



Urban  
Ecosystem  
Restorations

MAKE EVERY SQUARE FOOT COUNT

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# THE BUTTERFLY COMMONS AT LAKELANDS

## ADAPTIVE MANAGEMENT PLAN

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## PROJECT GOALS

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The Butterfly Commons at Lakelands was designed to help reduce stormwater runoff, increase biodiversity, beautify the neighborhood, and inspire the community to adapt sustainable landscaping practices. This adaptive management plan is guided by best practices in sustainable landscaping.

## LOCATION

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The common areas (on each side of the long central courtyard) between the picket fences and the sidewalk in front of 1333, 1335, 1337, 1339, 1371, 1373, 1375, 1377, and 1379 Main Street, Gaithersburg, MD 20878.

## MAINTENANCE GUIDELINES

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### Long-Term Needs and Expectations

### LEAF MANAGEMENT AND MULCHING

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#### Leaf Management

- Do not remove leaf litter that falls into the project area; natural leaf fall should be used as an alternative to mulch.
  - Allow approximately 2” of leaves to remain in the beds. If too thick, redistribute across beds and ensure they are not crushing lower plants. If leaves are matted together in wet clumps, see below.
  - To keep leaves from blowing away, it is helpful to shred the leaves prior to adding to the beds, which can be done by mowing over the leaves when they fall in grassy areas (or by having kids run and jump in piles of them) before spreading them in the flower beds. Note: mowing over leaves may reduce the survival rate of overwintering moth and butterfly larva.
- Watch the beds for signs of leaf compaction or clumping due to heavy rain or snow fall. If leaves are compacted (i.e. sticking together in thick mats), especially if on top

of existing plant material, fluff up the leaves so that they dry, crunch them into smaller pieces if possible, and clear them off the tops of the plants.

#### Mulching (if necessary)

- Once the plantings are established, additional mulching is not desirable unless there is significant replanting or soil disturbance.
- Keep mulch away from plant stems; leave at least 1” bare around herbaceous plants and 3” around shrubs. Avoid piling mulch on living plant material including leaves.
- Always use undyed, shredded hardwood mulch.
- Avoid filling bermed (hollowed out) areas with mulch – this reduces the effectiveness of the berms (which are meant to temporarily hold water in place).
- Mulch should never be more than about an inch thick. If small amounts of mulch are displaced – redistribute mulch from within the existing beds.

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#### FERTILIZER

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- Do NOT fertilize the Butterfly Commons. No commercial nutrient inputs are needed.

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#### PRUNING, DEADHEADING, THINNING, AND PLANT REPLACEMENT

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- See “Special Maintenance Notes” under each plant profile for detailed, species-specific needs.
- Pruning is only needed to remove diseased or damaged plant material. Leave seed heads through winter to encourage re-seeding and to support wildlife.
- If necessary for aesthetic purposes, trim back stalks in late winter/early spring. Leave 4-6” of the stem for animal nesting materials. Sprinkle seed heads within the garden areas to encourage reseeding.
- The goal of this project is to demonstrate “green mulching” – using living plant material to cover the ground and outcompete weeds. So, we encourage an approach that allows the plants to fill in the project area. However, once the plants are well established (after year two) it may occasionally be necessary to thin some fast-growing or aggressive plants to favor the growth of less vigorous species. Only thin out plant species that are crowding out or killing others. For more information on how to thin perennials, view [this resource](#).
- The formal design of this garden will require additional efforts in order to maintain the formal style. The main features that provide the formal look are described below under “Design Integrity.” However, the intent is that other species will grow under and around the Ilex (Inkberry) to reduce the amount of mulch/soil showing through

and prevent weeds. Except for the plant care noted under “Design Integrity,” other species from the Plant List should be encouraged to grow and cover the ground to help prevent weeds and erosion.

- Early spring: If desired, Carex can be trimmed across the top to remove prior year, old-leaf growth; however, it only has one flush of growth in spring, so limit trimming to early spring.
- Late Spring/Early Summer (roughly the end of May/beginning of June): If the Aromatic aster and Black eyed susans are already looking on the tall side (e.g., more than 1.5’ tall), cut back foliage to avoid “flopping” or excessive height. Simply gather the plant and cut back the stems by one-third to one-half. Plant selections were chosen to minimize the need for this maintenance. However, site conditions do vary, and these species tend to stretch. Growth habit will depend upon the specific area they are growing in and the amount of light and water they are receiving; some plants may need to be cut back, others may not.

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## BERMS AND WET ZONES

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- The berms were constructed using clay soil from the site. The clay was built up and compacted, then covered in mulch. Berms are designed to hold water in place and infiltrate in a specific location.
- Although most of the berms in the Butterfly Commons will ultimately be taken over by plants and become part of the regular soils, if certain berms continue to be necessary to manage stormwater runoff to the sidewalks (particularly the berm in Section C, as noted below), then be sure to repair them before a major breach forms.
- To repair, use clay soil to fill areas that are showing signs of erosion. Keep the top edge of the berm level, this is important to prevent additional erosion issues on the berm. A straw filled “log” may be used if an area is particularly problematic.
- Do not remove plants from berms if they are on the Plant List. The root systems will help to stabilize the bermed areas.
- Section C (see Design Overview) is prone to standing water and receives excess water from a basement sump pump, therefore some plant species will not thrive in this area. Allow the wet tolerant species to dominate (e.g., Ilex glabra, Iris versicolor, Packera aurea). If these wet tolerant species fail to thrive, more aggressive measures may be necessary to establish a successful garden in this area. Please communicate with UER and the Lakelands if the plants in this area are failing.

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## WEEDING

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- All plant species on the attached plant list are not weeds.

- Catching and removing weeds early is a key to successful weed management. It is particularly important to catch annual weeds before they go to seed and create a seed bank.
- Common cool season annual weeds often germinate in early winter and go to seed quickly in early Spring, often by March. Cut or pull annual weeds before they set seed.
- Most weeds will enter from neighboring areas up against the fence. Pay close attention to these areas and stop the weed creep early to avoid larger infestations.
- Cut or hand pull weeds; if seeds are forming, completely remove plant material from Butterfly Commons.
- Avoid excessive digging or soil disturbance when pulling weeds as this will send weed seeds in the soil and encourage weed growth. Cutting at the base of the plant is often sufficient to kill weeds. If the soil is disturbed while pulling a weed, make sure to tamp it back down and readjust the mulch to cover the disturbed area.

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#### HERBIVORE MANAGEMENT

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- If significant grazing is noticed apply herbivore repellent (Repels-All spray or granules or similar non-toxic product) on an as needed basis. Use of repellent in limited situations will likely discourage future grazing, additional applications may not be needed – monitor and apply appropriately.
- Please see Appendix 4 regarding common deer management techniques and recommendations.

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#### TRASH REMOVAL

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- Watch for any debris and animal waste – remove as needed.
- Avoid piling snow on the beds although it is not necessary to remove snow that has naturally fallen within the bed area. If homeowners pile snow from their walkways onto the beds, carefully remove large piles while leaving the last few inches to avoid damaging the plants.
- Limit the use of de-icing products. Use only as needed and directed on packaging.
- Remind the neighbors about [salting best management practices](#).
- Sweep up any salt piles following snow events.

## WATERING

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- Following establishment, the beds should no longer require irrigation.
- Evaluate each section independently to determine if watering is needed; if area is already wet, do not overwater.
- Water the equivalent of one inch of rain, approximately 1-2 minutes.
- Water at the base of the plants using a nozzle with gentle flow. Avoid blasting the plants and soil with high pressure as this contributes to mulch runoff.
- Avoid “sprinkling” the leaves which encourages fungal disease and water loss.
- Water in the AM hours to reduce the likelihood of fungal disease.

## DESIGN INTEGRITY

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- Some aspects of the planting design must be maintained to stay true to the “formal” style of these gardens. Specifically:
  - the shrubs (Inkberry) must remain planted in straight rows;
  - the long rows of Carex and Tiarella that run along the edge of the sidewalks should be maintained in straight rows and kept off sidewalks; and
  - the Deschampsia that marks each corner is a specific design element that helps to define these garden boundaries and provide cues that the area is well-maintained.
  - It is less important to ensure that the other species found in these gardens stay in the location they were planted.

## CONTACT INFORMATION

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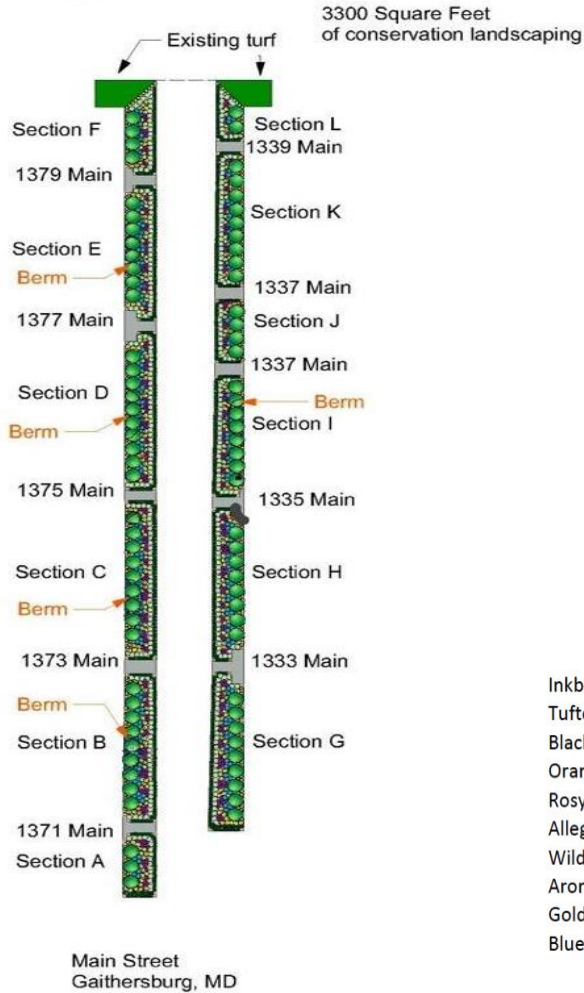
Please copy Rachel Toker and Michele Fuenzalida on all correspondence and reports related to project maintenance.

- Rachel Toker, Urban Ecosystem Restorations  
[rachel@urbanecosystemrestorations.org](mailto:rachel@urbanecosystemrestorations.org)
- Michele Fuenzalida, Lakelands Community Association  
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# APPENDIX I: DESIGN OVERVIEW AND PLANT LIST

Lakelands Butterfly Commons  
 Drawn by: L. Hubbard  
 5-26-2020  
 v.1

2 Lakelands Butterfly Commons Overview  
 Scale: 1/32" = 1'-0"



**Diagram #1**

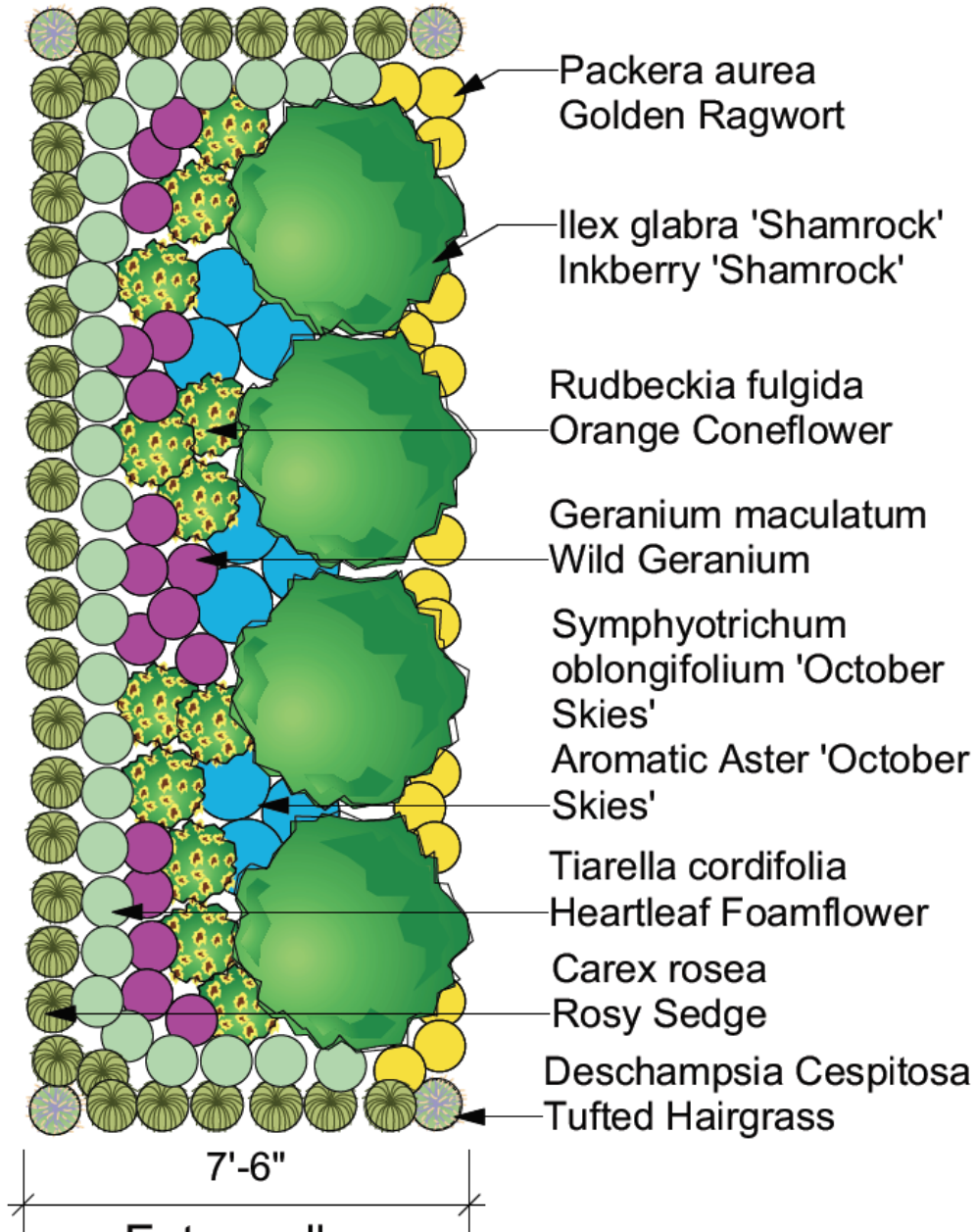
## Plant List

- |                                |                                    |
|--------------------------------|------------------------------------|
| Inkberry 'Shamrock'            | <i>Ilex glabra</i>                 |
| Tufted Hair Grass              | <i>Deschampsia cespitosa</i>       |
| Black Eyed Susan               | <i>Rudbeckia hirta</i>             |
| Orange Coneflower 'Deamii'     | <i>Rudbeckia fulgida</i>           |
| Rosy Sedge                     | <i>Carex rosea</i>                 |
| Allegheny Foamflower           | <i>Tiarella cordifolia</i>         |
| Wild Geranium                  | <i>Geranium maculatum</i>          |
| Aromatic Aster 'October Skies' | <i>Symphotrichum oblongifolium</i> |
| Golden Ragwort                 | <i>Packera aurea</i>               |
| Blue Flag Iris                 | <i>Iris versicolor</i>             |



Entry walk

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- Packera aurea  
Golden Ragwort
- Ilex glabra 'Shamrock'  
Inkberry 'Shamrock'
- Rudbeckia fulgida  
Orange Coneflower
- Geranium maculatum  
Wild Geranium
- Symphyotrichum  
oblongifolium 'October  
Skies'
- Aromatic Aster 'October  
Skies'
- Tiarella cordifolia  
Heartleaf Foamflower
- Carex rosea  
Rosy Sedge
- Deschampsia Cespitosa  
Tufted Hairgrass

7'-6"

Entry walk

Title Lakelands Design Template		
Scale 3/8" = 1'0"	Drawn By L. Hubbard	Date 8-9-2021
CAD File Name Lakelands Sample Design		

Notes:	January	February	March	April	May	June	July	August	September	October	November	December
Microberms were used in selected locations with high waterflow to help slow and absorb stormwater within the project area. Within the bermed areas we added Iris versicolor to help manage the water flow. R. hirta was preferentially planted in these areas because it is more tolerant of wetter conditions than R. fulgida.												
<i>Latin name</i>	bloom time											
<i>Carex roosa</i>	April- May											
<i>Deschampsia cespitosa</i>	July-September											
<i>Geranium maculatum</i>	April-May											
<i>Ilex glabra 'Shamrock'</i>	May-June											
<i>Iris versicolor</i>	May-June											
<i>Pachera aurea</i>	April											
<i>Rudbeckia fulgida 'Heavenly'</i>	June-October											
<i>Symphoricarum oblongifolium 'October skies'</i>	August-October											
<i>Tiarella cordifolia</i>	May											
<i>Eurybia divaricata</i>	August-October											
<i>Lobelia siphilitica</i>	July-September											
<i>Solidago caesia</i>	August-October											
<i>Symphoricarum cordifolium</i>	August-October											

Butterfly Commons at the Lakelands Plant List with Optional species

Installed or optional:	Latin name	Common name	Bloom time	Color	Sun	Moisture	Height (ft)	Attribute
Installed	<i>Carex roosa</i>	Rosy sedge	April- May	green	part sun - shade	med - dry	1	evergreen/winter interest/texture
Installed	<i>Deschampsia cespitosa</i>	Tufted hairgrass	July-September	tones of gold, silver, purple and green	sun - part shade	wet - med	2-3	winter interest/texture
Installed	<i>Geranium maculatum</i>	Wild geranium	April-May	Pink	sun - shade	med - med dry	1.5-2	Spring bloom
Installed	<i>Ilex glabra 'Shamrock'</i>	Inkberry dwarf	May-June	white - minor	sun - part shade	wet - med	3-4'	Evergreen shrub
Installed	<i>Iris versicolor</i>	Blue flag iris	May-June	blue	sun - part sun	wet - med, dry	2-2.5	Used in high water flow areas.
Installed	<i>Pachera aurea</i>	Golden ragwort	April	yellow	sun - shade	med - dry	5-2.5	Evergreen ground cover under shrubs
Installed	<i>Rudbeckia fulgida 'gleamii'</i>	Orange coneflower	June-October	yellow	sun - part sun	med wet - med dry	2-3	Early summer bloom. Perennial.
Installed	<i>Symphoricarum oblongifolium 'October skies'</i>	Aromatic aster	August-October	blue	sun	med - dry	1-3	Late season bloom. Semi-evergreen/bronze - ground cover
Installed	<i>Tiarella cordifolia</i>	Foam flower	May	white	part shade - shade	med	.75-1	evergreen/bronze - ground cover
Optional	<i>Eurybia divaricata</i>	White wood aster	August-October	white	part shade - shade	med - dry	1-2.5	Late season bloom
Optional	<i>Lobelia siphilitica</i>	Great blue lobelia	July-September	blue	sun - part shade	wet - med	2-3'	Summer bloom, unique flower.
Optional	<i>Solidago caesia</i>	Blue stem goldenrod	August-October	yellow	part sun - shade	med - dry	1.5-3	Late season bloom
Optional	<i>Symphoricarum cordifolium</i>	Blue wood aster	August-October	blue	part sun - shade	med - dry	2-5	Semi-evergreen late season bloom

revised 8-9-2021

## APPENDIX 2: SPECIES PROFILES

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### ***Carex rosea***

Common Name: Rosy sedge

Height: 1.00 to 3.00 feet

Spread: 1.00 to 3.00 feet

Bloom Time: April- May

Bloom Description: Greenish

Sun: Part shade to full shade

Water: Dry to moist

Maintenance: Low

Flower: Insignificant

Tolerate: Drought, deer, pest resistant



*Carex rosea* is a petite perennial sedge that forms 1' mounds of narrow shaggy foliage. The leaves are deep green and semi-evergreen. In late spring green star-shaped flower spikes are displayed above the foliage. This sedge occurs in shade to partly shaded woods in wet to dry soil. It also has great landscape potential as a woodland groundcover or lawn substitute.

**Special maintenance notes:** Only has one flush of growth, limit trimming to early Spring or just trim back to edge of sidewalk if overgrowth occurs.

### ***Deschampsia cespitosa***

Common Name: tufted hair grass

Height: 2.00 to 3.00 feet

Spread: 1.00 to 2.00 feet

Bloom Time: July to September

Bloom Description: Tones of gold, silver, purple and green

Sun: Part shade



Water: Medium

Maintenance: Low

Flower: Showy

Tolerate: Black Walnut, Air Pollution, deer.

*Deschampsia cespitosa*, commonly called tufted hair grass, is a clump-forming, cool season grass which is often grown as an ornamental. Easily grown in average, medium, well-drained soils in part shade. Prefers moist, organically rich soils. It typically forms a low, dense tussock (to 16" tall) of very thin (1/5" wide), arching, dark green grass blades (to 2' long). Numerous flower stems rise in summer from the foliage mound to a height of 3' bearing wide, airy panicles (to 20" long) of tiny, variably colored flowers (tones of gold, silver, purple and green) which form a cloud over the foliage. Flower panicles turn yellowish-tan after bloom as the seed ripens and may remain attractive through much of the winter. One of the few ornamental grasses that grows well in shade. May self-seed in optimum growing conditions.

**Special maintenance notes:** Cut old foliage to the ground in late winter before new shoots appear. Flowering stems may be removed in fall to tidy plants or left for winter interest

## ***Geranium maculatum***

Common Name: wild geranium

Height: 1.50 to 2.00 feet

Spread: 1.00 to 1.50 feet

Bloom Time: April to May

Bloom Description: Pale pink, deep pink, lilac

Sun: Full sun to part shade

Water: Medium

Maintenance: Medium

Flower: Showy

Tolerate: Rabbit, Deer, Drought, Dry Soil



*Geranium maculatum* is a clump-forming woodland perennial which typically occurs in woods, thickets and shaded roadside areas. Forms a mound of foliage that grows to 24" tall and 18" wide. Features 1 1/4" diameter, pink to lilac, saucer-shaped, upward facing, 5-petaled flowers in spring for a period of 6-7 weeks. Deeply cut, palmately 5-lobed, dark green leaves (to 6" across). Flowers give way to distinctive, beaked seed capsules which give rise to the common name of crane's bill.

Easily grown in average, medium, well-drained soil in full sun to part shade. Prefers moist, humusy soils, but tolerates poor soils. Will naturalize in optimum growing conditions.

**Special maintenance notes:** Foliage may yellow in hot summers if soil is allowed to dry out. Foliage may decline after flowering in hot summer climates, at which point it may be lightly sheared back and shaped to revitalize.

## ***Ilex glabra* 'Shamrock'**

Common Name: inkberry

Height: 3.00 to 4.00 feet

Spread: 3.00 to 4.00 feet

Bloom Time: May to June

Bloom Description: Greenish-white

Sun: Full sun to part shade

Water: Medium to wet

Maintenance: Low

Flower: Insignificant

Leaf: Evergreen

Tolerate: Rabbit, Deer, Erosion, Wet Soil, Air Pollution



*Ilex glabra*, commonly called inkberry or gallberry, is a slow-growing, upright-rounded, stoloniferous, broadleaf evergreen shrub in the holly family. 'Shamrock' is a compact rounded cultivar that grows 3-4' tall and suckers less than the species. Spineless, flat, ovate to elliptic, glossy, dark green leaves (to 1.5" long) have smooth margins with several marginal teeth near the apex. Leaves usually remain attractive in winter unless temperatures dip well below zero. Greenish white flowers (male in cymes and female in cymes or single) appear in spring but are relatively inconspicuous. If pollinated, female flowers give way to pea-sized, jet black, berry-like drupes (inkberries to 3/8" diameter) which mature in early fall and persist throughout winter to early spring unless consumed by local bird populations. Easily grown in average, medium to wet soils in full sun to part shade. Adaptable to both light and heavy soils. Tolerates wet soils. Prefers rich, consistently moist, acidic soils in full sun. Good shade tolerance, however, avoid neutral to alkaline soils.

**Special maintenance notes:** As the shrubs mature, they may require some pruning to keep them at or below the height of the picket fence. If they get "leggy" pruning can be done in the dormant season to encourage new growth. Prune to shape in early spring just before new growth begins. Remove root suckers regularly if colonial spread is not desired.



## ***Iris versicolor***

Common Name: blue flag

Height: 2.00 to 2.50 feet

Spread: 2.00 to 2.50 feet

Bloom Time: May to June

Bloom Description: Violet blue

Sun: Full sun to part shade

Water: Medium to wet

Maintenance: Low

Flower: Showy

Tolerate: Deer, Wet Soil



*Iris versicolor*, commonly called northern blue flag, is a clump-forming iris that is native to marshes, swamps, wet meadows, and ditches. It is a marginal aquatic plant that forms a clump of narrow, arching-to-erect, sword-shaped, blue-green leaves (to 24" long and 1" wide). Flowering stalks rise from the clump to 30" tall in late spring, with each stalk producing 3-5 bluish-purple flowers (to 4" wide) with bold purple veining. Clumps spread slowly by tough, creeping rhizomes. Grow in medium to wet soils in full sun to part shade. This iris may be grown in up to 2-4" of shallow standing water (muddy bottom or containers), or in moist shoreline soils or in constantly moist humusy soils of a border.

**Special maintenance notes:** After fall frost, if desired, plant leaves may be trimmed back to about 1" above the crown.

## ***Packera aurea***

Common Name: golden ragwort

Height: 0.50 to 2.50 feet

Spread: 0.50 to 1.50 feet

Bloom Time: April

Bloom Description: Yellow

Sun: Full sun to part shade

Water: Medium to wet

Maintenance: Medium

Flower: Showy

Tolerate: Wet Soil, deer.



*Packera aurea*, commonly called golden ragwort, golden groundsel or squaw weed, is a somewhat weedy perennial which is valued for its ability to thrive in moist shady locations, naturalize rapidly and produce a long and profuse spring bloom. Features flat-topped clusters of yellow, daisy-like flowers (to 1" diameter) atop sparsely-leaved stems in early spring. Oblong stem leaves are finely cut (pinnately lobed) and quite distinctive. Flowering stems typically rise 1-2' tall from basal clumps of long-stemmed, heart-shaped, toothed, dark green leaves that often have a purplish tinge beneath.

Easily grown in average, medium to wet soils in full sun to part shade. Blooms well in shady locations. Freely self-seeds and is easily grown from seed. Naturalizes into large colonies in optimum growing conditions. Evergreen foliage will serve as an attractive ground cover throughout the growing season.

## ***Rudbeckia fulgida* 'Deamii'**

Common Name: orange coneflower

Height: 2.00 to 3.00 feet

Spread: 2.00 to 2.50 feet

Bloom Time: June to October

Bloom Description: Orange / yellow

Sun: Full sun

Water: Dry to medium

Maintenance: Low

Flower: Showy, Good Cut, Good Dried

Tolerate: Deer, Drought, Clay Soil, Dry Soil, Shallow-Rocky Soil, Air Pollution



*Rudbeckia fulgida* occurs in both dry and moist soils in open woods, glades and thickets. An upright, rhizomatous, clump-forming, free-blooming coneflower which typically grows to 3' tall, often forming colonies in the wild. The 'Deamii' cultivar has a strong clumping habit and is less prone to disease. Features daisy-like flowers (to 2.5" across) with yellow rays and brownish-purple center disks. Prolific bloom production over a long mid-summer to fall bloom period. Oblong to lanceolate, medium green foliage. Easily grown in dry to medium, organically rich to average, well-drained soils in full sun. Best bloom occurs in full sun, although plants will tolerate some light shade. Plants prefer consistent moisture throughout the growing season, with some tolerance for drought once established. Good air circulation is appreciated.

## ***Rudbeckia hirta***

Common Name: black-eyed Susan

Height: 2.00 to 3.00 feet

Spread: 1.00 to 2.00 feet

Bloom Time: June to September

Bloom Description: Yellow to orange-yellow rays and dark brown centers

Sun: Full sun

Water: Medium

Maintenance: Low

Flower: Showy

Attracts: Butterflies

Tolerate: Deer, Drought, Clay Soil



*Rudbeckia hirta*, commonly called Black-eyed Susan, is a common native wildflower which typically occurs in open woods, prairies, fields, roadsides and waste areas. It is a coarse, hairy, somewhat weedy plant that features daisy-like flowers (to 3" across) with bright yellow to orange-yellow rays and domed, dark chocolate-brown center disks. Blooms throughout the summer atop stiff, leafy, upright stems growing 1-3' tall. Rough, hairy, lance-shaped leaves (3-7" long).

Biennial or short-lived perennial easily grown in average, medium moisture, well-drained soils in full sun. Best in moist, organically rich soils. Tolerates heat, drought and a wide range of soils. Whether or not plants survive from one year to the next, they freely self-seed and will usually remain in the garden through self-seeding.



## ***Symphotrichum oblongifolium* ‘October Skies’**

Common Name: aromatic aster

Height: 1.50 to 2.00 feet

Spread: 1.50 to 2.00 feet

Bloom Time: August to October

Bloom Description: Dark sky blue

Sun: Full sun

Water: Dry to medium

Maintenance: Medium

Flower: Showy

Leaf: Fragrant

Attracts: Butterflies

Tolerate: Drought, Erosion, Clay Soil, Dry Soil, Shallow-Rocky Soil



*Symphotrichum oblongifolium*, commonly called aromatic aster, is a bushy, stiff, compact, low-growing plant with hairy stems. Typically grows 1-2' (infrequently to 3') tall and features small, daisy-like flowers (1" across) with violet blue rays and yellow center disks. Rigid, toothless, oblong, blue-green leaves (to 4" long) are, as the common name suggests, fragrant when crushed. 'October Skies' grows more compact than the species and less apt to spread. It features attractive deep sky-blue flowers. Stems typically grow to 18" tall. Small, daisy-like flowers (to 1" across) with blue to blue-purple rays and yellow center disks bloom in profusion in fall.

Good in open shade gardens, native plant gardens or woodland gardens. Easily grown in average, dry to medium, well-drained soil in full sun. Does well in sandy or clay soils. Generally tolerates poor soils and drought.

## ***Tiarella cordifolia***

Common Name: foam flower

Height: 0.75 to 1.00 feet

Spread: 1.00 to 2.00 feet

Bloom Time: May

Bloom Description: White or pink

Sun: Part shade to full shade

Water: Medium



Maintenance: Low

Flower: Showy

Leaf: Good Fall

Tolerate: Deer.

*Tiarella cordifolia*, commonly called foamflower, is clump-forming perennial which spreads rapidly by runners to form dense, 1-2' wide clumps of foliage. Semi-glossy, heart-shaped, 3-5 lobed leaves (4" across) rise directly from the runners. Leaves may have reddish variegation along the veins. Foliage is evergreen in mild winters, often turning reddish bronze in autumn and winter. Tiny, white flowers with very long stamens appear in airy racemes in spring for about 6 weeks on numerous, erect, wiry, mostly leafless flower stems which rise well above the foliage clump to a height of 10-12". Flower buds are pinkish. Easily grown in average, medium, well-drained soil in part shade to full shade. Prefers humusy, organically rich, moisture-retentive soils. Soil should not be allowed to dry out. Wet soils, particularly in winter, can be fatal, however. Removal of flower spikes after bloom will improve the appearance of the foliage mound. Foliage is semi-evergreen.

# APPENDIX 3: INITIAL MAINTENANCE ACTIVITIES (FIRST YEAR)

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## **9-27-20 through 10-9-20:**

- Monitoring Frequency: Check project every other day and after heavy rainstorms.
- Watering: Evaluate for watering needs. Water if no significant rain has fallen in 3 days.
- Berms/Mulching: Maintain berm height and position. Restore displaced mulch – particularly after heavy rainstorms. Berm locations are identified on Diagram #1 at the end of this document. Notify UER if berms are damaged.
- Damage: Monitor for insect damage or disease. Remediate as needed. Notify UER if you identify animal or plant damage. Prune as necessary to address unsightly damage or disease.
- Weeding: Weed as needed. Notify UER if weeds are a regular problem. Do not remove any plants on Butterfly Commons Plant List.

## **10-9-20 through 11-20-2020:**

- Check project at least every three days. Water if no significant rain in 5-day period.
- Perform same maintenance items as during prior maintenance period.

## **11-20-2020 through 3-31-2021:**

- Notify UER if any items of concern are identified.
- Water as appropriate if there is a long hot, dry spell of more than 10 days until ground is frozen and/or hoses are detached for the season.
- After a frost or freeze, firmly tamp plants back in place if frost heave is observed.
- Avoid piling snow on the beds although it is not necessary to remove snow that has naturally fallen within the bed area. If homeowners pile snow from their walkways onto the beds carefully remove large piles leaving the last few inches to avoid damaging the plants.

## **3-31-2021 through 8-15-21:**

- Water as appropriate if there is a long hot, dry spell of more than 10 days. The Inkberry shrubs are the highest priority for watering needs as they are difficult to replace and somewhat sensitive to water stress during the establishment phase.
- **Evaluate for any plant losses. Contact Lauren Hubbard for guidance if plant replacements are needed. She will coordinate planting.** If some species are not thriving it may be best to replant with a different species or simply eliminate that species from the plan, allowing other more successful species to fill in.
- Continue weeding as needed. It may be helpful to use an edging tool to cut through the turf grass along the fence line that may be encroaching from the neighbors. Repeat this

as needed throughout the life of these garden beds, encourage neighbors to plant similar natives on their property to reduce this maintenance task. Mulching can be helpful during establishment to hold moisture while the new plants are setting roots. After establishment, see Adaptive Management Guidelines.

- Evaluate and monitor berms for signs of erosion. Repair as needed.

**8-15-21 through life of project**

- Follow “Specific Maintenance Guidelines,” it is anticipated that the maintenance needs will decrease once the garden reaches maturity in about two years.

## APPENDIX 4: DEER MANAGEMENT PRACTICES AND RECOMMENDATIONS

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[see attached]

# Deer Management Information Sheet

Deer sightings are a frequent occurrence in Montgomery County, Maryland, and many people find them to be the largest hurdle in their gardening/native plant journey.

Options to protect your plants include:

- physical (fencing/caging),
- chemical (repellants),
- biological (resistant plants), and
- using complex plant palettes, with a diverse plant mix grouped closely together.

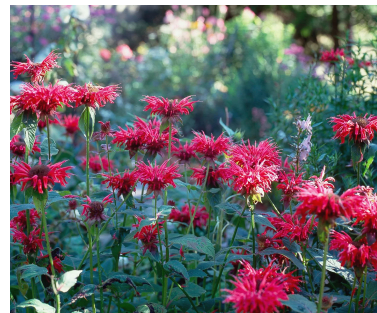
Deer tend to frequent the same areas over time, so discouraging them from visiting early in the planting season is beneficial, as they will be less likely to visit in the future.

Deer resistant plants usually have **fuzzy leaves** and **strong odors** that deter deer from eating them. Even if deer don't eat a shrub or tree they will rub them, so caging is recommended for all young trees and shrubs. Deer also tend to browse from about .5' to 5', so plants either shorter or taller than this are usually more safe.

Although these recommendations have been known to decrease deer presence and consumption of plants, they are not universal. Different regions have different success with these methods, and in lean times, deer will eat more varieties than normal.

## Native Deer Resistant Herbaceous Plants:

- **Mountain mint** (Pycnanthemum)
- **Goldenrods** (Solidago) (These are often nibbled down so may not bloom as well as if shielded behind a fence.)
- **Bee Balms** (Monarda)
- **Aromatic asters** (Symphyotrichum oblongifolium)



Pictured: Bee Balms

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### Native Deer Resistant Grasses:

(Basically all grasses, sedges and rushes, and ferns are deer resistant.)



Pictured: Little Bluestem

- **Bluestems** (*Andropogon spp.*)
- **Canada Wildrye** (*Elymus canadensis*)
- **Indiangrass** (*Sorghastrum nutans*)
- **Little Bluestem** (*Schizachyrium scoparium*)
- **Pennsylvania Sedge** (*Carex pennsylvanicum*)
- **Purple Lovegrass** (*Eragrostis spectabilis*)
- **Sea Oats** (*Chasmanthium latifolium*)
- **Soft Rush** (*Juncus effusus*)
- **Switchgrass** (*Panicum virgatum*)

### Native Deer Resistant Trees:



- **Allegheny Serviceberry** (*Amelanchier laevis*)
- **American Beach** (*Fagus grandifolia*)
- **American Holly** (*Ilex opaca*)
- **Bald Cypress** (*Taxodium distichum*)
- **Black Gum** (*Nyssa sylvatica*)
- **Downy Serviceberry** (*Amelanchier arborea*)
- **Eastern Red Cedar** (*Juniperus virginica*)

- **Flowering Dogwood** (*Cornus florida*) (pictured above)
- **Honey Locust** (*Gleditsia triacanthos*)
- **Paw-Paw** (*Asimina triloba*)
- **Pitch Pine** (*Pinus rigida*)
- **Sassafras** (*Sassafras albidum*) (pictured right)
- **Sweetbay Magnolia** (*Magnolia virginica*)
- **Sweetgum** (*Liquidambar styraciflua*)
- **Sycamore** (*Platanus occidentalis*)



### Homemade Deer Repellents:

- Hanging a bar of Irish Spring soap above your plants (The smell repels).
- "Rotten Egg Spray"--Combine 3 raw eggs, 3 cloves of garlic, 3 cups of water, 3 tablespoons of milk or yogurt, and 3 tablespoons cayenne pepper in a blender.



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Let ferment in a jar outside for three days, and then transfer to a spray bottle. Spray on plants and perimeters of the garden. \*Warning, will have a pungent odor! It is not advised to use this method on areas too close to the home or that are frequented.\*

- Sprinkling chili powder or flakes on plants that deer like to eat.

Note: Repellants have to be replenished after rain. Disclaimer: UER has not used these options, but they have good reviews from other sources.

#### Store-bought Deer Repellents:

- Bobbex Concentrate Deer Repellent
- Deer Out Concentrate Deer Repellent
- I Must Garden Deer Repellent
- Repels-all



#### Montgomery County Recommendations:

- Hang a bar of soap from the tree branches
- Utilize high fencing that deer cannot step over (can be purchased at most gardening stores, or stores like Home Depot and Lowe's)
- Utilize motion sensors and other technology that will create movement to scare away deer
  - Other options include hanging CD's or windchimes that will startle deer
- Planting a mix of plants closely together, including some deer repellent choices, will help deter deer from those they usually like (recommended)
- Electronic devices - some make sounds, some give a mild shock - you need to move them around to be effective.



#### Resources:

- [Maryland DNR](#)
- [My Green Montgomery](#)
- [Montgomery Co. Suggestions](#)
- ["How I Saved My Garden"](#)
- [Best Deer Repellants](#)
- [Deer-resistant Native Plants for the Northeast by Ruth Rogers Clausen and Gregory Tepper.](#)

Note that rabbits can also do a number of new gardens - temporary caging and use of repellents when planting can help give the new plants a chance to get started.