

Volunteer

Professional

Volunteer + Professional

Clay Soil Meadow

Image Source: Rachel Kramer, "A beautiful night at Millennium Park." 24 July 2013 via Flickr, CC BY 2.0.



HELLO

MY NAME IS

Clay Soil Meadow

The Clay Soil Meadow is a native meadow selected for planting in heavy clay and other poor draining soils. Due to a mix of existing geology and previous building removal practices, clay soils are quite common throughout Detroit.

If you have tried planting gardens before with little luck, this lot design may be perfect for your lot. The plant mix for this meadow is selected for its ability to grow in clay soil and for the colors it will provide to your lot.

This plant mix can also be used as a substitute for meadow plantings in other lot designs.

For more information refer to [DFC-lots.com](https://dfc-lots.com)

What is the lot design likely to cost?

The estimated cost of the Clay Soil Meadow is low (\$50 – \$1,000) and based on utilizing volunteer labor and the seed mix. 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, particularly during the first two growing seasons while the meadow establishes itself. The meadow should be mowed once a year in the late fall or early spring.

Will the 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, you can 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 Field Guide estimates the installation time of this lot design to be one full weekend with the help of at least three 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.

Cost	\$50 - 1,000	\$1,000 - 2,500	\$2,500 - 5,500	\$5,500 +
People	Volunteer	Professional	Volunteer + Professional	
Experience	Beginner	Intermediate	Advanced	
Upkeep	Low	Medium	High	
Stormwater	Good	Better	Best	
Location	Residential Lot in Full Sun or Part Sun			

Clay Soil Meadow

Examples of Clay Soil Meadow Plants



1 - Hairy Goldenrod

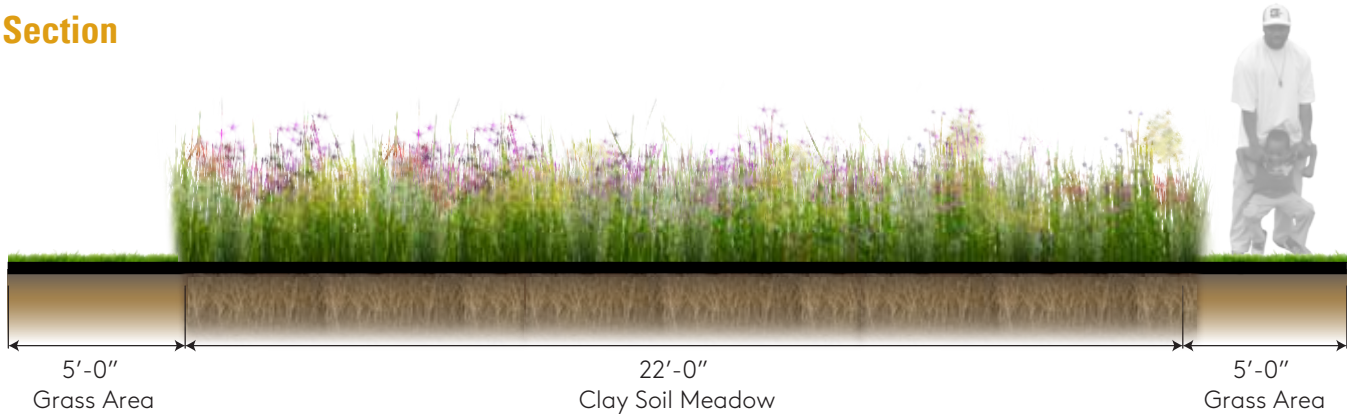


2 - Purple Coneflower

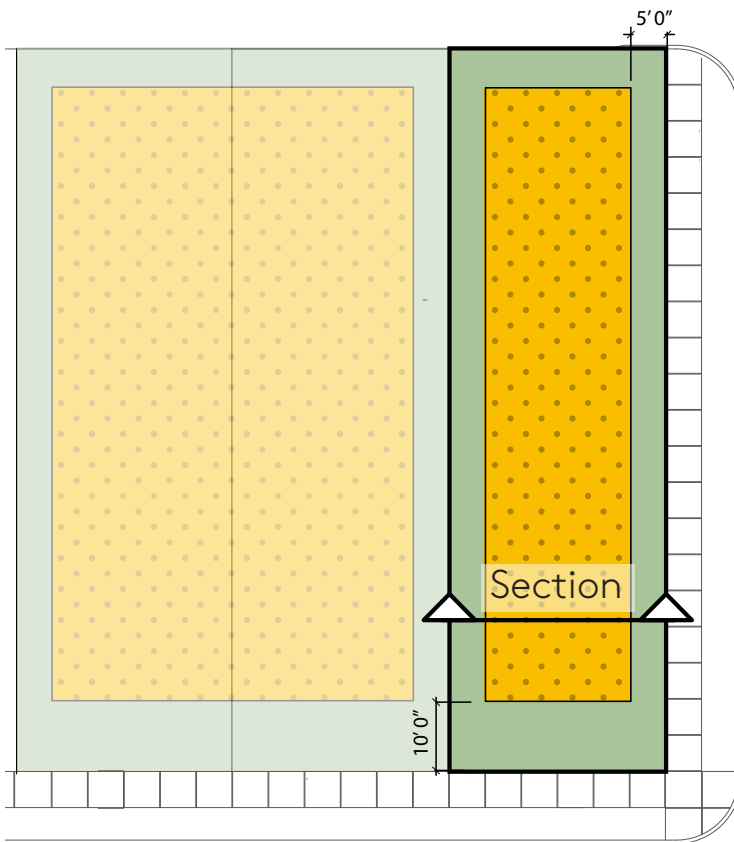


3 - Black-Eyed Susans

Section



Where Do I Grow?



The Clay Soil Meadow can be installed on single or multiple lots and is suitable for corner properties. The images below show examples of the perennials found in the recommended meadow seed mix.



4 - White Beard Tongue



5 - Goldenrod



6 - Aster

Clay Soil Meadow

Grass or Optional Groundcover

Image Source: 1) gobucks2, "Fall Day 2009." 19 September 2009 via Flickr CC-BY-NC-SA 2.0; 2) Steven Severinghaus, "Coneflower Forest." 17 July 2014 via Flickr CC BY-NC-SA 2.0; 3) Jonathan Bloy, "Field of Black-eyed susans." 18 July 2010 via Flickr, CC BY-NC-SA 2.0; 4) Bill Bumgarner, "White Beard Tongue." 18 June 2009 via Flickr, CC BY-NC-ND 2.0; 5) Psycho Delia, "Meadow Brown on Golden Rod." 13 July 2014 via Flickr, CC BY-NC 2.0; 6) Tom Potterfield, "Symphyotichum." 20 September 2012 via Flickr, CC BY-NC-SA 2.0.

Before You Start

'Construction Ready'

This lot design assumes that you have prepared the lot to a 'construction ready' state.

'Construction Ready' refers to a lot that is clean and clear of trash, hazardous objects, unwanted trees, brush and vegetation, fences, and other unwanted structures.

It may be necessary to remove grass in preparation for your lot design. Refer to the Remove Your Grass box located on the right hand side of this page for more information.

Is there an available water source near your lot? Consider how and where you will access water during and after construction to ensure that your plants can establish.

If your lot is not ready for construction, refer to the [Clean + Green](#) lot design.

You can find the lot design at DFC-lots.com.

Call Before You Dig

Locate underground utilities before beginning your lot design. MISS DIG provides a free service to Michigan residents by locating and marking utilities on requested properties. Call (800) 482-7171 or 811 at least three days before you plan to start digging on your lot.

Test Your Soil

Harmful pollutants have made their way into many urban soils. To proceed with awareness, consider having your soil tested before construction. Two great options are available:

Soil testing is free to members of Keep Growing Detroit's Garden Resource Program. Call (313) 757-2635 for more information or visit detroitagriculture.net.

If you are not yet a member, you can work directly with Michigan State University's (MSU) Extension Program. They have a Home Lawn and Garden Soil Test Mailer for \$25. For more information call (888) 678-3464 or visit msusoiltest.com.

If you are concerned about the presence of lead or other contaminants in your soil, call the Michigan Department of Health and Human Services at (866) 691-5323 or (800) 424-LEAD.

Remove Your Grass

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.

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.

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).

Tools + Resources

Suggested Tools

- **Marking Paint and Tape Measure**
- **Safety Gear:** Gloves, heavy work boots, tall socks, pants, long sleeve shirts, dust mask, protective eye wear, ear plugs, and hard hats (if using heavy machinery)
- **Garden Tools:** Spades, shovels, rakes, trash bags, 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

Field Guide Resources

Resources are available on the Field Guide's web site.

- Clean + Green
- Perennials + Grasses Planting Detail
- Bulb Planting Detail

Materials List

Materials

- **Germination Blankets**, 2 rolls (8 by 112.5 feet), used for the meadow area

Planting

- **Clay Mix seed mix**, 9 ounces of seed
- **Annual Cover Crop seed mix**, 14 ounces of seed

Remaining Lot (Optional)

Groundcover

- **Low-Maintenance Fescue Mix**, 7 pounds of seed
- **Germination Blanket**, 2 rolls (8 by 112.5 feet)

Clay Soil Meadow Step-By-Step

Let's Start

Want to create the Clay Soil 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
- Maintain Your Lot Design
- Sow Remaining Lot

! Annual Cover Crop is used to establish Clay Mix and does not require annual re-seeding.

Prepare Your Lot

Use marking paint and a tape measure to map out the size, shape, and dimensions of your design.

The Field Guide recommends a 20 by 90 foot (1,800 square feet) meadow with a ten foot mowing strip that aligns with the front of neighboring houses and five foot pathways along sides and back of meadow.

Sow Meadow

Soil should be prepared for seeding by scarifying, raking or tilling the soil four to six inches deep to loosen up any compaction, allowing for easier seed germination and better water infiltration. Tilling should not be done without an assessment of buried cement, debris, or large rocks. Be sure to select the correct size of machinery for the job.

Seeding should take place in either spring (mid-May to mid-June) or fall (mid October to end of November). Michigan Wildflower Farm's Clay Mix and Annual Cover Crop seed mix are good options for the Clay Soil Meadow; similar mixes are available from other suppliers.

Michigan Wildflower Farm suggests five ounces of Clay Mix mixed with eight ounces of Annual Cover Crop seed mix per 1,000 square feet. **The Field Guide recommends nine ounces of Clay Mix and 14 ounces of Annual Cover Crop seed mix for the meadow area (20 by 85 feet).**

Once seeds have been 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.

Clay Soil Meadow Step-By-Step

Two 8 by 112.5 foot single net germination blankets will cover meadow area.

Germination blankets or straw can be purchased at most nurseries and garden stores, including Detroit Farm and Garden.

○ Maintain Your Lot Design

A meadow requires care and maintenance to thrive. The Clay Soil 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.**

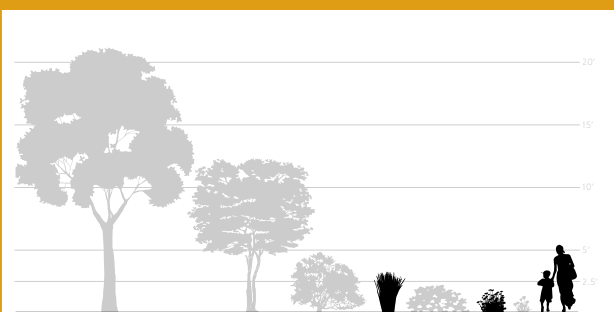
After the first year, continue weeding, and mow your meadow in late fall or early spring to keep the meadow at its best. It will take about three years for the meadow to establish.

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!



Visit the Resources page on the Field Guide's web site (DFC-lots.com) to discover other vendors and places to purchase plants.

Average Height of Plants



Grasses and Perennials

○ Sow Remaining Lot

If you are seeking a lower maintenance alternative to a traditional lawn, the Field Guide recommends a fescue seed mix. **If you follow the Clay Soil Meadow lot design you will need approximately seven pounds of fescue seed mix for the remaining lot (1,200 square feet) and two 8 by 112.5 foot rolls of single net germination blankets.**

This family of floppy grasses is drought-resistant and requires one cutting (in August or September) per year. Fescue can be established in full sun to shade and should be seeded in spring (mid-March to mid-May) or fall (August to September).

Soil should be prepared for seeding by scarifying, raking or tilling the soil four to six inches deep to loosen any compaction, allowing for easier seed germination and better water infiltration. Apply seed mix to a damp lot.

Sow seeds by using a seed spreader or by hand across remaining lot. The Field Guide recommends a seed rate of five pounds per 1,000 square feet. 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 your seed establishes by keeping seeds from blowing away and protecting them from birds. Germination blankets or straw can be purchased at most nurseries and garden stores.

Once established, grass will not require supplemental watering except during unusually dry periods. Eco-Turf Low Maintenance Fescue Mix is one recommended seed mix and can be purchased through the Michigan Wildflower Farm.

Other Field Guide lot designs can be used as groundcovers, check out the web site for additional options and ideas.

Next Level: If you would like to bring additional color to your grass you can always plant bluebells, crocuses and/or daffodils to create a decorative show in spring. Bulbs should be planted in the fall.

For more guidance on bulb planting refer to the [Bulb Planting Detail](#).

Planting: Full Sun to Part Sun

Clay Mix

Mixing nine ounces of Clay Mix with 14 ounces of Annual Cover Crop seed mix is recommended for the Clay Soil Meadow lot design.

You can buy these seeds premixed at Michigan Wildflower Farm.

Tall Thimbleweed, *Anemone Virginiana*
(1% of mix)

Smooth Aster, *Aster laevis* (2% of mix)

New England Aster, *Aster novae-angliae*
(3% of mix)

Purple Coneflower, *Echinacea purpurea*
(2% of mix)

Bergamot, *Monarda fistulosa* (5% of mix)

Foxglove Beardongue, *Penstemon digitalis*
(3% of mix)

Yellow Coneflower, *Ratibidua pinnata*
(6% of mix)

Blackeyed Susan, *Rudbeckia hirta* (6% of mix)

Rosinweed, *Silphium integrifolium* (2% of mix)

Prairie Dock, *Silphium terebinthinaceum*
(3% of mix)

Stiff Goldenrod, *Solidago Rigida* (4% of mix)

Golden Alexandra, *Zizia Aurea* (3% of mix)

Big Bluestem, *Andropogon gerardii* (15% of mix)

Canada Wild Rye, *Elymus canadensis*
(10% of mix)

Switch Grass, *Panicum virgatum* (10% of mix)

Indian Grass, *Sorghastrum nutans* (3% of mix)



1 - Meadow



2 - Goldenrod in Meadow

Plant Sizes



Seeds: All plants can be purchased in seed form.

Did You Know?

Professionals Can Help!

The **Field 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. On the Field Guide web site, use the [Construction Package](#) link located near the top of this lot design page to download and print. Your selected professional will then be able to provide a cost estimate and schedule based on the condition of your lot and the design you select.

Want to Hire Locally?

DFC-lots.com has a growing list of Detroit-based professionals and suppliers of landscape materials and services.

Still unsure of where to start?

Call (313) 294-LOTS or email fieldguide@detroitfuturecity.com for assistance.

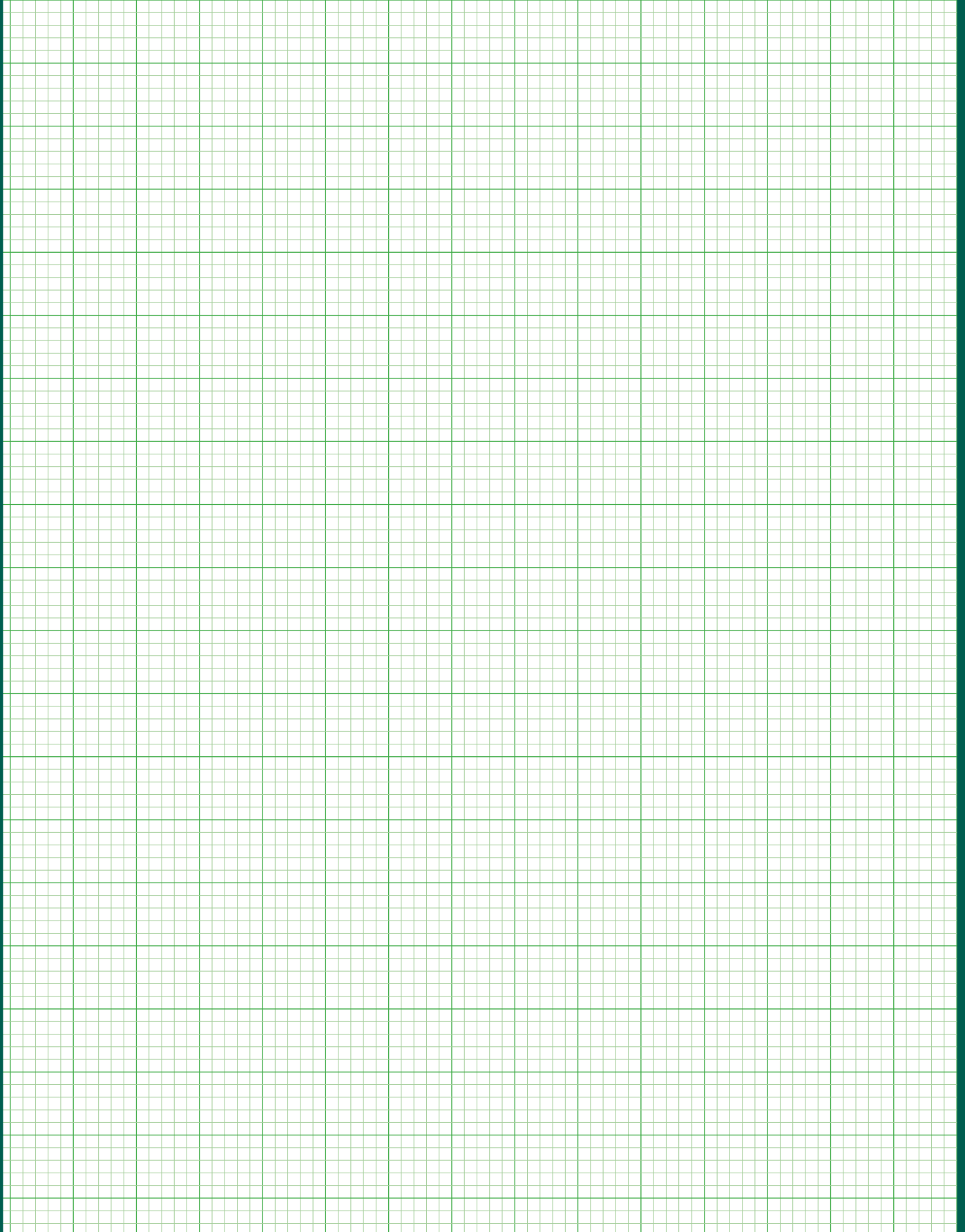
Helpful Facts

- The Clay Soil Meadow can be implemented on a single lot or extend across multiple lots.
- Native plants have deep roots that help capture, hold, and slowly release stormwater.

Planting Tips

- The best time to plant is spring or fall.
- Do not plant in extreme heat.
- Water after planting and as needed.
- Weed weekly or as needed.

Draw Your Lot



Clay Soil Meadow Field Notes



**DETROIT
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**working
with lots**
A FIELD GUIDE

**Visit DFC-lots.com
#DFClots**

Image Source: Tom Potterfield, "Asclepias syriaca (common milkweed)." 18 June 2014 via Flickr CC BY-NC-SA 2.0.