



Developing a Plant List

To improve pollinator habitat as a revegetation objective, select a mix of plant species and site improvements that encourage foraging, breeding, nesting, and overwintering of a variety of pollinator species. Revegetation efforts for pollinators should aim for diverse plant communities that include key plant species supporting local pollinators, including imperiled and state- or federally listed pollinator species.

Guidelines for developing a species list that supports pollinators and other revegetation objectives:

- Select species adapted for the sunlight and soil conditions present at the roadside sitel. Seed mixes cannot be context-specific, include species adapted to a wide range of growing conditions.
- Prioritize the use of native plants.
- Avoid using introduced (non-native) species in high-quality mixes, as these species may outcompete native plants during establishment, diminishing the quality of habitat over time and supporting fewer species of pollinators.
- Include key plant species that support imperiled pollinators, such as host plants for caterpillars or plants that are known to provide nectar or pollen to adults.
- Ensure that non-aggressive species are able to establish by limiting the abundance of aggressive species.
- Aim for biodiverse plantings that avoid temporal gaps in bloom periods. Include multiple species that bloom in the spring, summer, and fall.
- If installing vegetation via seeding, balance the proportion of grass seeds to wildflower seeds. If grass density is too high, grasses will outcompete wildflowers over time, reducing plant diversity. At minimum, 50 percent of the seed mix should be wildflowers to increase the likelihood of achieving a considerably more diverse and stable planting.
- In highly visible areas, consider increasing the wildflower component to create more showy plantings, if that is an objective for the revegetation site.
- Design plantings with plant communities in mind, and include species that will grow well together.
- Include layers of plants. For example, where wildfire is not an issue, include an understory of shrubs, wildflowers, grasses, or sedges with tree plantings. Layers help to shade out weeds, reduce moisture loss, provide layers of habitat for wildlife, and reduce maintenance requirements.



- Check erosion control mulches or straw, seed laboratory reports, and legal seed labels of the planting stock. Mulches, seed, and other planting stock should be free of noxious weeds, invasive or introduced species, and other crop components.
- Where available and economical, native plants and seed should be procured from local ecotype providers. Local ecotype plant materials are adapted to the local climatic conditions, will generally establish well, and will have bloom times in sync with the presence of monarchs and other pollinators. Some cultivars have been bred for a particular trait such as showiness and may have little to no pollen and nectar and therefore little value to pollinators.
- Avoid taller herbaceous plants in areas where lines of sight could be blocked, such as intersections and other safety zones.
- In areas with snow and ice, species to be planted close to the road should have some level of salt tolerance to reduce damage from road salt applications.
- When possible, salvage native plants, particularly those that are more difficult to establish or are longer lived, from the site prior to construction and disturbance for use in the revegetation project. Enlist the help of other agencies or volunteers to temporarily relocate the salvaged vegetation for installation at the site after construction or for installation at another appropriate site.
- Consider reaching out to local experts, organizations and agencies for guidance on appropriate plant lists. This may include the US Fish and Wildlife Service, native plant societies, and the Xerces Society. A longer list of possible groups to reach out to can be found in Table 11-3 of the regional guidebooks (see below).

For more detail, please see: Pollinator Habitat Conservation Along Roadways, Volumes 1-16. National Academies of Sciences, Engineering, and Medicine. Washington, DC: The National Academies Press.

Project materials available here: <https://www.trb.org/NCHRP/NCHRPWOD362.aspx>

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