

The Missouri Pollinator Habitat Planning Tool for Solar Sites

This evaluation and planning tool has been created to assist in the establishment and management of vegetation at solar installations in Missouri for enhanced habitat beneficial to native pollinators. Check the boxes and add up the points to determine whether the plan meets or exceeds the minimum requirements. For more information on pollinators and habitat refer to:

<https://extension2.missouri.edu/programs/master-pollinator-steward>

PROJECT DETAILS

Solar developer: _____

Project location: _____

Project size (acres): _____

Date of evaluation: _____

TOTAL SCORE (from page 2): _____

The site provides exceptional habitat	90+ pts
Meets pollinator standards	76 – 89 pts
Does not meet standards	75 pts or less

SITE SCORES		Points possible	Points awarded
1. SITE PLANNING AND MANAGEMENT (Check all that apply)			
<input type="checkbox"/>	A plant establishment and management plan has been developed. Plants selected should be short enough to not cast a shadow on solar panels	+ 5	
<input type="checkbox"/>	A site plan has been developed in consultation with natural resource professionals	+ 3	
<input type="checkbox"/>	Mowing regimes are limited, only mowing 1/3 of site each year during the dormant season to prevent damage to blossoms and provide refugia for bees and other pollinators during the winter	+ 10	
<input type="checkbox"/>	Mowing occurs on more than 1/3 of site each year	- 1	
<input type="checkbox"/>	Mowing is conducted frequently and/or during the summer (not during dormancy)	- 1	
<input type="checkbox"/>	Signage is developed promoting the area to be pollinator friendly habitat	+ 3	
2. HABITAT PREPARATION PRIOR TO PLANTING¹ (Check all that apply)			
<input type="checkbox"/>	Measures were taken to control existing vegetation prior to seeding such as herbicide treatments and multiple tillage operations according to the plan developed by the resource professional	+ 7	
<input type="checkbox"/>	Conservation plan created for existing native flowering plants	+ 3	
<input type="checkbox"/>	A soil test was performed and required amendments were applied	+ 3	
<input type="checkbox"/>	No practices were implemented to control existing vegetation	- 20	
3. INSECTICIDE RISK (Check all that apply)			
<input type="checkbox"/>	Plan to use insecticide and/or pre-planting seed treatment (excluding buildings/electrical boxes, etc.)	- 40	
<input type="checkbox"/>	Communication with local chemical applicators and site registered on https://mo.driftwatch.org/	+ 20	

4. AVAILABLE HABITAT COMPONENTS WITHIN 0.25 MILES (Check all that apply)			
	Native warm-season grasses for bee nesting	+ 1	
	Open sandy soil areas for bee nesting	+ 1	
	Trees/shrubs for bee nesting	+ 1	
	Water sources available throughout the year	+ 1	
FLOWERING PLANT SCORES			
5. FLOWERING PLANT SPECIES SEEDED IN PERIMETER AREA (native, not introduced; species with more than 1% cover²) (Check one)			
	5 - 10 species	+ 1	
	10 - 15 species	+ 3	
	16 - 20 species	+ 8	
	> 20 species	+ 10	
	<i>Exclude invasive plant species from total</i>		
6. PLANT DIVERSITY UNDER SOLAR ARRAY³ (Check one)			
	Grass monoculture	+ 1	
	Clover/grass mix	+ 5	
	Native wildflower mix	+ 10	
7. PERCENT OF SITE PLANNED TO BE DOMINATED BY WILDFLOWERS⁴ (Check one)			
	0 – 25 %	+ 1	
	26 - 50 %	+ 3	
	51 - 75 %	+ 8	
	More than 75 %	+ 10	
	<i>Projects may have different species mixes under the solar panels and around the perimeter.</i>		
8. SEEDS USED FOR WILDFLOWER AREAS			
	Seed mixes follow USDA NRCS standards for native pollinator mixes which includes number of species blooming during various seasons, standards for sourcing seeds, seeds/square foot and standards for eligible species	+ 10	
9. SEASONS WITH AT LEAST THREE BLOOMING FORB SPECIES PRESENT (Check all that apply)			
	Spring (April - May)	+ 5	
	Summer (June - August)	+ 5	
	Fall (September - October)	+ 5	
	Total points:		

¹ Contact the MU Extension Center located in the county where the site is located for information on collecting soil samples for testing.

² Measurements of percent cover should be based on the percent of the ground surface covered by foliage as viewed from above.

³ For seeding within the panel array, utilize a native wildflower mix that is short in stature or clovers and other non-native species beneficial to pollinators. If clovers are used, these should be established in locations separate from the native wildflowers in the perimeter locations.

⁴ Wildflowers in Section 7 refer to native forbs which are flowering plants that are not woody and are not grasses, sedges, etc.

More information on establishing pollinator habitat in Missouri

Backyard habitat for monarchs: <https://mdc.mo.gov/wildlife/attracting-wildlife/backyard-habitat-monarch-butterflies>

Establishing Great Pollinator Habitats: https://youtu.be/T_4YLO96seE

Farmers for Monarchs: <https://farmersformonarchs.org/>

Missourians for Monarchs: <https://moformonarchs.org/>

Missouri Grow Native Resource Guide (for native wildflower and forb suppliers and additional management recommendations): <https://www.moprairie.org/GrowNative/GrowNative/Resource-Guide/Resource-Guide.aspx>

Missouri Master Pollinator Steward Program: <https://extension2.missouri.edu/programs/master-pollinator-steward>

Native Forb Information Sheet for Missouri, USDA NRCS, MDC, MU Extension, Quail Forever: [https://efotg.sc.egov.usda.gov/references/public/MO/Native Forb Information Sheet 12 6 17.pdf](https://efotg.sc.egov.usda.gov/references/public/MO/Native%20Forb%20Information%20Sheet%2012%206%2017.pdf)

Native Pollinator Job Sheet, USDA NRCS, Missouri Department of Conservation and MU Extension School of Natural Resources: https://prod.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs144p2_010606.pdf

Plant Resources for Midwest Farmers and Landowners, Missouri Grow Native: <https://www.moprairie.org/GrowNative/Resources/For-Agriculture/GrowNative/For-Agriculture.aspx?hkey=414f1577-f95e-4e54-8c03-b443984573d2>

Pollinator Conservation, Xerxes Society: <https://xerxes.org/pollinator-conservation>

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This planning tool has been reviewed by the Missouri Master Pollinator Steward Advisory Committee

Portions of this planning tool have been adapted from the "Michigan Pollinator Habitat Planning Scorecard for Solar Sites", developed by the Michigan State Department of Entomology:
<https://pollinators.msu.edu/>