



Grass Matrix Gardens

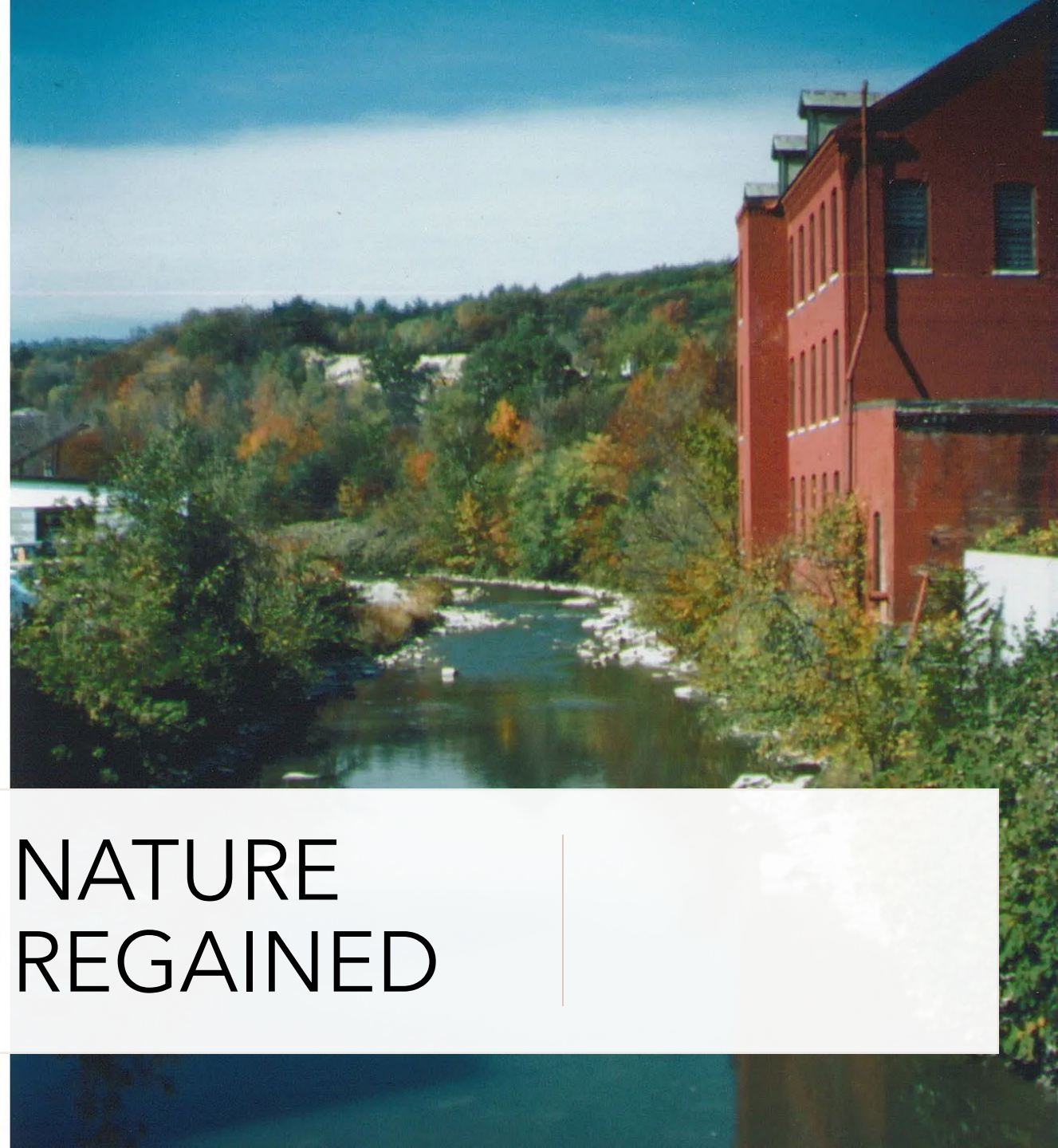
Sandy Vernon, landscape designer/horticulturist—PKJ Design Group



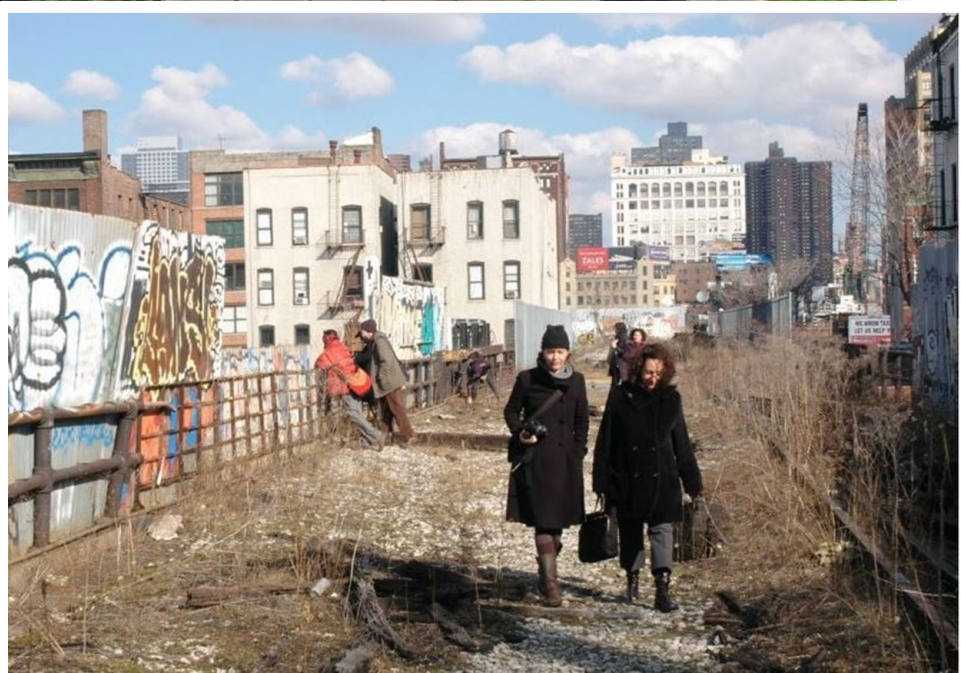
Planting is Changing

NATURE LOST





NATURE
REGAINED





“The front lines of the battle for nature are not in the Amazon rain forest or the Alaskan wilderness...
...the front lines are our backyards...”

Thomas Rainer and Claudia West
Planting in a Post Wild World



Creating interactive and immersive experiences
that are sustainable, responsible and captivating







Our landscape



Mount Timpanogos

Steppe Region

- A steppe is a dry, grassy plain occurring in temperate climates that have distinct seasonal temperature changes with cold winters and warm summers.
- Steppes are semi-arid receiving 10-20 inches of rain each year. This is enough to support short grasses, but not enough for tall grasses or trees to grow. Many kinds of grasses grow on steppes, but few grow taller than 20 inches. Scrub is below knee height.
- The most famous steppe is in Eurasia extending from Hungary to China. It reaches one-fifth of the way around the Earth. Another steppe region is in North America from the western edge of the Great Plains in the rain shadow of the Rocky Mountains. It extends from Texas to Saskatchewan, Canada. The other steppe regions are in Patagonia and South Africa.



A photograph of a steppe landscape featuring numerous clumps of tall, golden-brown grasses. The grasses have a feathery, spiky appearance and are growing in a field. The background shows more of the same vegetation, creating a sense of a vast, open plain.

What types of plants grow in the Steppes?

- Gray-green & blue tussock grasses
- Aromatic pewter & green subshrubs
- Low spreading silver forbs
- Low bulbs
- Intermittent perennials with short wiry stems
- Endure less than 20" of annual rainfall
- Tolerate extremes of heat and cold

What is a GRASS MATRIX?

- A landscaped garden where grasses are the predominant species interplanted with perennials that have structure and interest creating extended seasons of enjoyment.



CONCEPT of a Grass Matrix

- Reflects nature—free flowing vs order and discipline
- Blend of plant species vs monoculture blocks
- Relaxed vs manicured
- Sustainable vs high maintenance





WHY GRASSES?

- Mass plantings give impact
- Offer simplicity
- Low maintenance
- Long season of interest
- Create movement, texture & change
- Maintains the spirit of our place (Genius Loci)

DESIGNED INTERMINGLING



- 1. Purple Cone Flower
- 2. Autumn Moor Grass
- 3. Ornamental Allium
- 4. Calamint
- 5. Heuchera
- 6. Black Lace Elder (choice?)
- 7. Prairie Dropseed

Finegardening.com

How perennials and grasses grow together



In the Meadow:

- Grasses are dominant
- Forbs emerge through the matrix.

90:10 or 80:20

- Offers legibility & tranquility



PLANNING of a Grass Matrix

- What is your purpose for the area?
 - Erosion control, park strip, visual interest and change, lawn-free yard...



GUIDELINES for a Grass Matrix

- Pair grasses and perennials of the same basic height and competitiveness
- Perennials with vertical habits look best with heights equal to or slightly taller than the grasses
- Put sun plants in sun and shade plants in shade
- Consider scale
 - Large areas can take drifts while small areas do best with clusters of 3-5 perennials
- Remember 90:10 or 80:20

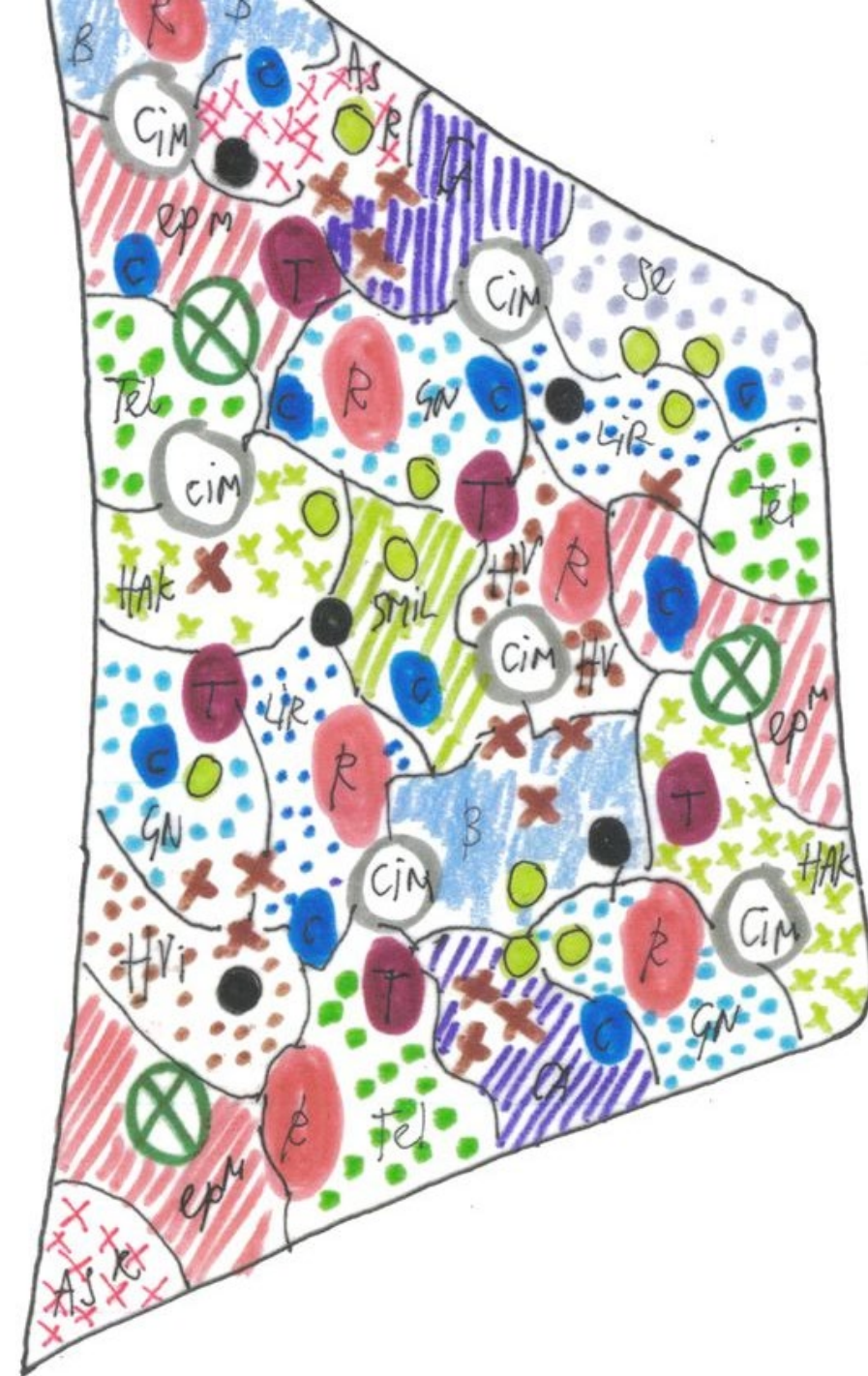


COMPANION PLANTING

- Low key combinations that look good over a long period of time
- Finding a good combination and repeating it
- Two different plants together can be dramatic, but can lack depth and year-round interest
- Combine 4 or 5 different plants or more

Part of Planning is Paper

- Draw the area to scale
- List the grasses, perennials and shrubs you want to use
- Sit in your garden from a few different vantage points and for an hour or a day or a week—whatever it takes to get a vision
- Then sketch it out
- Use your intuition, designs on paper are rarely reflected perfection in the ground

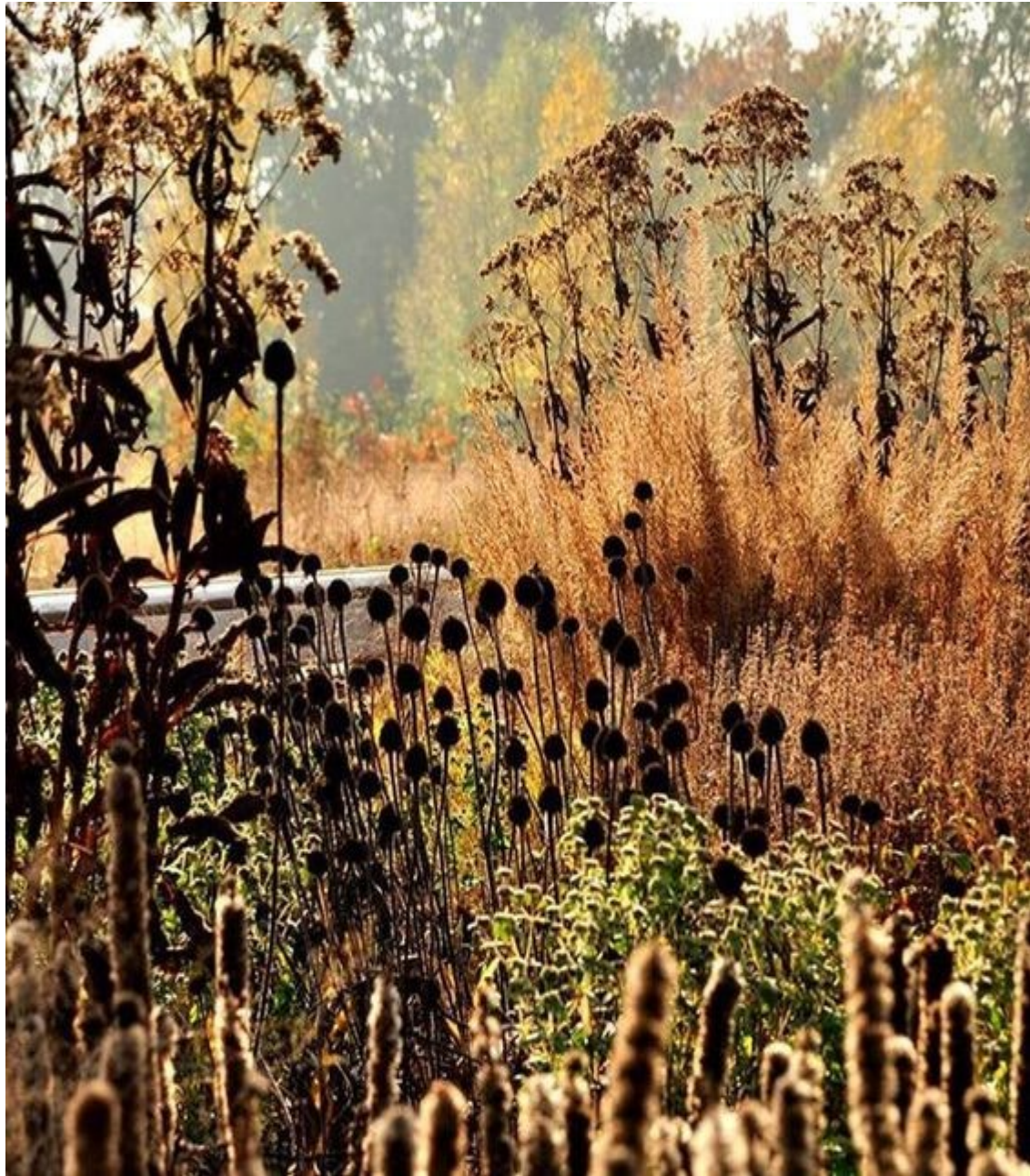
















Conversion

- Ponder and design
- Seating area to enjoy
- Remove unwanted lawn and define remaining lawn
- Convert to in-line drip
- Plant your design (finally)
- Mulch
- Adequately water to establish in early spring
- Enjoy, play, touch, smell, watch

Then and Now



GRASSES FOR DRIER AREAS

- **Indian Rice Grass** (*Achnatherum hymenoides*)
- **Blue Grama** (*Bouteloua gracilis*-Blonde Ambition)
- **Siskiyou Blue Fescue** (*Festuca idahoensis*)
- **Needle and Thread Grass** (*Hesperostipa comata*)
- **Muhly Grasses** (*Muhlenbergia*) mtn, ruby, deer
- **Alkali Sacaton** (*Sporobolus airoides*)
- **Big Bluestem** (*Andropogon gerardii*)
- **Sideoats Grama** (*Bouteloua curtipendula*)
- **Berkeley Sedge** (*Carex divulsa*) (shade)
- **Blue Sedge** (*Carex flacca*-Blue Zinger) (shade)
- **Sheep's Fescue** (*Festuca ovina*)
- **Atlas Fescue** (*Festuca mairei*)
- **Little Bluestem** (*Schizachyrium scoparium*—Prairie Blues)
- **Autumn Moor Grass** (*Sesleria autumnalis*)
- **Prairie Dropseed** (*Sporobolus heterolepis*)
- **Feather Grass** (*Stipa-pennata, capillata*) (*Nassella tenuissima*)

OTHER GREAT GRASSES

Calamagrostis—feather reed grass (Korean feather reed grass)

Carex—Sedges

Deschampsia—tufted hair grass

Festuca—Fescues (Cool as Ice)

Helictotrichon—Blue Oat Grass

Miscanthus—Maiden Grass

Molinia—Moor Grass (moist)

Panicum—Switch Grass

Pennisetum—Fountain Grass

Schizachyrium—Little Bluestem

Sorghastrum—Indian Grass

Hakonechloa—Japanese Forest Grass (shade & moisture!)

Juncus--Rush



Bouteloua



Deschampsia



Festuca



Miscanthus



Muhlenbergia



Molinia



Panicum



Sporobolus



Schizachyrium



Pennisetum



Calamagrostis



Schizachyrium



Pennisetum



Sorghastrum



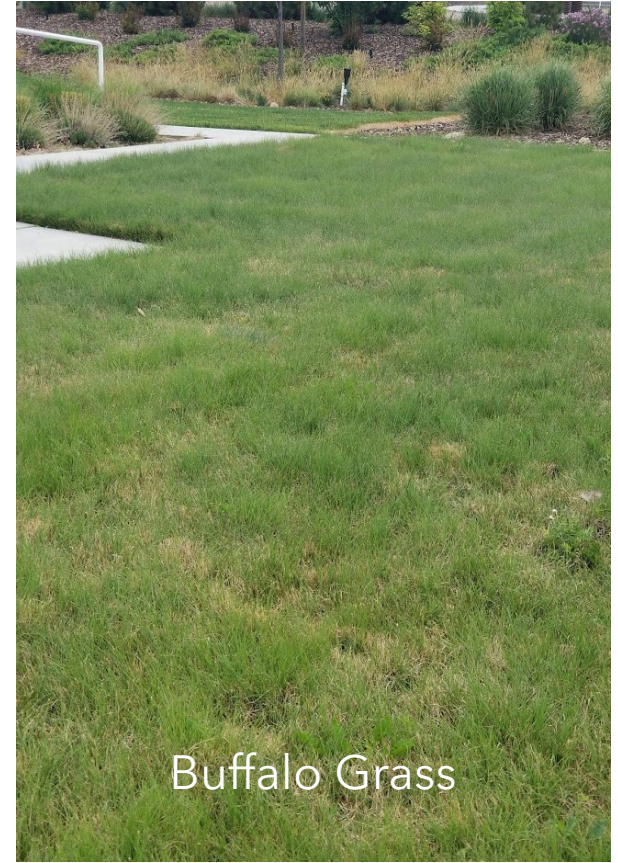
Fescues



Blend



Crested Wheatgrass



Buffalo Grass

Lawn Substitutes



Non-Irrigated Hydroseeding

- Non-irrigated native seed will take from 2-5 years to establish.
- Best time to seed is in November. Never any later than April 1



Irrigated HydroSeed

- Still best to seed in late fall
- Still takes time to establish (depends on Mother Nature)
- Irrigation creates a more uniform and robust appearance sooner

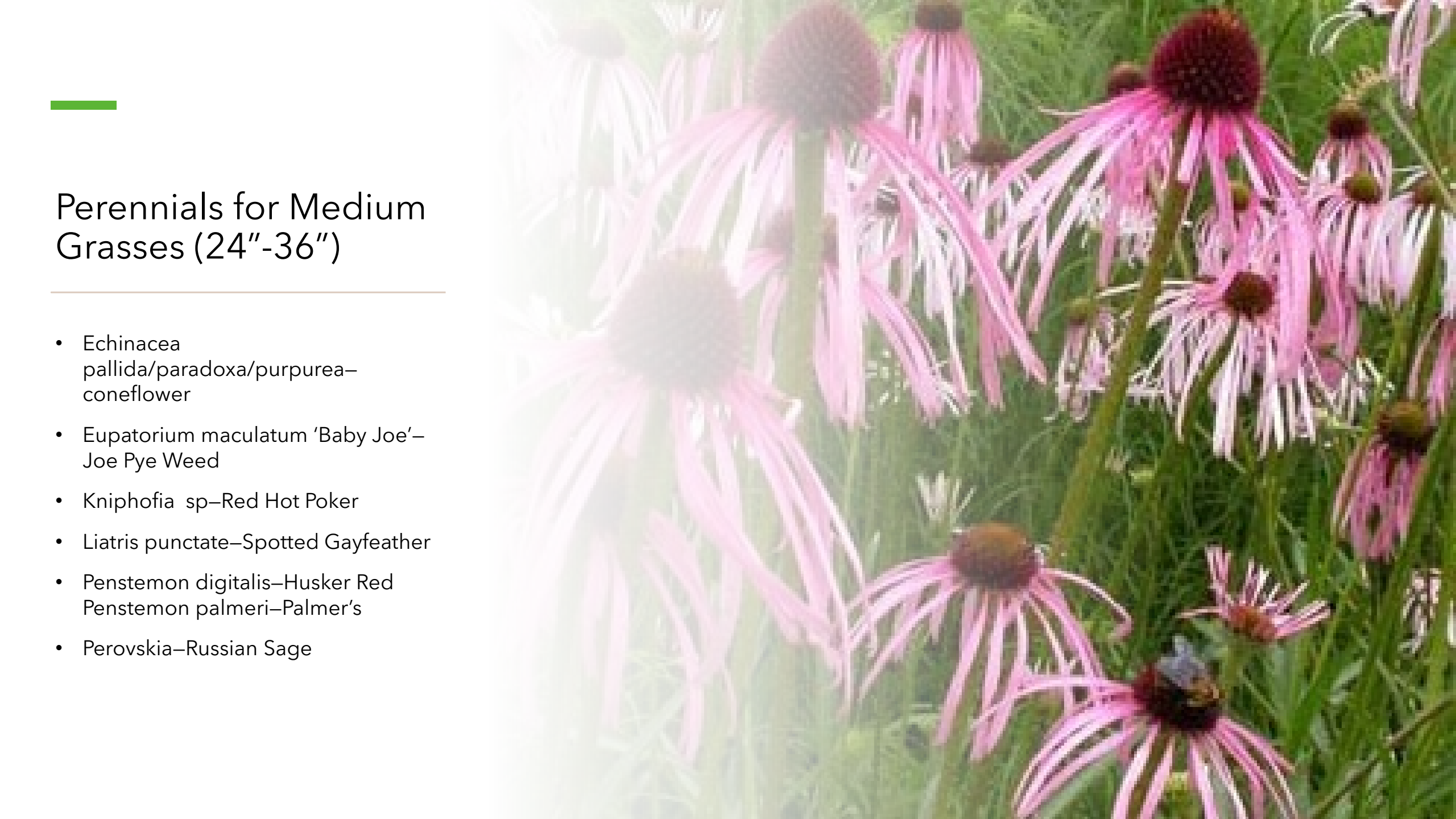
Clearing the Land





Perennials for Low Grasses (12"-24")

- *Aesclapias tuberosa*—Butterfly Weed
- *Allium millennium*—Millennium allium
- *Aster* sp.—Asters
- *Dalea purpurea*—Purple prairie clover
- *Eryngium*—Sea Holly
- *Tetranneuris acaulis* v. *arizonica* 'Sol Dancer'—Sol Dancer Daisy
- *Liatris spicata* 'Kobold'—Gayfeather
- *Linum perenne*—Blue Flax
- *Papaver* sp.—Poppy (California Poppy)
- *Penstemon* sp.—Beardtongue
- *Ratibida*—Mexican Hat/Prairie Coneflower
- *Salvia nemerosa* 'Caradonna'—Sage
- *Veronica spicata*—Speedwell

A background image of a field of pink coneflowers (Echinacea) with dark brown centers and long, thin petals. The flowers are in various stages of bloom, and the background is a soft-focus green field.

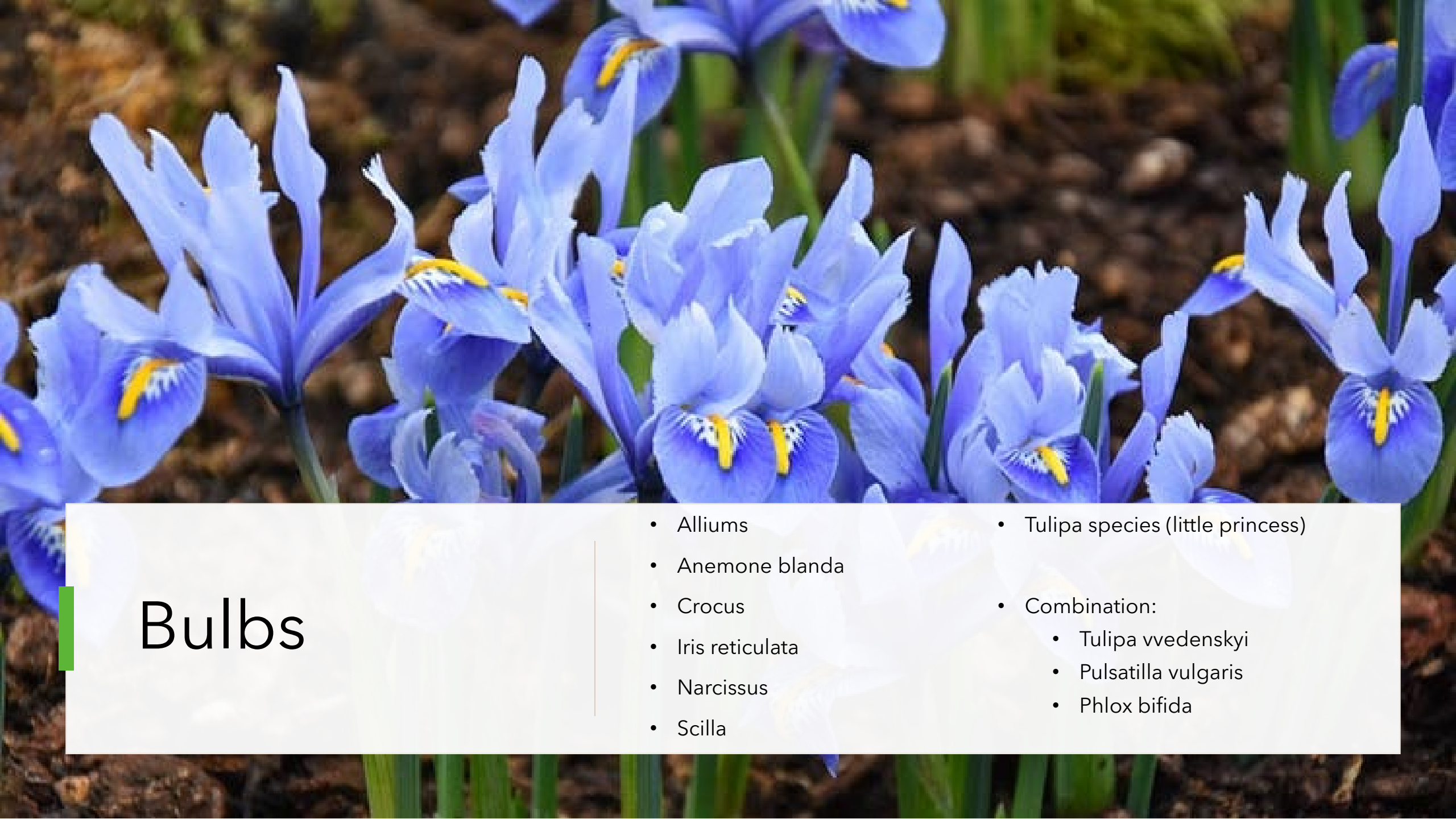
Perennials for Medium Grasses (24"-36")

- Echinacea
pallida/paradoxa/purpurea—
coneflower
- Eupatorium maculatum 'Baby Joe'—
Joe Pye Weed
- Kniphofia sp—Red Hot Poker
- Liatris punctata—Spotted Gayfeather
- Penstemon digitalis—Husker Red
Penstemon palmeri—Palmer's
- Perovskia—Russian Sage

Perennials for Tall Grasses (36"-60")

- *Echinops bannaticus*—Blue Globe Thistle
- *Eupatorium purpureum*—Joe Pye Weed
- *Helenium* sp.—Sneezeweed
- *Rudbeckia occidentalis* Nutt.—Western Coneflower
- *Verbena hastata*—Swamp Verbena





Bulbs

- Alliums
- Anemone blanda
- Crocus
- Iris reticulata
- Narcissus
- Scilla
- Tulipa species (little princess)
- Combination:
 - Tulipa vvedenskyi
 - Pulsatilla vulgaris
 - Phlox bifida

A photograph of a modern garden landscape. In the foreground, there's a low concrete wall or planter box containing various green plants, including some with large, rounded leaves. Behind this, a dense arrangement of different types of grasses and shrubs is planted. Large, light-colored rocks are scattered throughout the garden, some acting as stepping stones for a path made of flat, rectangular stones that leads from the bottom right towards the background. In the upper left, a modern house with large windows and a balcony is visible. A small green rectangular object is on the balcony. The overall scene is well-lit, suggesting daytime.

Combining Grasses

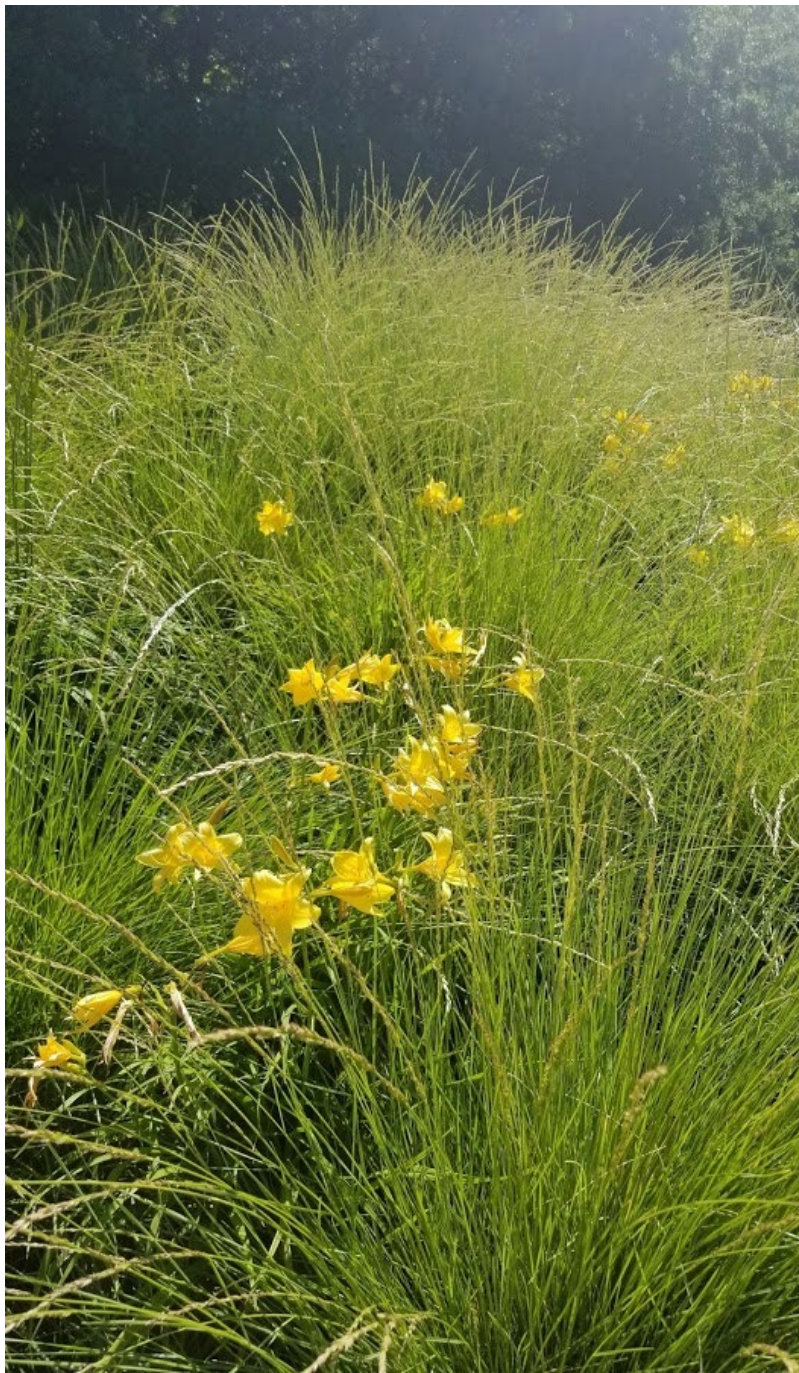


Adding Forbs



Combinations













QUESTIONS

