



Best Management Practices (BMPs) for Monarch and Pollinator Habitat Project Maintenance

A product of the Napa County Monarch Working Group

Landowners and managers play an important role in reversing the monarch and native pollinator decline by planting and maintaining high-quality habitat on their property.

BMPs for Long Term Success of Planting Areas

Native: Use native, insecticide-free plants for habitat projects. Include a combination of site appropriate nectar and host plants. *Do not* plant non-native tropical milkweed (*Asclepias curassavica*), it can spread the monarch pathogen *Ophryocystis elektroscirrha* (OE).

Host plants: Plant milkweed and other pollinator host plants in the most protected locations on the property where they can avoid chemical drift. Monitor milkweed for monarchs in various life stages during the spring.

Weeding: Before planting and as needed, remove invasive weeds to avoid competition with young plants. Manual and mechanical removal is preferable over chemical use as residual herbicide may linger.

Irrigation: The best time to transplant plants in our Mediterranean climate is in the late fall or early winter to minimize the need for supplemental irrigation. Irrigate transplants right after planting. Follow up irrigation for drought tolerant plants will depend on the weather and soil, but in general it should be at least 2 gallons every week if there is no rain forecasted. This should continue until plants are established which can take 2-3 years after planting. Water at the base of the plant and aim for long duration and deep infiltration so the roots will grow deep and strong. Avoid shallow irrigation.

Compost: Most native plants will not need soil amendments. However, if the soil is compacted or degraded, compost is beneficial. Compost can make plants grow faster and stronger, helping them become well established. A thin layer around the root zone, under the mulch, is enough.

Mulch: Mulch will greatly reduce weed pressure and keep the soil moist, reducing long-term maintenance. A natural mulch like wood chips is recommended. Avoid treated wood. Mulch should be about 2-4 inches thick. Keep mulch a couple inches away from plant stems and crowns to prevent disease and pest problems. Hand weeding may be needed around the plant stem.

Browse protection: If there are browsing animals, fencing must be built to protect the plantings. Napa County is home to gophers, deer, and rabbits. Individual plants can be caged, or a fence can be installed around the perimeter of the planting.

Pruning: Well-established plants can be pruned if needed. To protect pollinators, do not disturb more than 30% of the planting area at one time.

Education: Train crews to identify native beneficial plants, invasive plants, and beneficial insects in all life stages.

Empowerment: Include crews in planting and educational programs so that they become motivated to care for the plants and life they support.