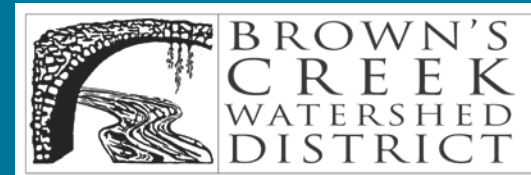


Raingarden Design



Mike Isensee, Middle St. Croix Watershed Administrator
Angie Hong, East Metro Water Resources Education Program
Tara Kline, Washington Conservation District, Design Specialist
Mary Green, Washington County Master Gardener
Howard Markus, Washington County Master Gardener



Tonight:



*Finalized Materials Costs
Plant Selection and Layout
Cost Share Application Form*



Equipment and Materials

Piping and Drain Tile



Flexible
connector
with grate -
\$10



4" Drain tile
\$0.50/foot

Drain Tile outlet \$10



Pop up emitter \$35

Grading and Site Prep Related Materials

Riser-Pipe and draintile outlet (as per plan) (4-6" pipe w/ debris cover @ inlet & outlet)
Leaf-Compost/Soil Replacement for Raingarden (well-aged, weed-seed free)
Edging (Type _____)
Edging Trencher
Sod Cutter
Rototiller
Delievery (Leaf-Compost)

Qty	Unit	Unit Cost	Amount
	overflow	\$	\$
	cu yd	\$	\$
	ft	\$	\$
	hr	\$	\$
	hr	\$	\$
	hr	\$	\$
	delivery	\$	\$

GRADING AND SITE-PREPARATION RELATED COSTS

\$

Leaf Litter Compost

1 truckload (1 yard) for
250 sq. ft. raingarden
Cost is \$12-\$25 per yard



Delivery fee is about \$70
per load

Grading and Site Prep Related Materials

Riser Pipe and drain tile outlet (as per plan) (4 6" pipe w/ debris cover @ inlet & outlet)

Leaf-Compost/Soil Replacement for Raingarden (well-aged, weed-seed free)

Edging (Type)

Edging Trencher

Sod Cutter

Rototiller

Delievery (Leaf-Compost)

Qty	Unit	Unit Cost	Amount
	overflow	\$	\$
	cu yd	\$	\$
	ft	\$	\$
	hr	\$	\$
	hr	\$	\$
	hr	\$	\$
	delivery	\$	\$

GRADING AND SITE-PREPARATION RELATED COSTS

\$



Borders

Edging



Plastic \$0.75/ft



Steel \$2.50 to \$3.50/ft



Trencher \$65.00 for 2 hrs



Aluminum \$1.75 to \$2.00/ft

Edging



“Bullet” Edging \$1.45/ linear foot



Natural Stone and Brick Edging \$1.00 to \$5.00/ft



Edging

Plastic \$0.75/ft

Steel \$2.00 to \$3.00/ft

Aluminum \$1.75 to \$2.00/ft

“Bullet” Edging \$1.35/ linear foot

Natural Stone and Brick Edging \$1.00 to \$5.00/ft

Edging estimate: 150 sq. ft. raingarden is
about 55 linear feet

Grading and Site Prep Related Materials

Riser-Pipe and drain tile outlet (as per plan) (4-6" pipe w/ debris cover @ inlet & outlet)

Leaf-Compost/Soil Replacement for Raingarden (well-aged, weed-seed free)

Edging (Type)

Edging Trencher

Sod Cutter

Rototiller

Delievery (Leaf-Compost)

Qty

Unit

Unit Cost

Amount

overflow

cu yd

ft

hr

hr

hr

delivery

GRADING AND SITE-PREPARATION RELATED COSTS

\$

Edging

Trencher is \$60.00
for 2 hrs



Grading and Site Prep Related Materials

Riser-Pipe and drain tile outlet (as per plan) (4-6" pipe w/ debris cover @ inlet & outlet)

Leaf-Compost/Soil Replacement for Raingarden (well-aged, weed-seed free)

Edging (Type _____)

Edging Trencher

Sod Cutter

Rototiller

Delievery (Leaf-Compost)

Qty

Unit

Unit Cost

Amount

overflow

\$

\$

cu yd

\$

\$

ft

\$

\$

hr

\$

\$

hr

\$

\$

hr

\$

\$

delivery

\$

\$

GRADING AND SITE-PREPARATION RELATED COSTS

\$

Sod Cutter

Sod Cutter Rental
\$60.00 for 2 hrs



Grading and Site Prep Related Materials

Riser-Pipe and drain tile outlet (as per plan) (4-6" pipe w/ debris cover @ inlet & outlet)
Leaf-Compost/ Soil Replacement for Raingarden (well-aged, weed-seed free)
Edging (Type _____)
Edging Trencher
Sod Cutter
Rototiller
Delievery (Leaf-Compost)

Qty	Unit	Unit Cost	Amount
	overflow	\$	\$
	cu yd	\$	\$
	ft	\$	\$
	hr	\$	\$
	hr	\$	\$
	hr	\$	\$
	delivery	\$	\$

GRADING AND SITE-PREPARATION RELATED COSTS

\$

Tiller

Tiller Rental \$80.00
for 4 hrs / \$160 per
day



Grading and Site Prep Related Materials

Riser-Pipe and drain tile outlet (as per plan) (4-6" pipe w/ debris cover @ inlet & outlet)
Leaf-Compost/ Soil Replacement for Raingarden (well-aged, weed-seed free)
Edging (Type _____)
Edging Trencher
Sod Cutter
Rototiller
Delivery (Leaf-Compost)

Qty	Unit	Unit Cost	Amount
	overflow	\$	\$
	cu yd	\$	\$
	ft	\$	\$
	hr	\$	\$
	hr	\$	\$
	hr	\$	\$
	delivery	\$	\$

GRADING AND SITE-PREPARATION RELATED COSTS

\$

Retaining Wall / Decorative Rock

Other (retaining wall, excavation equipment, etc.)

\$

Landscape Rock \$35 to \$120 per ton



Retaining Walls \$5 to \$35/brick

Mini-Excavator \$250/day



Erosion Control



Landscape Fabric
\$15 for 3'x100' roll



River rock- \$5 for a 0.5
cubic foot bag

Erosion Control Materials

Erosion Control Blanket (Material: _____, Size: _____' x _____')
Anchoring Staples, 6" (for anchoring ECB)
Filter Fabric (at outlet of drain-tile pipe and overflow)
River Rock Splash Area (at outlet of drain-tile pipe) (approx. _____' x _____' x _____")
Shredded Hardwood Mulch (2-3" depth) (entire planting area) (1 cy = 150 sq. ft.)
Delivery (Wood Mulch)

Qty	Unit	Unit Cost	Amount
	roll	\$	\$
	each	\$	\$
	sq ft		
	cu ft	\$	\$
	cu yd	\$	\$
	load	\$	\$

EROSION CONTROL MATERIALS COSTS

\$



Shredded Hardwood Mulch

(fibrous stands will mat together)

Wood Mulch



\$24 and up per
cubic yard

1 cubic yard of mulch covers
150 square ft (at 2-3" depth)

Erosion Control Materials

Erosion Control Blanket (Material: _____, Size: _____' x _____')

Anchoring Staples, 6" (for anchoring ECB)

Filter Fabric (at outlet of drain-tile pipe and overflow)

River Rock Splash Area (at outlet of drain-tile pipe) (approx. _____' x _____' x _____")

Shredded Hardwood Mulch (2-3" depth) (entire planting area) (1 cy = 150 sq. ft.)

Delivery (wood Mulch)

Qty

Unit

Unit Cost

Amount

	roll	\$	\$
	each	\$	\$
	sq ft		
	cu ft	\$	\$
	cu yd	\$	\$
	load	\$	\$

EROSION CONTROL MATERIALS COSTS

\$

Wood Mulch Delivery

For drop-off, a delivery fee range for less than 10 yards is typically around \$60-75



A typical pickup box can hold 1 to 1 ½ cubic yards of mulch

Erosion Control Materials

Erosion Control Blanket (Material: _____, Size: ____' x ____')
 Anchoring Staples, 6" (for anchoring ECB)
 Filter Fabric (at outlet of drain-tile pipe and overflow)
 River Rock Splash Area (at outlet of drain-tile pipe) (approx. ____' x ____' x ____")
 Shredded Hardwood Mulch (2-3" depth) (entire planting area) (1 cy = 150 sq. ft.)
 Delivery (Wood Mulch)

Qty	Unit	Unit Cost	Amount
	roll	\$	\$
	each	\$	\$
	sq ft		
	cu ft	\$	\$
	cu yd	\$	\$
	load	\$	\$

EROSION CONTROL MATERIALS COSTS

\$

Wood Mulch Delivery

For drop-off, a delivery fee range for less than 10 yards is typically around \$60-75



A typical pickup box can hold 1 to 1 ½ cubic yards of mulch

Erosion Control Materials

Erosion Control Blanket (Material: _____, Size: _____' x _____')
 Anchoring Staples, 6" (for anchoring ECB)
 Filter Fabric (at outlet of drain-tile pipe and overflow)
 River Rock Splash Area (at outlet of drain-tile pipe) (approx. _____' x _____' x _____")
 Shredded Hardwood Mulch (2-3" depth) (entire planting area) (1 cy = 150 sq. ft.)
 Delivery (Wood Mulch)

Qty	Unit	Unit Cost	Amount
	roll	\$	\$
	each	\$	\$
	sq ft		
	cu ft	\$	\$
	cu yd	\$	\$
	load	\$	\$

EROSION CONTROL MATERIALS COSTS

\$



Plants

Native Plants

Right Plant for the Right Place

'plugs'

\$0.70-1.30 ea.

4 or 6 plugs
per pack

32 or 48 plugs
per flat

3-4" pots

\$3-10 each



Potted Plants

A collection of various potted plants is displayed on a green lawn. In the foreground, there are several pots of ornamental grasses with long, slender leaves, some showing yellow variegation. Behind them, taller plants with dense, upright clusters of small purple flowers are visible. To the right, a larger, bushy plant with dark green, oval-shaped leaves is in a pot. The plants are arranged in a row, with some pots partially obscured by others. In the background, a garden bed with large, grey rocks is visible, and beyond that, a paved path or driveway runs along the edge of the lawn. The overall scene is bright and sunny, suggesting a clear day.

Gallon pots - \$10+ each

WOOO HOOO!



Plant Prices

Delivery fee is typically \$60-\$80

'plugs'

\$0.70-1.30 ea.

in 6 packs



(native plants)



3-4" pots

\$3-10 each



Shrubs

\$20-35 each

Gallon pots

\$10+ each



Plant Materials (Plugs & Plots)

Native Perennial Plugs (____ " spacing)
Native Perennial 3-4" Pots (____ " spacing)
Cultivar Perennials (____ "spacing)
Other Plants (larger container size)
Native Shrubs (for ____ Soils) (____ " spacing)
Delivery (Plants)

Qty

Unit

Unit Cost

Amount

	each	\$	\$
	each		
	each	\$	\$
	delivery	\$	\$

PLANT MATERIALS COSTS

\$

OTHER COSTS

(retaining wall, excavation equipment, etc.)

\$

Plant Selection



Asclepias tuberosa

Butterfly Milkweed

Butterfly milkweed is a clump forming prairie flower that thrives in dry to medium soils. It has flat-topped orange flowers that are on stems that grow to 3-feet tall. It has a long taproot, making transplanting difficult. It is very hardy, heat and drought tolerant. Butterfly milkweed is an excellent plant for attracting caterpillars and butterflies, particularly monarchs. It seems to be deer resistant. It prefers dry sandy to loam soils though it will tolerate most soils. (Native to Midwest)



Butterflies

Dry to Average

3-inches of inundation

Sides and Front

Sand, Loam



Blue Thumb Plant Grant

Application Deadlines- Tonight & June 5, 2014

Materials To Needed to Apply

1. Plant grant application
2. Graph paper with the proposed raingarden layout
3. Aerial map with the location of your raingarden
4. Cost estimate



Next Steps

Receive the results of your application by Thursday, May 15

Schedule your onsite meeting to layout the garden and discuss installation



MIDDLE ST. CROIX WATERSHED MANAGEMENT ORGANIZATION

455 Hayward Avenue OAKDALE, MINNESOTA 55128
Phone 651.275.1136 x22 www.mscwmo.org



Blue Thumb Grant Application Form

1. Contact Information

Name		
Address		
City	State	Zip Code
Project Location (if different than above)		
Lake or Stream (if applicable)	Previous Grant Recipient? What Project?	
Home Phone	Work or Cell Phone	
Email Address	Other Contact Info	

2. Project Type ☐ Raingarden ☐ Native Slope Stabilization ☐ Native Shoreline

3. Source of Runoff ☐ Roof ☐ Driveway ☐ Other (specify) _____

4. Project Measurements

Size of Runoff Area (square feet)	Size of Raingarden / Native Slope Stabilization / Native Shoreline (square feet)	
-----------------------------------	--	--

5. Attach Project Plans from the Blue Thumb Design Course and Completed Cost Estimate Worksheet.

I certify to the best of my knowledge that the information included in this application is true, complete, and accurate. I acknowledge that if approved, cost share funding expires on November 30, 2014, unless an extension is granted by the MSCWMO prior to the expiration.

Signature of Applicant/Contact	Date	Signature of Property Owner	Date
--------------------------------	------	-----------------------------	------



Goal:
Have a Planting Plan
Your Rain garden
Time: 40 minutes

Raingarden Design



Mike Isensee, Middle St. Croix Watershed Administrator
Angie Hong, East Metro Water Resources Education Program
Tara Kline, Washington Conservation District, Design Specialist
Mary Green, Washington County Master Gardener
Howard Markus, Washington County Master Gardener

