Creating Pollinator Habitat: Seeding

Grasslands and pollinator meadows can offer many benefits to state facilities, including the opportunity to improve wildlife habitat and enhance the visual landscape. The Pollinator Landscapes at State Facilities Guiding Framework provides an overview of benefits and various strategies that state facilities can employ to create these habitats; this document contains basic information that facilities may want to factor into their decision-making process before procuring seeds for their new meadow or grassland. The seed selection criteria on the second page can be provided to a vendor to help ensure an optimal seed mix is provided.

Costs	**Upfront and ongoing costs will vary** depending on seed mix composition, site preparation, and ongoing management required. It may take 2-3 years of management before the meadow becomes self-sufficient, but once established it will require less maintenance than a lawn. The Lawn-to-Pollinator Habitat Savings Calculator on the LBE Sustainable Landscaping Website can provide a high-level estimate of potential cost savings.
Habitat Goals	The criteria included in the Seed Criteria Checklist are **intended for the conversion of lawns and landscaped areas to grassland habitat and/or pollinator meadows**. For the purposes of this guide, "Pollinator Meadow" mixes refer to those with a higher percentage of flowering species. These are generally more colorful than grass-dominated mixes. "Grassland Habitat" mixes contain more grasses and are thus cheaper. These mixes contain less color, but still provide valuable wildlife habitat. **if habitat restoration is a primary goal, only MA native species should be used, and experts should be consulted regarding the seed mix.** Agencies should have a clear understanding of their goals as this will inform what species will be appropriate (e.g., for height, habitat value, color, etc.) and how the site is maintained.
Site Prep	Site preparation will vary depending on existing conditions. It may require eradication of existing vegetation via tilling, covering the area with tarp for a growing season, or using MDAR-approved herbicide. Additional soil preparation will depend on site conditions and method of seeding. Experts should need to be consulted to determine the best methods.
Ongoing Care	**Facilities should be prepared to invest some time and resources into the habitat, especially in the first few years as plants establish.** Re-seeding may be necessary after the first year, for example, and treatment may be needed for aggressive weeds or invasive species. Once plants are well-established (2-3 years), there is minimal weed control and only once-per-year mowing. As every site is different, ongoing management will vary. While an expert should be consulted to ensure proper management is prescribed, this introductory guide outlines typical strategies agencies can employ to maintain their habitat.

Managing Expectations

In general, a newly seeded area may look weedy during the first few years of establishment. Species will grow at different rates and the plant composition will change over time as early successional species diminish and long-term species expand. Changes in weather, seed input from surrounding habitat, and other natural causes may result in changes over time. It's important to convey to visitors, staff, and the general public that it takes time for the desired species to establish. Signage and other educational efforts can be used to help communicate the intent and benefits of the effort. "Growing Wild for Pollinators" signs are available for order through MassCOR. See the LBE Sustainable Landscaping Website for information.

Creating Pollinator Habitat: Seed Criteria Checklist

This checklist contains criteria that state facilities are encouraged to follow when selecting and procuring a seed mix for the creation of a grassland or wildflower meadow. State entities may send this list directly to a seed vendor with the appropriate checked boxes along with additional details, or use this as a guide when developing a scope of work. Pre-vetted mixes may also be procured via FAC104 (see below). As site conditions, facility goals, and seed availability varies from project to project, additional details may need to be considered. Contact LBE-Grants@mass.gov for assistance in contacting experts.

Species should meet the following criteria:

- ✓ Native to Northeast U.S., preferably native to Massachusetts, and not listed as rare or endangered. (Note: if native habitat is the primary goal, species should be native to MA and ecoregion).
- ✓ Preference should be given to seeds that are sourced to the closest MA ecotype available.
- ✓ Mix should have a diversity of species as appropriate to site conditions and, to provide pollinator habitat, should include species that bloom throughout the seasons and are considered of high pollinator value.
- ✓ When desired species are not available, substitutions should aim to meet the intent of the project goals (e.g., support specific pollinators, sun/shade conditions).

The seed mix should contain an appropriate proportion of grasses and flowers, depending on the facility's habitat goals (select one):

- ❑ Grassland habitat: Mix consisting predominantly of grasses, but also includes flowers and legumes for diversity and pollinator habitat. Generally, 5-35% wildflowers per square foot, $360-$1000 per acre. More grasses in the mix will also help reduce weed pressures.
- ❑ Pollinator meadow: Mix consisting of a high percentage of forbs to support pollinators. Mix may be tailored to be showier where required for high-visibility areas. Generally, 45-75% wildflowers per square foot, $725-$1,500 per acre. A higher percentage of flowers may require more weed control.

The seed mix should be appropriate for the site's specific conditions:

- ❑ Sun: Full Sun, Partial Sun, Full Shade
- ❑ Soil moisture: Dry, Medium (mesic), Wet
- ❑ Other soil traits (e.g., sandy, rocky, clay): _____
- ❑ Estimated square footage of site: _____
- ❑ Maximum desired plant height: _____

Consult an Interagency Expert

Once a seed mix has been recommended by a supplier, interagency experts are available to help vet mixes to ensure their appropriateness for the site and its desired habitat goals. These experts can also provide input on site preparation and maintenance. Contact LBE-Grants@mass.gov if a consultation may be needed.

Recommended Seed Mixes

Vendors on statewide contract FAC104: Landscaping Products, Parks, and Recreation Equipment can provide custom-made seed mixes following the criteria listed above. Seed mixes made with predominantly native species have previously been developed by these vendors. Agencies can send their preferred list to vendors to request a quote. Note that species availability may change and any replacement species should meet the above criteria. See the FAC104 Native Seed Mixes document on the LBE Sustainable Landscaping page.

Learn more about pollinator-friendly habitats:

Leading by Example: Sustainable Landscaping
MDAR: Choosing Pollinator-Friendly Native Plants
DCR: Growing Wild Massachusetts