Habitat Maintenance

Read on for tips on caring for your habitat long term!

As we enter the active growing season for most parts of the state, habitat maintenance is paramount. During the first couple of years, you will need to tend to your plants on a regular basis to make sure they thrive in the long term. Below are some tips on maintaining your projects during this important establishment period:

Irrigation:

We covered the details of irrigation in our last newsletter (Feb), but as a reminder, during this establishment phase, we generally recommend irrigating every 7-14 days when there is no regular precipitation. Keep a close eye on your plants as we enter the dry season, test your irrigation system to make sure it is working properly, and fix any leaks promptly.

Weed Management:

Weed management is critical during the first couple years after planting. Maintenance practices should focus on controlling noxious and invasive species when they are seedlings, and well before they set seed. Weeds should be prevented from going to seed in, or adjacent to, the project area to help ensure long-term success. Familiarity with the life cycle of weeds will facilitate appropriate timing of management activities. Since young wildflower and weed seedlings may look alike, care should be taken to properly identify weeds before removal. The California Invasive Plant Council is a great resource for identifying and learning about weeds, while the California Native Plant Society's CalScape is a great resource for learning more about the native plants in your habitat kit, and includes photos to help with identification. Recommended weed management strategies include:

XERCES SOCIETY
for Invertebrate Conservation

- **Managing Irrigation:** Weeds will grow where water flows, so however you irrigate, make sure to directly water the plants you planted and not the area in between. For drip irrigation, this means placing emitters a couple inches from the base of the plant, and making sure that there aren't any extra emitters in between your plants. When hand irrigating, try to water gently at the base of the plant. Avoid over-head watering as this will exacerbate weed problems and can lead to disease problems.
- **Mowing / String Trimming:** Mowing or string trimming can be utilized around individual plants and around the general habitat area to keep weedy species from encroaching. Mowing can even be used over the top of wildflowers and native bunch grasses to manage weeds within grassland wildflower project areas. Timing should focus on preventing weeds from choking out desired vegetation or going to seed.
- **Hand Weeding:** Some hand-weeding will likely be necessary during the first few seasons. We recommend focusing on hand weeding around the base of individual plants to prevent competition for resources.
- **Mulching**: Top mulch such as bark chips or straw can be very effective at keeping moisture in and weeds out. We recommend maintaining a thick layer of mulch around plants and throughout the habitat area until plants begin to mature.
- **Grazing:** Grazing can be effective in managing weeds in mature / established larger scale habitat areas such as grassland meadows. Keep in mind that different animals have different grazing patterns and habits. Cattle grazing usually works the best for pollinator habitat plantings, because they generally prefer grass over forbs and can thus be effective at controlling exotic grass weeds and / or reducing thatch so that forbs can persist.
- **Burning**: Similar to grazing, burning can be an effective management tool for established, larger scale projects that do NOT include woody plants. Many forbs benefit from some disturbance, so a low-intensity burn can be effective in maintaining diverse stands of wildflowers over time. Burning is best done between fall and spring and generally requires permitting and a high degree of expertise.
- **Herbicides:** Because herbicides can cause both direct and indirect harm to pollinators, we recommend using herbicides only when absolutely necessary and in as targeted a manner as possible. Never apply herbicides to plants when they are in bloom. If other weed management methods are unavailable, below are some considerations related to herbicide use:
    - **Spot Spraying:** Spot spraying with herbicides can be effective, relatively inexpensive, and require minimal labor, even on larger project areas. Care should be taken that herbicides do not drift or drip onto desirable plant species. Spot spraying is usually

performed with backpack sprayers, or occasionally with rope-wick implements (when weed growth is substantially taller than newly established wildflowers). Dye can be added to herbicide mixes to assist the applicator in keeping the herbicide on target plants.

- **Selective Herbicides:** Grass-selective herbicides can be used to control weedy grasses in broadleaf plantings. Contact a local crop advisor or Extension specialist for appropriate herbicide selection and timing.

Other Management Considerations:

Herbivory: We talked about herbivory from vertebrate pests in our October newsletter. As a reminder, physical cages of different types may be necessary to protect plants from destructive herbivory from deer, rabbits, pocket gophers or ground squirrels. Insect herbivory can also occur, but is rarely severe in diverse, native plantings. Oleander aphids and other insect pests do sometimes attack milkweed, and infestations can look alarming, but they rarely cause significant damage.

Diseases: Plant diseases are also relatively rare in diverse native plantings, and can generally be prevented through providing appropriate irrigation, weed management, and other methods to reduce stress on plants.

'Bee Pesticide Free': As a reminder, we ask that you do NOT use pesticides in your habitat areas, as the potential harm to visiting pollinators generally outweighs any potential benefits. Herbicide use is permitted as a last resort, but other pesticides, such as insecticides or fungicides, should never be used within habitat project areas.

Learn more about Xerces California Monarch and Pollinator Habitat Kits

***Questions?* Contact us at centralvalleypollinators@xerces.org**

XERCES SOCIETY
for Invertebrate Conservation