Native Butterfly Meadow
The Native Butterfly Meadow is a Missouri native meadow designed for beautification, habitat creation and to attract pollinators, like the monarch butterfly. The monarch butterfly lays eggs exclusively on the milkweed plant and feeds on the nectar of Pale Purple Coneflower, Rough Blazing Star and Purple Prairie Clover, plants that are included in this lot design. Bordered by a clean, perennial edge, this lot design offers a friendly addition to every neighborhood.

For more information, refer to UNI Vacant to Vibrant: A Guide to Working with Lots, www.uni-kc.org

<table>
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<th>Cost</th>
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<th>$1,000 - 2,500</th>
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<td>Intermediate</td>
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<td>Location</td>
<td>Residential Side Lot in Full Sun or Part Sun</td>
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What is the lot design likely to cost?
The estimated cost of the Native Butterfly Meadow is high ($2,500 – $5,500) and based on utilizing volunteer labor, seed mix, and potted plants. To save money, you can buy smaller pots or plugs. The cost assumes that residents or volunteers have access to basic safety gear and garden tools.

How much upkeep will this lot design require?
This lot design requires a medium level of maintenance to thrive. Maintenance will include weeding and watering the meadow and perennial beds, particularly during the first two growing seasons while the plants establish themselves. The meadow should be mowed once a year in the late fall or early spring.

Will installation of this lot design require a professional?
The installation of this lot design should not require professional assistance if you, with the help and support of friends, family or neighbors would like to construct this lot design. Please refer to the Step-By-Step section for guidance. If you do not have the required support or feel unable to tackle this lot design, please seek professional assistance.

How long will it take to install this lot design?
While people tackle projects in different ways and at different speeds, the UNI Vacant to Vibrant Guide estimates the installation time of this lot design to be one full weekend with the help of at least three to five healthy adults or youth. The Field Guide assumes the lot is ‘construction ready,’ and all equipment and materials required for the lot design have been acquired and are ready to use.
Native Butterfly Meadow

Examples of Native Butterfly Meadow Plantings

1 - Common Yarrow
2 - Meadow with Coneflower
3 - Blue-Eyed Grass

Where Do I Grow?

The Native Butterfly Meadow can be installed on single, double, or multiple lots and is suitable for corner properties. The meadow area and perennial bed can be extended to cover two or more lots.

Image Source: 1) Common Yarrow, Public Domain; 2) Pale echinacea in the Poltava region, Ukraine, by Oms2012, (CC BY-SA 3.0); 3) Blue-eyed Grass (Sisyrinchium angustifolium), Marvin Smith, US, (CC BY-SA 2.0).
Before You Start

Till Safely

Before you till, inspect your lot for signs of buried concrete or rubble that was not removed during the cleanup stage. Large debris can ruin tiller blades.

When tilling, wear appropriate safety gear, such as covered boots with socks, long pants, safety glasses, dust mask, and ear protection. Make sure you understand the safe operating procedures of your tiller. Refer to the user's manual.

Test Your Soil

Harmful pollutants have made their way into many urban soils. To proceed with awareness, consider having your soil tested before construction.

University of Missouri Extension provides soil testing for a small fee. They can test for individual contaminants or for certain categories of contaminants, such as heavy metals. A Soil and Plant Environmental Analysis Form is available at [http://extension.missouri.edu/explorepdf/miscpubs/mp0953.pdf](http://extension.missouri.edu/explorepdf/miscpubs/mp0953.pdf). Additional information can be found at University of Missouri Extension’s Soil and Plant Diagnostic Services page, [http://soilplantlab.missouri.edu/soil/](http://soilplantlab.missouri.edu/soil/), or by contacting the Soil and Plant Testing Laboratory, at soiltestingservices@missouri.edu or 573-882-0623.

Need to remove grass in areas where you are constructing your lot design?

There are many ways to remove unwanted grass. The first is to remove the grass and its root system by digging up the grass. Another option is to cover your lot with cardboard or a plastic tarp to smother your grass in darkness. It will take several weeks, but after being covered, the dead grass will be easier to remove.

Call Before You Dig

Locate underground utilities before beginning your lot design. Call 1-800-DIG RITE (800-344-7483) or 811 at least three days before you plan to start digging on your lot.

Image Source: Daylilies, Hemerocallis_lilioaspodelus17548490, Henry Healy, Chicago, IL, (CC BY-SA 2.0).
What You Need: Shopping List

Shopping List

The shopping list provides a breakdown of potential materials, tools, and resources required to construct this lot design.

This shopping list is designed for a single lot (30 by 100 feet).

Materials List

Materials
- Mulch or Wood Chips, 1 cubic yards
- Compost Blanket

Planting Option
- Butterfly Garden Mix seed mix, 5 ounces of seed
- Annual Cover Crop seed mix, 8 ounces of seed
- Missouri Evening Primrose, 44 pots
- Blue-Eyed Grass, 44 pots
- Yarrow, 10 pots
- Daylily, 12 pots

Remaining Lot (Optional)

Groundcover
- Spread with newsprint and cover with mulch.

Tools + Resources

Suggested Tools
- Marking Paint and Tape Measure
- Safety Gear: Gloves, heavy work boots, tall socks, pants, long sleeve shirts, dust masks, protective eye wear, ear plugs, and hard hats (if using heavy machinery)
- Garden Tools: Spades, Shovels, Rakes, Trashbags, and Wheelbarrows
- Tiller, 6 inch depth (optional)

Potential Water Sources
- Garden Hose with potential extension hose
- Sprinkler
- Rain Barrel in addition to other water source

Resources

Image Source: Missouri Evening Primrose Photo by MDC Staff, 1-14-14, courtesy Missouri Department of Conservation (MDC).
Native Butterfly Meadow Step-By-Step

Let’s Start

Want to create the Native Butterfly Meadow but don’t want to hire a professional? Here are a few guiding principles to help you construct your lot design.

☑ Check off tasks as you go along.

Lot Design Steps

Volunteer Opportunities:

☑ Prepare Your Lot
☑ Sow Meadow
☑ Plant Perennials
☑ Maintain Your Lot Design
☑ Sow Remaining Lot

Prepare Your Lot

Select the best location for your meadow. Use marking paint and a tape measure to map out the size, shape, and dimensions of your design.

The UNI Vacant to Vibrant: A Guide to Working with Lots, www.uni-kc.org, recommends a 22 by 38 foot (836 square feet) meadow with two 22 by 4 foot (88 square feet per bed) perennial beds.

Sow Meadow

Soil should be prepared for seeding by adding and then dampening 3-5 layers of newsprint. Add compost over the seeds.

Seeding should take place in either spring (mid-May to mid-June) or fall (mid-October to end of November). Missouri Wildflowers Nursery (www.mowildflowers.net) and Taylor Creek Restoration Nursery (www.restorationnurseries.com) sell a wide variety of native seed mixes and staff can provide instructions as to the amount of seeds needed depending upon the size of your lot.

Once mixed, spread seed across the entire meadow area. You can do this by hand or with a hand-cranked whirlwind seeder. You may need to do this several times to get even coverage. Gently water seedlings daily until they are four to six inches in height.

Placing a thin layer of straw or a germination blanket over seeded areas will help ensure that your seed establishes by keeping seeds from blowing away and protecting them from birds. Cover with compost or mulch, which can be purchased at most nurseries or hardware store gardening sections.

Annual Cover Crop is used to establish the Butterfly Garden Mix and does not require annual re-seeding.
Native Butterfly Meadow Step-By-Step

☐ Plant Perennials

Sunny to partly-sunny plantings are recommended for the perennial beds. If your lot is in shade, seek alternate planting options.

Place plants in the desired location, then remove plastic pots, loosen roots, and plant.

The UNI Vacant to Vibrant Guide recommends adding three inches (1 cubic yard) of wood chips or mulch over each perennial bed. Adding wood chips or mulch will help suppress weeds.

For more guidance on planting perennials refer to the step-by-step planting instructions available in the UNI Vacant to Vibrant Reference Section, www.uni-kc.org.

☐ Maintain Your Lot Design

A meadow requires care and maintenance to thrive. The Native Butterfly Meadow will require weeding, watering, and mowing. In the first year, cut your meadow back to four to six inches whenever it reaches above ten inches in height.

After the first year, continue weeding, and mow your meadow in late fall or early spring. This will keep the meadow at its best. It will take about three years for the meadow to establish.

Perennial beds are low-maintenance; however, watering and weeding plants regularly is still required, especially during the first two years. The mulch or wood chips areas should be replenished or top-dressed annually.

Meadows are a work in progress. If you feel your meadow needs more color, it is okay to add additional native seed mixes and plants. Be creative and make it your own!

Average Height of Plants

Grasses and Perennials
Native Butterfly Meadow Lot Design

Refer to the Construction Package for more details - located at UNI Vacant to Vibrant: A Guide to Working with Lots, www.uni-kc.org

Individual Plant

Strengthen your neighborhood's identity! Align your garden with the front setback line of adjacent houses.

1 Perennial
2 Perennial
3 Grass or Optional Groundcover
4 Native Butterfly Meadow
5 Mulch
Planting: Full Sun to Part Sun

Missouri Evening Primrose
Oenothera macrocarpa
12” Height x 18” Width
Blooms August
Quantity: 44 pots

Yarrow
Achillea millefolium
24” Height x 24” Width
Blooms June–September
Quantity: 10 pots

Daylily
Hemerocallis
Pick your favorite variety at the garden center.
28” Height x 24” Width
Blooms June–July
Quantity: 12 pots

Blue-Eyed Grass
Sisyrinchium campestre OR
Sisyrinchium angustifolium
12” Height x 12” Height
Blooms May–June
Quantity: 44 pots

Key

1 Missouri Evening Primrose & Blue-Eyed Grass (Space approximately one foot apart and mix evenly.)

2 Yarrow & Common Daylilies (Space approximately three feet apart and mix evenly.)

3 Native Butterfly Meadow (Five ounces Butterfly Garden Mix with eight ounces Annual Cover Crop seed mix spread over meadow area.)

Plant Sizes

Pots: Plants can be purchased in one to five gallon pots. Size of pots can vary based on availability.

Pollinator Magnet Meadow Mix
Seed mix can be purchased at Missouri Wildflowers Nursery (www.mowildflowers.net) and Taylor Creek Restoration Nursery (www.restorationnurseries.com).

Butterfly Milkweed, Asclepias tuberosa
Side-Oats Grama, Bouteloua curtipendula
Sand Coreopsis, Coreopsis lanceolata
Bicknell’s Sedge, Carex bicknelli
Purple Prairie Clover, Dalea purpurea
Pale Purple Coneflower, Echinacea pallida

False Boneset, Kuhnia eupatorioides corymbis
Rough Blazing Star, Liatris aspera
Black-eyed Susan, Rudbeckia hirta
Little Bluemem Grass, Schizachyrium scoparium
Sky Blue Aster, Symphyotrichum oolentangiense

Plant Sizes

Seeds: All plants can be purchased in seed form.

Image Source: 1) Oenothera macrocarpa by Jerzy Opiola, (CC BY-SA 3.0) 2) Achillea, millefolium, bloem, by Pethan, (CC BY-SA 3.0); 3) Hemerocallis ‘Mikado’, by Epibase, Göteborg, Sweden, (CC BY-SA 3.0); 4) Prairie Blue-eyed Grass (Sisyrinchium campestre) by Joshua Mayer, (CC BY-SA 2.0);
Did You Know?

Professionals Can Help!
The UNI Vacant to Vibrant: A Guide to Working With Lots provides a Construction Package for each lot design. The Construction Package includes information and details required for a professional to construct this design. More information is available in the UNI Vacant to Vibrant Guide at www.uni-kc.org.

Helpful Facts

• The plants recommended for this lot design attract monarch butterflies and other Kansas City pollinators.

• Native perennials and meadows help create a colorful garden.

Planting Tips

• Call ahead to be sure the nursery or garden store has the plants you need for your lot design.

• An alternative seed mix is a Butterfly and Hummingbird Garden Mix, such as ERNMIX-179 or equivalent.

• The best time to plant is in spring or fall.

• Do not plant in extreme heat.

• Water after planting and as needed. Do not let plants dry out.

• Weed weekly or as needed.

Image Source: Bee on Purple Prairie Clover (Dalea purpurea), Joshua Mayer, (CC BY-SA 2.0).
Draw Your Lot: Native Butterfly Meadow
UNI Vacant to Vibrant:
A Guide to Working with Lots
www.uni-kc.org

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