod (Solidago spp) Prairie Dock (Silphium terebinthinaceum) Swamp Milkweed (Ascelpias incarnata)

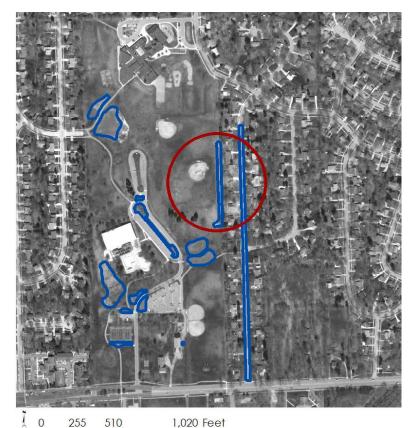
Shrubs and Trees:

Eastern Cottonwood (Populus deltoides) Red Osier Dogwood (Cornus sericea) Silver Maple (Acer saccharinum)

Buhr Park: Swale Meadow

Approximate Address: 2751 Packard





Year Built: 2003

Designer: Tilton & Associates, Inc Aesthetic Level Required: Medium

DESCRIPTION:

This rain garden was built in 2003 to infiltrate stormwater runoff as part of the Stormwater Management Plan. Stormwater runoff is held back from entering residential parcels downhill. A controlled burn was conducted in the spring of 2016. NAP will burn this rain garden regularly. Stormwater runoff comes from overland flow.

MAINTENANCE NOTES:

Maintenance work done to the electrical lines above this swale has damaged plantings in the past. Invasives include black locust.

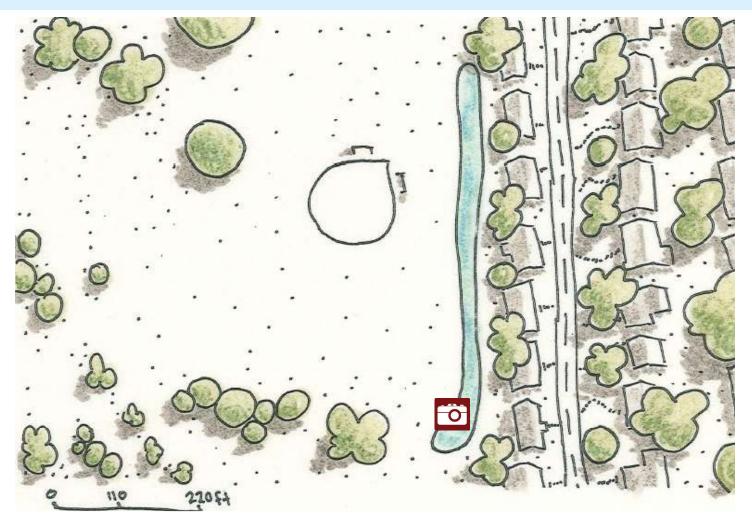


ACTIVITY	Monthly	Biannually	Annually	As Needed
Remove Trash	Х			
Remove Invasives	Х			
Remove Sediment				Х
Controlled Burns				Х
Herbicide				Х
Add/Divide Plants				Х
Collect Seeds		late summer & fall		
YEARLY ESTIMATE	HOURS	COST		
Supervisor Labor	26	\$1,058		
Volunteer Labor	40	\$800		
Equipment		\$118		
Controlled Burns		\$257		
Herbicide	0.25	\$10		
Contingency (10%)		\$225		
SUM		\$2,468		

Buhr Park: East Swale

Site Plan

Acres: 0.35 SF: 15,301



NATIVE PLANTS TO LOOK FOR:

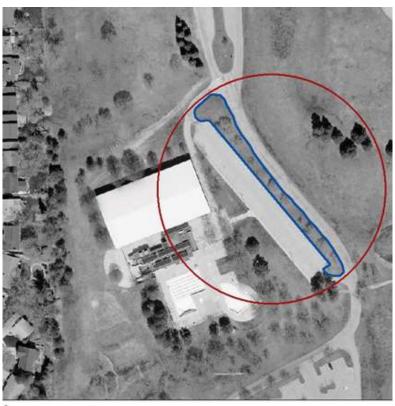
Perennials:

Aster spp. Bergamot (Monarda fistulosa) Golden Alexander (Zizia aurea) Goldenrod (Solidago spp) Prairie Dock (Silphium terebinthinaceum) Spiderwort (Tradescantia) Swamp Milkweed (Ascelpias incarnata)

Buhr Park: Pool Parking Lot Rain Garden



Approximate Address: 2751 Packard



0 50 100 200 Fee

Year Built: 2012

Designer: Conservation Design Forum Aesthetic Level Required: Medium

DESCRIPTION:

This swale receives water from the parking lot and road. Along the eastern side runs a pervious parking lot. The City of Ann Arbor installed this garden. A controlled burn was conducted in the spring of 2016. NAP will burn this rain garden regularly.

MAINTENANCE NOTES:

Purple Loosestrife, Crown Vetch and other aggressive invasives will need to be treated with herbicide. Additional invasives include Yellow Sweet Clover and Canada Thistle. Cut back standing dead between late fall and early spring.

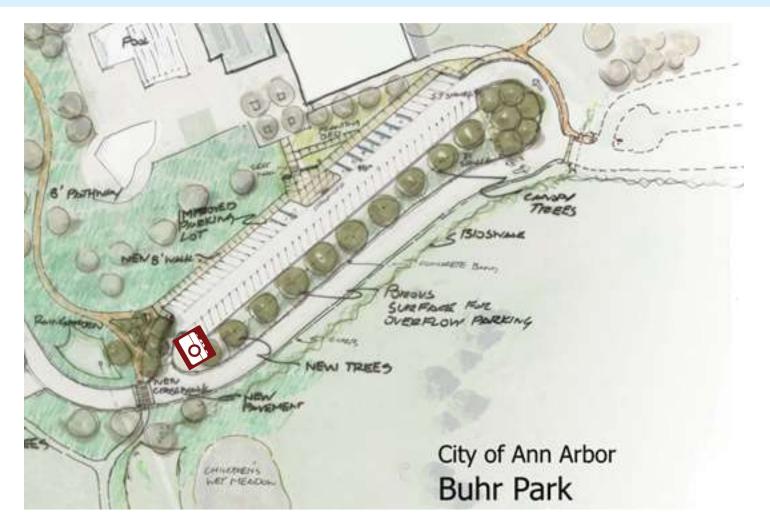


ACTIVITY	Monthly	Biannually	Annually	As Needed
Remove Trash	Х			
Remove Invasives	Х			
Remove Sediment		Х		
Controlled Burns				Х
Herbicide				Х
Add/Divide Plants				Х
Collect Seeds		late summer & fall		
YEARLY ESTIMATE	HOURS	COST		
-				
Supervisor Labor	15	\$611		
Volunteer Labor	8	\$160		
Equipment		\$103		
Controlled Burns		\$292		
Herbicide	0.5	\$19		
Contingency (10%)		\$118		
SUM		\$1,303		

Buhr Park: Pool Parking Lot Rain Garden

Site Plan

Acres: 0.4 SF: 17,420



NATIVE PLANTS TO LOOK FOR:

Perennials:

Aster spp.

Beardtongue (Penstemon digitalis) Bergamot (Monarda fistulosa) Black Eyed Susan (Rudbeckia hirta) Blue Flag Iris (Iris virginica) Butterfly Weed (Asclepias tuberosa) Fox Sedge (Carex vulpinoidea) Golden Alexander (Zizia aurea) Goldenrod (Solidago spp) Switchgrass (Panicum virgatum)

Shrubs and Trees:

Red Oak (Quercus rubra) Boxelder (Acer negundo)

Buhr Park: North Annex Rain Garden

Approximate Address: 2751 Packard







Year Built: 2012

Designer: Conservation Design Forum Aesthetic Level Required: Medium

DESCRIPTION:

This rain garden receives water from the parking lot and road. The City of Ann Arbor installed this garden. A controlled burn was conducted in the spring of 2016 by NAP. NAP will regularly burn this area.

MAINTENANCE NOTES:

Invasives include Purple Loosestrife and Chickory. Cut back standing dead between late fall and early spring.

0 45 90 180 Feet



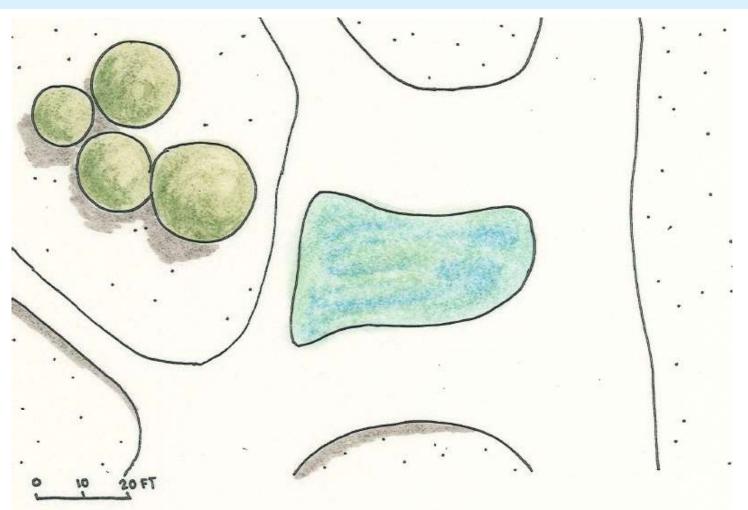
ACTIVITY	Monthly	Biannually	Annually	As Needed
Remove Trash	Х			
Remove Invasives	Х			
Remove Sediment			Х	
Controlled Burns				Х
Herbicide				Х
Add/Divide Plants				Х
Collect Seeds				Х

YEARLY ESTIMATE	HOURS	COST
Supervisor Labor	13	\$529
Volunteer Labor	7	\$140
Equipment		\$103
Controlled Burns		\$23
Herbicide	0.25	\$9
Contingency (10%)		\$80
SUM		\$884

Buhr Park: North Annex Rain Garden

Site Plan

Acres: 0.03 SF: 1,362



NATIVE PLANTS TO LOOK FOR:

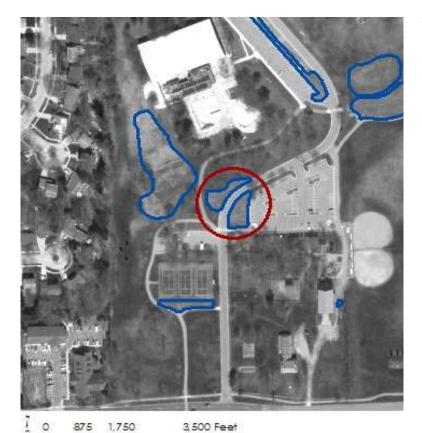
Perennials:

Aster spp. Black Eyed Susan (Rudbeckia hirta) Golden Alexander (Zizia aurea) Goldenrod (Solidago spp) Prairie Dock (Silphium terebinthinaceum) Shrubs and Trees: Boxelder (Acer negundo)

Buhr Park: South Parking Lot

Approximate Address: 2751 Packard





Year Built: 2012

Designer: Conservation Design Forum Aesthetic Level Required: Medium DESCRIPTION:

The City of Ann Arbor installed these rain gardens. The garden south of the parking lot receives stormwater runoff from the parking lot. The garden north of the road receives runoff from the grassy hill and the road. A controlled burn was conducted in the spring of 2016. NAP will burn this rain garden regularly.

MAINTENANCE NOTES:

Invasives include Purple Loosestrife, Yellow Sweet Clover, Sow Thistle and Canda Thistle.



ACTIVITY	Monthly	Biannually	Annually	As Needed
Remove Trash	Х			
Remove Invasives	Х			
Remove Sediment			Х	
Controlled Burns				Х
Herbicide				Х
Add/Divide Plants				Х
Collect Seeds			fall	

YEARLY ESTIMATE	HOURS	COST
Supervisor Labor	15	\$611
Volunteer Labor	8	\$160
Equipment		\$103
Controlled Burns		\$198
Herbicide	0.4	\$13
Contingency (10%)		\$108
SUM		\$1,193

August 2016

Buhr Park: South Parking Lot



NATIVE PLANTS TO LOOK FOR:

Perennials:

Aster spp.

Beardtongue (Penstemon digitalis) Big Bluestem (Andropogon gerardii) Black Eyed Susan (Rudbeckia hirta) Blue Flag Iris (Iris virginica) Fox Sedge (Carex vulpinoidea) Goldenrod (Solidago spp) Golden Alexander (Zizia aurea) Swamp Milkweed (Asclepias incarnata) Trees and Shrubs: Ninebark (Physocarpus opulifolius)

Buhr Park: Tennis Court Rain Garden

Approximate Address: 2751 Packard



SW



0 255 510 1,020 Feet

Year Built: 2012

Designer: Ann Arbor Parks & Recreation Aesthetic Level Required: Medium

DESCRIPTION:

This swale receives and stores stormwater from the tennis courts. The City of Ann Arbor installed this garden. A controlled burn was conducted in the spring of 2016. NAP will burn this rain garden regularly.

MAINTENANCE NOTES:

Due to a lack of maintenance, this area is heavily infested with invasives like Canada Thistle, Yellow Sweet Clover and Honeysuckle. Cut back standing dead between late fall and early spring.



ACTIVITY	Monthly	Biannually	Annually	As Needed
Remove Trash	Х			
Remove Invasives	Х			
Remove Sediment				Х
Controlled Burns				Х
Herbicide				Х
Add/Divide Plants				Х
Collect Seeds				Х

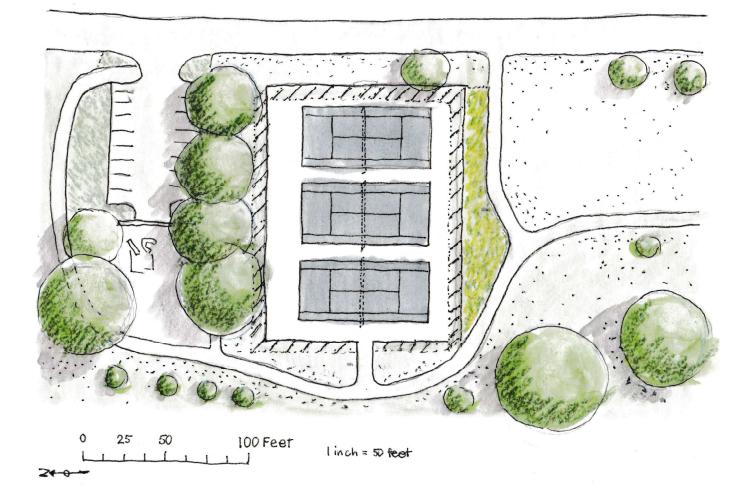
YEARLY ESTIMATE	HOURS	COST
Supervisor Labor	15	\$611
Volunteer Labor	7	\$140
Equipment		\$103
Controlled Burns		\$49
Herbicide	0.25	\$9
Contingency (10%)		\$91
SUM		\$1,003

June 2014

Buhr Park Tennis Court Rain Garden

Site Plan

Acres: 0.07 SF: 2,900



NATIVE PLANTS TO LOOK FOR:

Perennials:

Aster spp. Bergamot (Monarda fistulosa) Fox Sedge (Carex vulpinoidea) Goldenrod (Solidago spp) Golden Alexander (Zizia aurea)