

Demo Rain Garden

Tippecanoe County



Background Information

At the Tippecanoe County Extension Office, the community saw a parking lot island as an opportunity for reducing runoff and increasing green space in the area. This site allows for a 500 square foot rain garden split into two gardens surrounding the path. With a prime location for viewing and accessibility as well as the effectiveness of capturing stormwater runoff, the installation of this rain garden went underway following the steps of the Purdue Rainscaping Education Program. This site allows for easy viewing access to visitors and also an excellent example of the benefits of Rainscaping.



Utilizing a landscape design and installation company, the area's soil was treated and shaped to prepare for the rain garden. Soil amendments were added, and the land was formed to add a depression to allow for water to drain into the garden. The participants of the course planted native plants tolerant of a 24 hour flooding period as well as other hardy and easy to maintain perennials such as blue false indigo, bottle brush grass, and bottled gentian.

A year later, the rain garden is growing successfully and beautifully. It takes the runoff from the Tippecanoe County Extension Office Building and surrounding parking lot and prevents those pollutants from running off to near water sources making the rain garden an excellent example of Rainscaping.

Blue False Indigo



Bottlebrush Grass



Bottled Gentian



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Garden Design: Plantings and Information

Plant Scientific Name	Common Name	Number Used	Unit Price	Total Price
Asclepias incarnata	Marsh milkweed	32	\$1.35	\$43.20
Asclepias tuberosa	Common butterfly weed	49	\$1.75	\$85.75
Aster azureus	Sky-Blue Aster	49	\$1.35	\$66.15
Aster ericoides	Heath Aster	64	\$1.40	\$89.60
Bastisia australis	Blue False Indigo	49	\$1.75	\$85.75
Baptisia leucophaea	Cream False Indigo	32	\$2.00	\$64.00
Echinacea pallida	Pale purple coneflower	64	\$1.50	\$96.00
echinacea purpurea	purple coneflower	49	\$1.35	\$66.15
Eryngium yuccifolium	Rattlesnake Master	32	\$1.35	\$43.20
Filipendula rubra	Queen of the Prairie	49	\$1.50	\$73.50
Gentiana andrewsii	Bottle Gentian	49	\$1.75	\$85.75
Liatris aspera	Rough Blazing star	64	\$1.75	\$112.00
Liatris pycnostachya	Prairie Blazing star	32	\$1.50	\$48.00
Liatris spicata	Dense Blazing star	49	\$1.50	\$73.50
Lobelia siphilitica	Great Blue Lobelia	49	\$1.50	\$73.50
Penstemon hirsutus	Hairy Penstemon	49	\$1.35	\$66.15
Petalostemum purpureum	Purple Prairie Clover	64	\$1.40	\$89.60
Solidago juncea	Early Goldenrod	98	\$1.35	\$132.30
Solidago ridellii	Riddell's Goldenrod	64	\$1.35	\$86.40
Solidago rugosa	Wrinkled Goldenrod	49	\$1.35	\$66.15
Vernonia fasciculata	Smooth Ironweed	49	\$1.35	\$66.15
Veronicastrum virginicum	Culver's Root	32	\$1.50	\$48.00
Bouteloua curtipendula	Side-Oats Grama	49	\$1.35	\$66.15
Carex granularis	Meadow sedge	196	\$1.50	\$294.00
Hystrich patula	Bottlebrush Grass	64	\$1.35	\$86.40

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Schizachyrium scoparium	Little Bluestem	98	\$1.35	\$132.30
Other Materials		Number Used	Unit Price	Total Price
S/H on Plants		1	\$300.00	\$300.00
Bio Soil		45	\$50.00	\$2,250.00
Premium Shredded Hardwood Mulch		6	\$35.00	\$210.00
Excavation Labor associated with Rain Garden Construction		1	\$1,600.00	\$1,600.00
Hauling of Soil from Site		1	\$800.00	\$800.00
Installation		1	\$1,300.00	\$1,300.00
Compost and Peat amendments		2.5	\$50.00	\$125.00
Additional Hardwood Mulch		5	\$35.00	\$175.00
Site Preparation		1	\$600.00	\$600.00
Green Vision Tax		1	\$193.20	\$193.20
Total Cost				\$9,792.85



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Maintenance Plan: General Maintenance

- Fertilizer
 - Some starter fertilizer could be used on the site if there are low potassium levels. Otherwise, the native plants should adapt to the soil type on site.
- Watering
 - From installation for about a month – water as needed; about 30 minutes – make sure everything's moist.
 - Once plants are established, you should not need to water them except during prolonged dry periods (about one week).
 - If excessive rain is experienced, it is advised to temporarily reroute some incoming water away from the garden by cutting a notch in the berm. Large, mature plants handle saturation better than young, small plants.
 - Water from the rain barrels can be used to water the garden, but in case of a dry period a hose and/or sprinkler system may be used.
- Weeding
 - During the first few establishment years, weeding should take place every month as needed. Over time, the plants will fill in and weeding won't be necessary.
 - Hand pulling of weeds should be sufficient.
 - Weeding will be provided by the office or it's grounds crew.
- Mulch
 - It should be coarse, double shredded hardwood or another alternative which does not easily float.
 - Approximately 3 inches should be maintained in the garden at all times.

Maintenance Plan: Seasonal Maintenance

This is namely for after the two-three year establishment period, but should still be carried out during those first two years.

- Year-round
 - Keep drain clear and garden clean of garbage
 - Weed (except winter)
- Spring:
 - Prune dead vegetation and plants that have grown too large
 - Weed the garden and add mulch if needed
 - Remove excess sediment (i.e. leaves, sticks, debris) that may have collected over winter
 - Remove dead stalks/seed heads from previous season
 - Replenish mulch layer to maintain 3 inch layer
 - Best time to plant new/different plants and replace plants that may have died over winter
 - Plugs establish more successfully than seeds
- Summer
 - Remove weeds (i.e. crabgrass, dandelions etc.)

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- Water during dry periods (based on whether National Weather service declares drought; if no rain for one week)
- Monitor berm around edge of garden for erosion
- Fall
 - Do not remove (too many) leaves that may have fallen into the garden – leaves will provide compost material for following spring growth; layer of leaves is fine but mounds of leaves are not
 - Remove weeds and diseased plants
 - If fall is dry continue to water until grounds begin to freeze (late October)
- Winter
 - No maintenance is needed; can cut back rain garden to clean up for spring if wanted
 - You should check to make sure garden is clean of garbage, leaves, etc. every few weeks

Resources:

<https://extension.purdue.edu/rainscaping/the-rainscaping-team>

About the Purdue Rainscaping Education Program

The Purdue Rainscaping Education Program offers state-wide training for Purdue Master Gardeners, conservation agencies and organizations, stormwater professionals, and landscape companies and consultants.

The two day workshop sessions cover an introduction to rainscaping and rain gardens with specific modules for rain garden site selection, plant selection and garden design, installation, maintenance, and community engagement.

Workshops include hands-on activities, interactive discussions, and field trips to community rainscaping projects. Participants also gain experience through creation of a demonstration rain garden with community partners in a public space.