

**POLLINATOR-FRIENDLY CERTIFICATION CRITERIA FOR MASSACHUSETTS
2019/2020****CERTIFICATION LEVEL: CERTIFIED****ESTABLISHMENT**

- Completed *Application Form*, including site establishment and maintenance plan.
- Seed mix(es) to be used on-site not pre-treated with insecticide or fungicide.
- Seed mix(es) include only native species.
(In general, this refers to species native to Massachusetts. Species native to the Northeast may be acceptable for inclusion if there is a justifiable reason for doing so.)
- Seed mix(es) appropriate for local conditions (soil type, hydrology, etc.).
- At least 33% of array footprint and perimeter are planned to have flowering plants.
- Seed mix(es) contain at least 9 flowering species comprising 2% or more of seed mix, by seed count. **See note (page 4) regarding 2% rule.*
- Seed mix(es) contain at least 3 blooming species per season, comprising 2% or more of seed mix, by seed count, for 2 of 4 seasons (April, May/June, July/August, September/October).
**See note (page 4) regarding 2% rule.*
- Seed mix(es) contain no more than 25% grass and sedge species, by seed count.
- Amount of seed to be planted is determined according to the seed provider's recommendation and the proposed planting density in the target area.
- Trim zone, stormwater basin, and other site plantings include only native species.
(As above, this refers to species native to Massachusetts. Species native to the Northeast may be acceptable for inclusion if there is a justifiable reason for doing so.)
- Trim zone and other plantings are appropriate for local conditions (soil type, hydrology, etc.).
- Trim zone plantings include at least 50% flowering plants.
- Vegetation screen, if present, includes only native species, unless specified otherwise by municipal permitting authorities.
(As above, this refers to species native to Massachusetts. Species native to the Northeast may be acceptable for inclusion if there is a justifiable reason for doing so.)
- Vegetation screen, if present, includes only plants appropriate for local conditions (soil type, hydrology, etc.), unless specified otherwise by municipal permitting authorities.
- At least 25% of species selected for seeding or planting support specialist bees or are host plants for rare or uncommon butterfly and moth species.
- Fencing:
 - New arrays: A 6-12 inch gap should be left at the bottom of the fence for wildlife passage
 - Existing arrays: A hole at least 6 inches high and 18 inches wide should be cut in each corner of the array fencing to allow wildlife passage through the array.

MANAGEMENT

In general, all management activities should be conducted in accordance with the site management plan submitted as part of the Application Form. Any major changes to management deemed necessary should be explained and described in a letter submitted with the Annual Maintenance Log.

- After three growing seasons, mowing should be conducted no more than once per year in the array footprint and array perimeter.
Mowing only once per year management to be followed after 3 years of establishment. We recognize that in the first 3 years, multiple mowing treatments may be required to reduce growth of invasive or other weed plants.
- Limit trim zone management to encourage growth of native shrub and tree species, while addressing shading of panels, security concerns, and invasive plant control.
- Conduct invasive plant management as described in the site management plan, limiting use of herbicide to the greatest extent possible.
- During the establishment period (first 3 growing seasons), an environmental professional with vetted plant identification skills should visit the site to flag invasive plants for removal. Spot treatment of invasive species with herbicide or a weed-whacker is acceptable throughout the year.
- No insecticide or fungicide use.
(Exceptions are allowed for use of Bti to control mosquitoes in the stormwater basin, if required by health officials.)
- Maintain and submit Annual Maintenance Log of vegetation management and other relevant activities occurring on site.
(See Annual Maintenance Log form.)
- If applicable, submit annual request for exclusion from spraying for mosquitoes and maintain “No Spray” signage. (<http://www.mass.gov/eea/agencies/agr/pesticides/mosquito/pesticide-application-exclusions.html>)
- If applicable, maintain any additional special features present on-site, including educational signage, bee nesting habitat, perennial water sources, or wildlife habitat.

Additional Recommendations

- Set mower height at 7-12 inches
- Mow only 1/3 of array perimeter per year
- Mow in early spring (April/early May), to avoid cutting blooming plants, and to allow for overwintering habitat for pollinators in uncut vegetation.

MONITORING

Monitoring will be conducted in the 4th growing season, and every third growing season thereafter. UMass Clean Energy Extension will contact the facility owner in January of the monitoring year to arrange access for staff or a UMass-contracted vendor to conduct monitoring. Three one-day visits will be conducted in 3 of 4 seasons (April, May/June, July/August, September/October), at least two weeks apart. The monitoring procedure will include the following:

- Assessment of array footprint and perimeter, including:
 - plant diversity, listing species that comprise more than 2% cover
 - % of area dominated by native plants
 - % of area dominated by invasive plants
 - % of area with currently blooming species
 - list of currently blooming species

- Assessment of trim zone, including:
 - plant diversity in trim zone, listing species that comprise at least 5% of trim zone
 - % of trim zone comprised of native plants
 - % of trim zone comprised of invasive plants
 - % of trim zone with currently blooming species
 - list of currently blooming species

- Assessment of vegetation screen, including:
 - plant diversity in vegetation screen, listing species that comprise at least 5% of screen
 - % of vegetation screen comprised of native plants
 - % of vegetation screen comprised of invasive plants
 - % of vegetation screen with currently blooming species
 - list of currently blooming species

- Documentation and description of any ground nesting sites for bees on the property
- Documentation and description of any cavity nesting sites for bees on the property
- Documentation and description of any perennial water sources on the property
- Documentation and description of any bird boxes or other wildlife habitat features established on the property
- Documentation of any “No Spray” signage
- Documentation and description of any other special features, such as pollinator-friendly signage or displays, or benches
- Documentation of any bird species observed nesting on property
- Documentation of any wildlife observed on the property during monitoring
- Preparation of report

EVALUATION

- At least 33% of array footprint and perimeter dominated by flowering plants
- At least 9 species comprise 2% or more of array footprint and perimeter
- At least 50% of array footprint and perimeter is dominated by native species
- 10% or less of array footprint and perimeter is dominated by invasive species
- At least 3 blooming species present per season, for 2 of 4 seasons (April, May/June, July/August, September/October), comprising 2% or more of site
- Trim zone includes at least 50% native species
- Plantings within trim zone have successfully established
- 10% or less of trim zone is invasive species
- Vegetation screen, if present, includes at least 50% native species
- Vegetation screen, if present, is less than 10% invasive species
- At least 25% of species present on-site support specialist bees or are host plants for rare or uncommon butterfly and moth species.
- If applicable, “No Spray” signage is well-maintained and legible.
- Clear and complete *Annual Maintenance Log* has been maintained and submitted annually throughout the establishment period.
- Management activities are in line with Management Criteria and site management plan.

EVALUATION AND RE-CERTIFICATION PROCESS

Please refer to the *Certification Procedure and Fees* document.

EXCEPTIONS TO 2% RULE FOR SEED MIXES

In general, a species must comprise at least 2% of the seed mix by seed count to be counted towards the total number of flowering species, or the total number of blooming species per season. However, certain species and genera establish well, and may not need a high seeding rate to establish well.

Accordingly, these species may still count towards the number of species, if they comprise 1% or more of the seed mix. Based on pollinator expert guidance, this list currently includes the following genera and species. This list will be updated as more information becomes available.

Chamaecrista fasciculata, *Eupatoriadelphus maculatus*, *Eupatorium hyssopifolium*, *Eupatorium perfoliatum*, *Eupatorium purpureum*, *Helianthus helianthoides*, *Monarda fistulosa*, *Monarda media*, *Packera aurea*, *Pycnanthemum* spp., *Solidago* spp., *Verbesina alternifolia*