

Ecoregional Gradient

An Adaptive Pollinator Garden for Climate Change

This pollinator garden expresses and adapts to temperature and precipitation fluctuations.

This proposal applies ecological theory to a pollinator garden that adapts to temperature and precipitation fluctuations.¹ No matter what climatic extremes impact the garden, plants will still grow and provide nectar resources to pollinators.

Plants are organized into four mixes along a wet to moist to dry gradient. Depending on recent weather events, certain areas will appear more dramatic to visitors than others. Plants are all native the Northern Appalachian-Acadian Ecoregion, and selected based on these criteria:

Plasticity: All plants have a large range as measured by the USDA hardiness zones

Functional redundancy: Overlapping bloom times ensure constant nectar availability

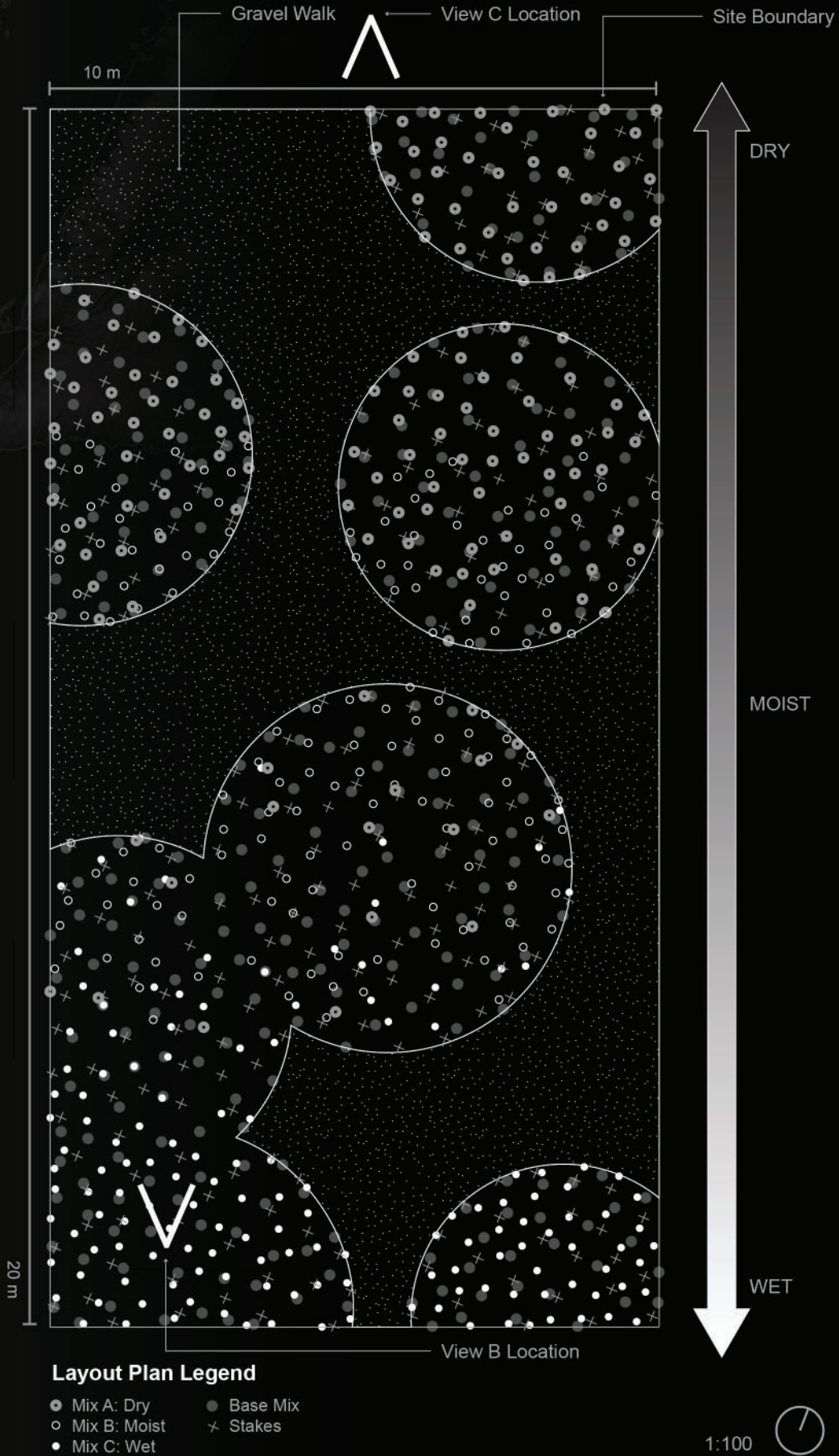
Response diversity: A majority of plants will thrive in all soil moisture levels

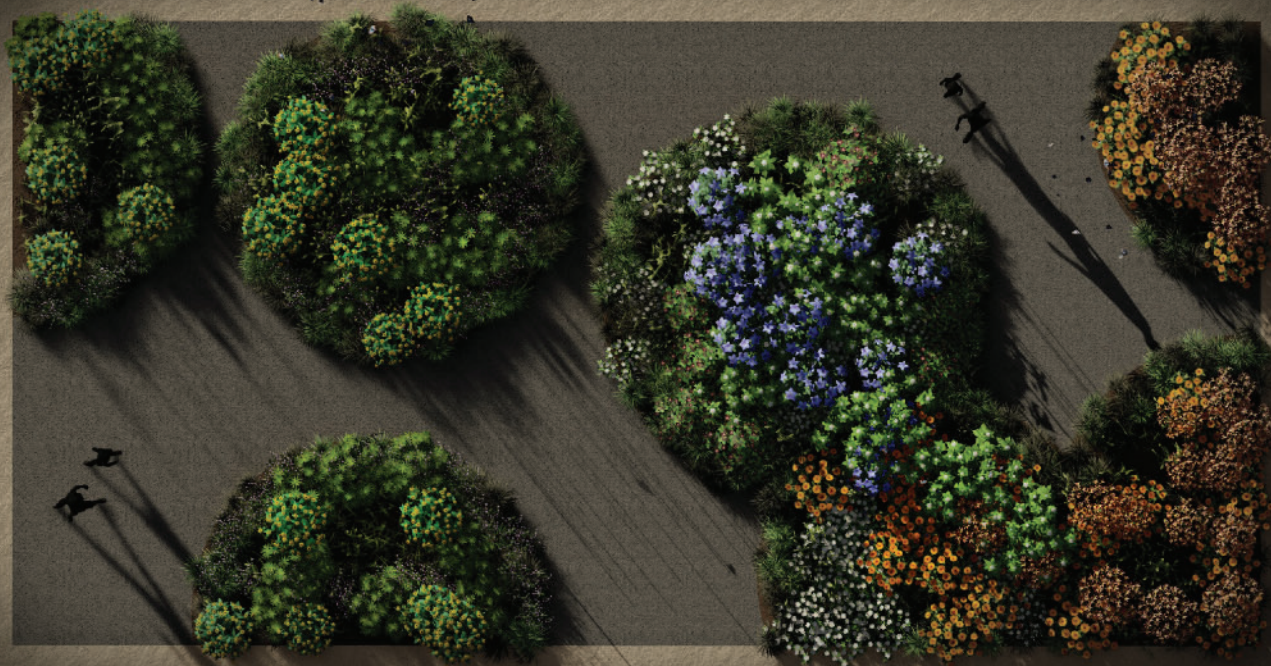
Light requirements: All plants thrive in full sun to partial sun

Several hundred 1m to 2m colored stakes represent the dry to wet gradient and form a static backdrop that emphasizes plant growth over time.

1. Hunter, MaryCarol. "Emerging Landscapes: Using Ecological Theory to Guide Urban Planting Design: An adaptation strategy for climate change." *Landscape Journal* 30, no. 2 (2011): 173-193.

Latin Name	Common Name	Height (in.)	USDA	Bloom Time and Color											
				J	F	M	A	M	J	J	A	S	O	N	D
Base Mix															
<i>Asclepias syriaca</i>	Common Milkweed	36	3 - 8												
<i>Carex blanda</i>	Common Wood Sedge	24	3 - 9												
<i>Carex tenera</i>	Quill Sedge	8 - 40	3 - 6												
<i>Prenanthes racemosa</i>	Glaucous Rattlesnake Root	12 - 60	3 - 6												
Mix A: Dry															
<i>Andropogon gerardii</i>	Big Bluestem	36 - 96	3 - 8												
<i>Asclepias tuberosa</i>	Butterfly Weed	24	3 - 9												
<i>Liatris aspera</i>	Button Blazing Star	36	3 - 8												
<i>Lupinus perennis</i>	Wild Lupine	36	3 - 8												
<i>Oryzopsis canadensis</i>	Canadian Ricegrass	12 - 28	3 - 5												
<i>Rudbeckia hirta</i>	Black-eyed Susan	24	3 - 9												
<i>Solidago speciosa</i>	Showy Goldenrod	60	3 - 8												
<i>Verbena hastata</i>	Blue Vervain	36 - 60	3 - 8												
<i>Waldsteinia fragarioides</i>	Barren Strawberry	2 - 6	4 - 7												
Mix B: Moist															
<i>Allium canadense</i>	Wild Garlic	8 - 12	4 - 8												
<i>Anemone multifida</i>	Pacific Anemone	12 - 36	4 - 9												
<i>Bromus latiglumis</i>	Broad-Grummed Brome	30 - 60	3 - 7												
<i>Coreopsis rosea</i>	Rose Coreopsis	12 - 24	3 - 8												
<i>Gentiana andrewsii</i>	Bottle Gentian	12 - 24	3 - 6												
<i>Lobelia kalmii</i>	Kalm's Lobelia	4 - 16													
<i>Senecio pauperculus</i>	Dwarf Ragwort	6 - 24	-												
<i>Vaccinium boreale</i>	Northern Blueberry	12	1b												
<i>Viola novae-angliae</i>	New England Violet	2 - 4	-												
Mix C: Wet															
<i>Calopogon tuberosus</i>	Tuberous Grass-Pink	12 - 48	3 - 9												
<i>Carex arcta</i>	N. Clustered Sedge	6 - 30	2 - 6												
<i>Carex bromoides</i>	Brome-like Sedge	8 - 12	4 - 8												
<i>Carex diandra</i>	Panicled Sedge	12 - 36	-												
<i>Carex stans</i>	Dioecious Sedge	6 - 30	3 - 7												
<i>Carex tenuiflora</i>	Sparse-flowered Sedge	4 - 20	-												
<i>Epilobium strictum</i>	Downy Willow-Herb	12 - 36	-												
<i>Erigeron hyssopifolius</i>	Hyssop-leaved Fleabane	14	2 - 8												
<i>Lilium canadense</i>	Canada Lily	36 - 96	-												
<i>Lonicera oblongifolia</i>	Swamp Fly-honeysuckle	12 - 72	-												
<i>Muhlenbergia richardsonis</i>	Soft-leaf Muhly	4 - 12	-												
<i>Oxymelos nemoralis</i>	Bog Aster	6 - 36	3 - 8												
<i>Platanthera blephariglottis</i>	White-fringed Orchis	3 - 43	-												
<i>Platanthera flava</i>	Tuberled Orchis	4 - 28	-												
<i>Polygonum arifolium</i>	Halberdleaf Tearthumb	24 - 72	-												
<i>Primula mistassinica</i>	Birds-eye primrose	2 - 6	2 - 8												
<i>Rosa nitida</i>	Shining Rose	18 - 36	4 - 7												
<i>Rubus chamaemorus</i>	Cloudberry	4 - 12	5												
<i>Solidago gigantea</i>	Smooth Goldenrod	24 - 72	-												





A: View looking down



B: View from the wet end of the garden looking west



C: View from the dry end of the garden looking east