

A person is crouching in a meadow, looking down at the ground. The meadow is filled with tall grasses and some green plants. In the background, there is a line of trees under a cloudy sky.

Meadow Design Exercise

A Matching Game

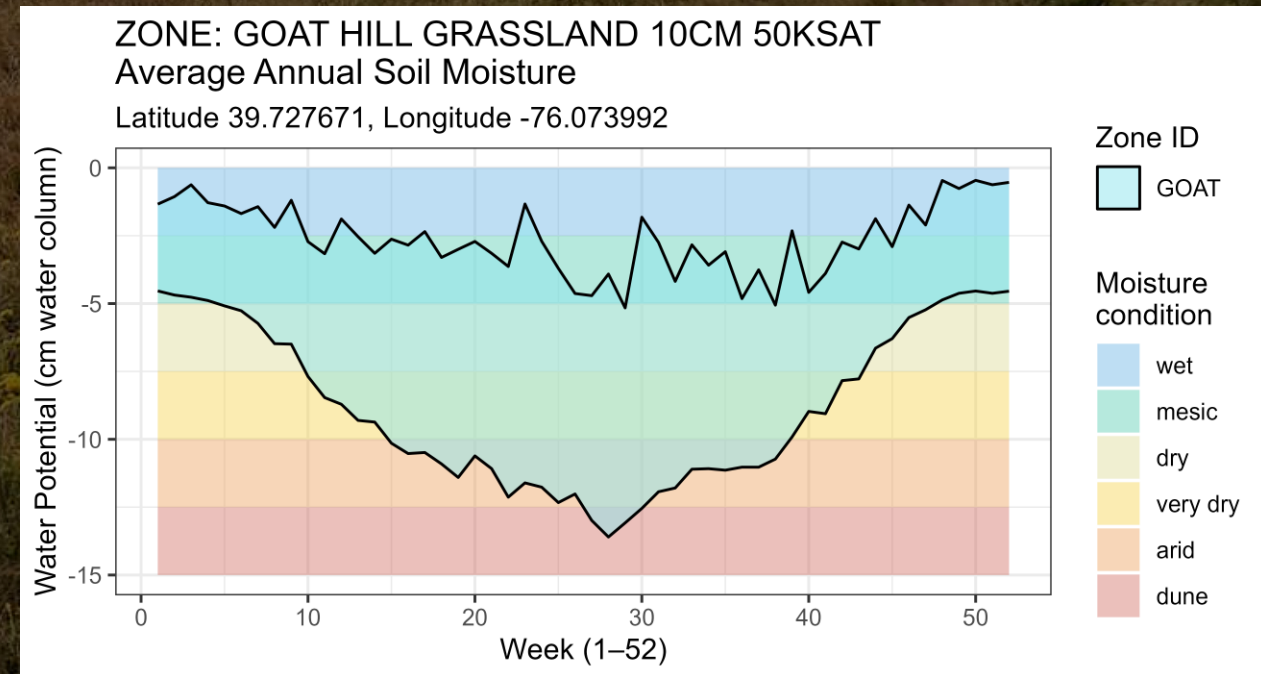
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Instructions

- This exercise is designed to practice some of the key steps and decisions of the meadow building process.
- Your task is to match a (prewritten) Meadow Building Plan with the correct Meadow project. Be sure to read each project description and project plan thoroughly, as there might be only slight differences between them.
- Good Luck!

Interpreting the Charts

- The charts tell you a lot about your meadow site
- Top line indicates how wet the meadow might get; the bottom line indicates how dry
- Distance between the two lines represents the magnitude of the variability. High variability=more weeds
- The difference between winter and summer is the amplitude. High amplitude=more weeds
- Native species are highly correlated to the shapes of the charts. Native plant can be used everywhere, just in well-matched locations



A wide-angle photograph of a vast, open field with tall, dry grasses. In the middle ground, a person wearing a dark jacket and pants is crouching down, looking towards the ground. The background shows a line of trees on a distant ridge under a heavy, overcast sky. The overall tone is muted and naturalistic.

PROJECT DESCRIPTIONS

Eight Different Projects

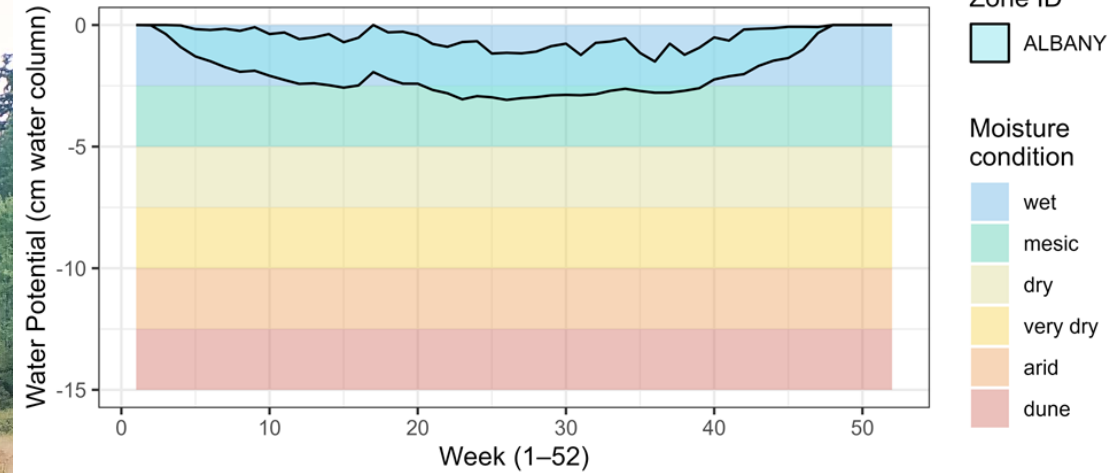
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Meadow A



ZONE: ALBANY PB BROWN DEPRESSION
Average Annual Soil Moisture

Latitude 42.716025, Longitude -73.854744

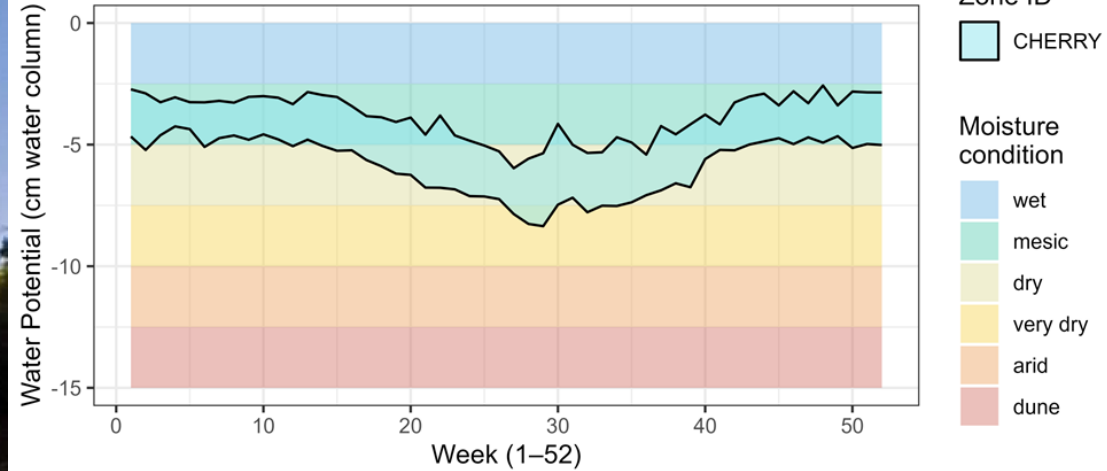


Attribute	Description
Situation	Natural areas with old meadows
Need	Grant to rebuild new meadow
Weeds	Japanese stilt grass
Other Plants	Spiraea and red maple incursions
Restrictions	None that we know
Conditions	Soggy in winter; normal in summer
Proximity	Trails weave through and adjacent
Herbivores	Deer are abundant
Budget	High
Timing	No constraints; focus on quality

Meadow B



ZONE: CHERRY SPRINGS - DANTHONIA COMPRESSA
 Average Annual Soil Moisture
 Latitude 41.664744, Longitude -77.812444

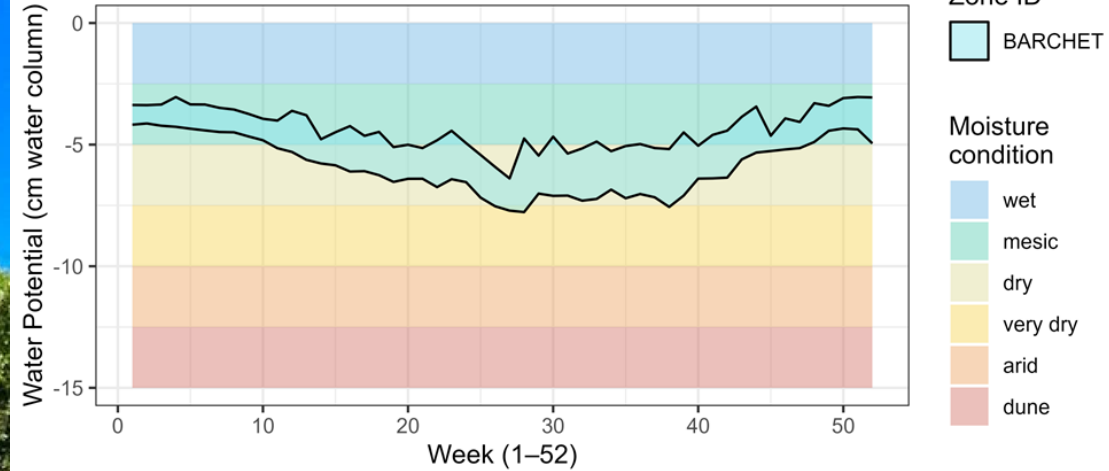


Attribute	Description
Situation	Old unpaved airstrip; observatory
Need	Build a beautiful flowering meadow
Weeds	Some kind of grass, mullein
Other Plants	None that we recognize
Restrictions	None
Conditions	Slippery in winter; dry in summer
Proximity	Across street from parking & camping
Herbivores	Bears and rabbits
Budget	Low budget
Timing	This year

Meadow C



ZONE: BARCHET - PHEASANT MEADOW HEADSLOPE
 Average Annual Soil Moisture
 Latitude 39.999946, Longitude -75.675765

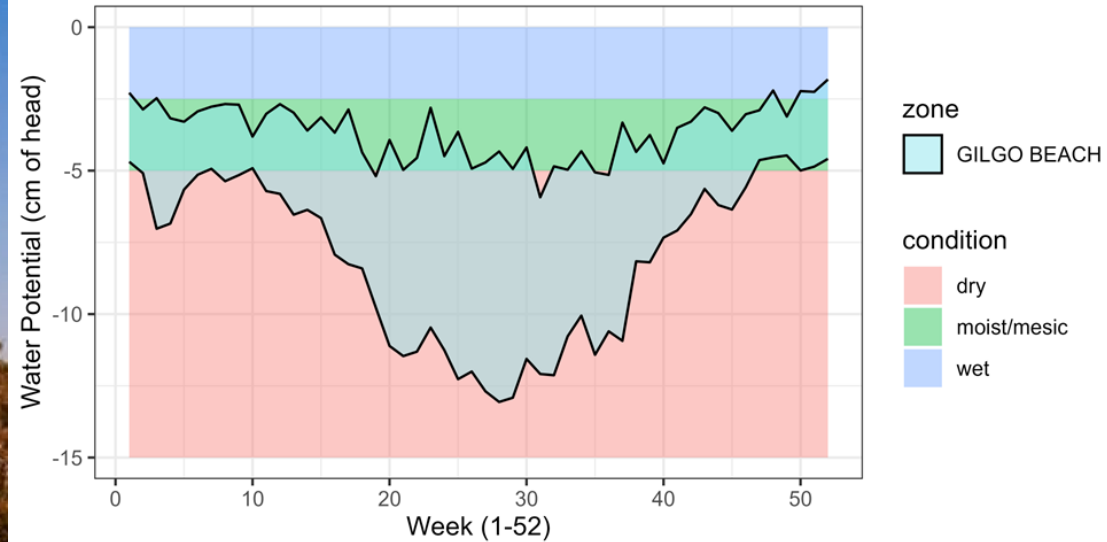


Attribute	Description
Situation	Old pasture near a wealthy farmhouse
Need	Replace with a functional meadow
Weeds	Pasture grasses, mostly
Other Plants	Some Antennaria and Schizachyrium
Restrictions	Ponds downhill
Conditions	Soft in winter; dry in summer
Proximity	A few hundred feet away
Herbivores	Deer fenced
Budget	High
Timing	Take your time; do it right

Meadow D



GILGO BEACH Average Annual Soil Moisture

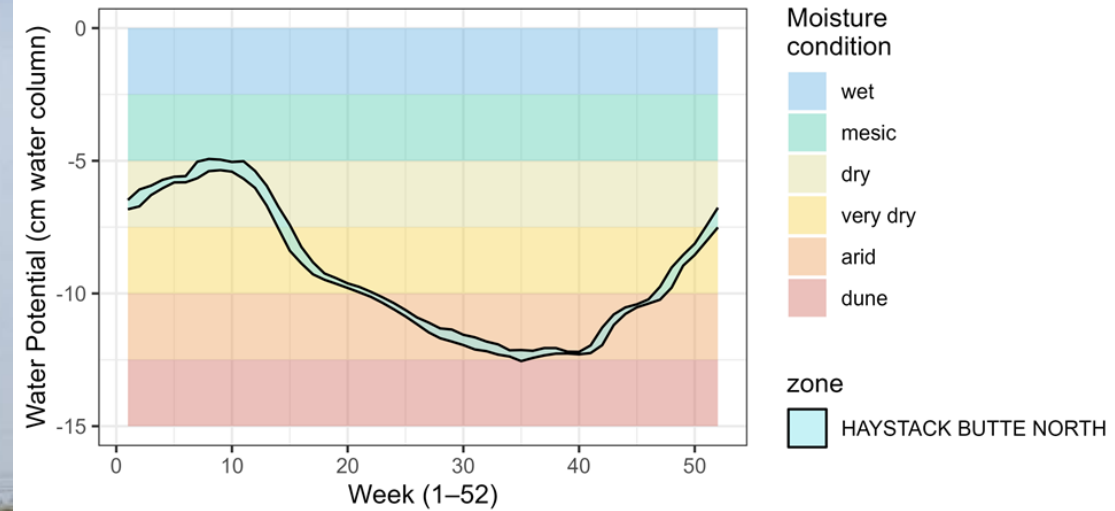


Attribute	Description
Situation	Construction area near new beach
Need	Install a colorful meadow for visitors
Weeds	A grass growing everywhere
Other Plants	Bayberry shrubs are nice
Restrictions	Work in the winter only
Conditions	Moist in winter; dry in summer
Proximity	Boardwalk passes through
Herbivores	Deer abound
Budget	Low
Timing	Flexible on timing; within three years

Meadow E

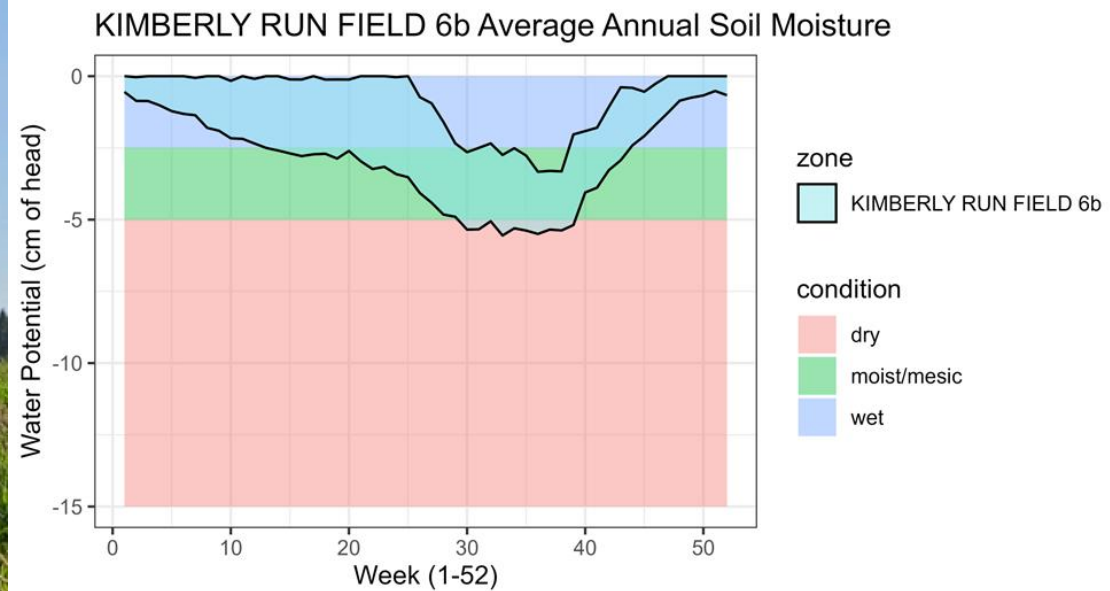


ZONE: HAYSTACK BUTTE NORTH
Average Annual Soil Moisture



Attribute	Description
Situation	New Housing Development
Need	Low maintenance lawn alternative
Weeds	none
Other Plants	none
Restrictions	No herbicides
Conditions	Dry mostly
Proximity	Front and back yards
Herbivores	Very little
Budget	Very low; equivalent to grass seed
Timing	Need right away

Meadow F



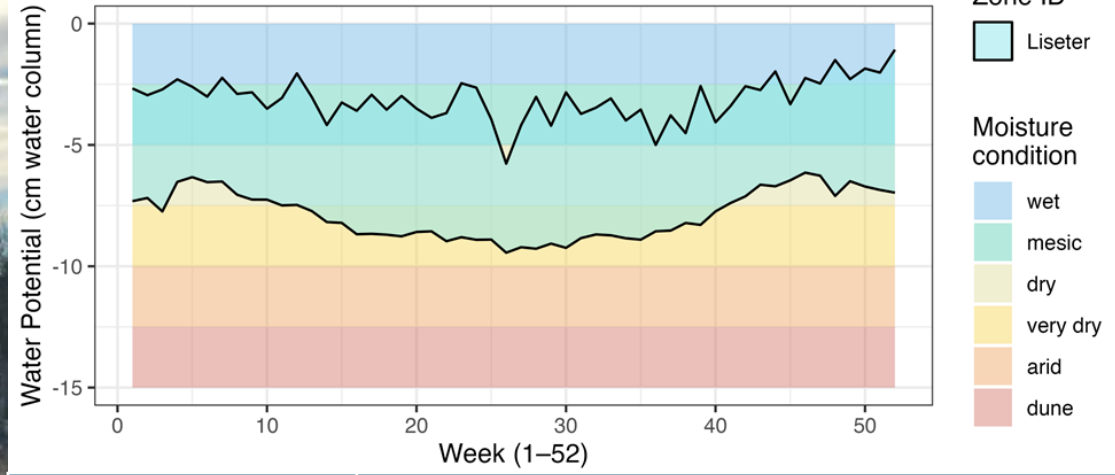
Attribute	Description
Situation	Preserved abandoned corn field
Need	Want warm season grassland for birds
Weeds	None that we could identify
Other Plants	Goldenrods, rushes, Packera
Restrictions	A small wetland nearby
Conditions	Usually normal in summer
Proximity	Not visible from road
Herbivores	Normal central PA wildlife
Budget	Moderate
Timing	Needs finished this year

Meadow G



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ZONE: Liseter Area 4
 Average Annual Soil Moisture
 Latitude 40.002383046444, Longitude -75.4208051578434

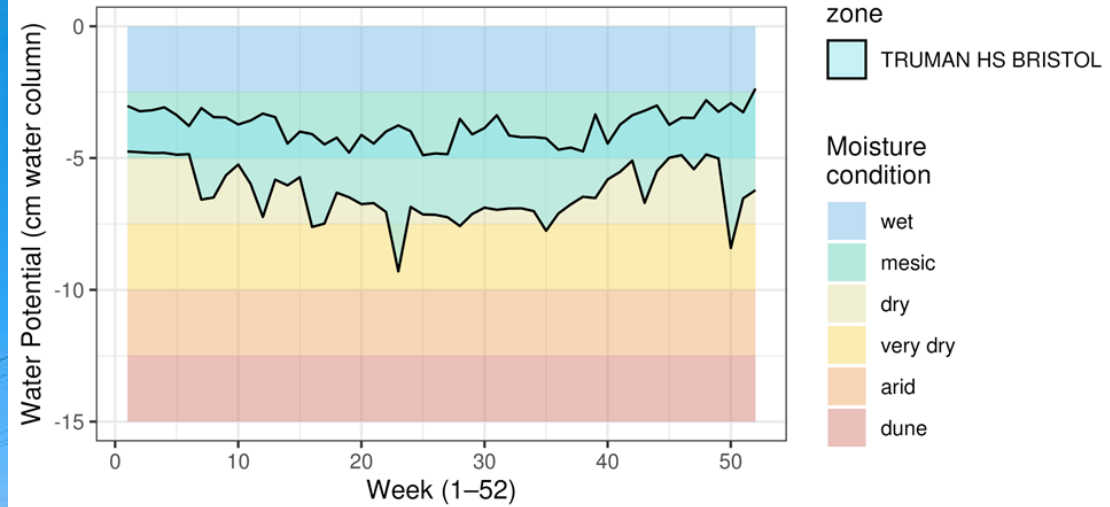


Attribute	Description
Situation	HOA; weedy slope behind houses
Need	Want a meadow to reduce mowing
Weeds	Loads; everything
Other Plants	Little bit of Schizachyrium
Restrictions	No herbicides
Conditions	Moist to dry
Proximity	Highly visible throughout the HOA
Herbivores	A ton of deer
Budget	Moderate; reasonable
Timing	Looking for immediate relief and a long-term solution

Meadow H



ZONE: TRUMAN HS BRISTOL
Average Annual Soil Moisture



Attribute	Description
Situation	Roadside Lawn near High School
Need	Reduce mowing; more attractive
Weeds	Turf lawn; stilt grass
Other Plants	Trees in tubes nearby
Restrictions	No herbicides
Conditions	Moist to dry, intermittently
Proximity	Highly visible from school grounds
Herbivores	Expect deer browse
Budget	Low
Timing	Have two years

A wide-angle photograph of a vast, open field of tall, dry grass. In the middle ground, a person wearing a dark jacket and pants is crouching down, looking towards the ground. The field extends to a low horizon line under a heavy, overcast sky. The overall tone is muted and naturalistic.

PROJECT DESIGNS

Eight Different Project Designs

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Design 2

Design Element	Reasons Why
Viable?	Maybe. Proceed with caution
Zones	Five zones – along hydrologic gradients, upland to lowland
Seed Mix	Inexpensive, but no Panicum virgatum. Add asters for pollinators
Veg Mgmt	Broad-spectrum herbicide + graminicide applied every 4 weeks
Prep Plan	Non-selective spraying; keep to windless days; post no entry
Planting Plan	Large seed drill with high-hp tractor
Socialize	Significant public concerns about herbicide use.
Establish	Expect to continue treating invasives after planting. Seek additional funding plan in case initial prep proves inadequate
Management	Annual mowing on third rotations; continued spot spraying
Keep?	Keep open for foreseeable future unless the cost to maintain becomes unaffordable without grant funding

Species	Common	Mix %
Sorghastrum nutans	Indiangrass	50%
Andropogon gerardi	big bluestem	20%
Agastache scrophulariifolia	purple giant hyssop	10%
Verbesina alternifolia	wingstem	5%
Symphotrichum novae-angliae	NE aster	5%
Coreopsis tripteris	tall tickseed	5%
Andropogon virginicus	broomsedge	3%
Lespedeza capitata	round-head bushclover	2%

Design 13

Design Element	Reasons Why
Viable?	YES. Low traffic area, high demand for new habitat by birders
Zones	Two zones – permanently moist and edges
Seed Mix	Defensive graminoid mix with few flowers
Veg Mgmt	Two years of monthly post-emergent treatments until clear
Prep Plan	Use glyphosate to suppress all/most vegetation
Planting Plan	Broadcast seed only; use light roller to set seed
Socialize	Post signs at both ends of trail describing the restoration process
Establish	Hand pull remaining weeds, if any, with volunteers in July
Management	No mowing; low-temp burn every 5 years
Keep?	Monitor and manage shrub encroachment to keep open

Species	Common	Mix %
Juncus effusus	common rush	25%
Carex vulpinoidea	fox sedge	20%
Scirpus cyperinus	woolgrass	15%
Acorus americanus	sweetflag	10%
Scirpus atrovirens	green bulrush	5%
Iris versicolor	blueflag iris	5%
Sagittaria latifolia	duck-potato	5%
Andropogon glomeratus	bushy bluestem	5%
Alisma subcordatum	water plantain	3%
Carex crinita	fringed sedge	3%
Carex lurida	lurid sedge	2%
Schoenoplectus americanus	chairmaker's bulrush	2%