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Protect Habitat for Climate Resilience



ReScape Principle: Create Habitat

Biodiversity is crucial to the health and resiliency of natural ecosystems. By using native plants and increasing the diversity of plant palettes, our built landscape can provide food, water and shelter for birds, butterflies, beneficial insects and other creatures, thus helping to conserve precious wildlife and restore fragmented ecosystems.

⊗ Problem

California is host to approximately 6,500 native plant species, many of which are listed as rare, threatened or endangered. Climate change has also impacted the natural habitats of our native flora and fauna. Planting and hardiness zones are changing, plants are leafing out and blooming earlier, birds and butterflies are breeding and migrating earlier, and wildlife species are shifting their ranges.

✓ Solution

Protecting and nurturing a diverse flora and fauna is key to climate resilience. Adopting regenerative landscape practices such as choosing California natives first, providing water and shelter, using organic pest management and conserving or restoring natural areas and wildlife corridors will help to conserve valuable wildlife resources and restore damaged ecosystems.

Research Shows:

- “Ecosystems [and landscapes] with high biodiversity are more productive and stable towards annual fluctuations in environmental conditions than those with a low diversity of species. They also adapt better to climate-driven environmental changes.” [1]
- “Animals and insects provide pollination services for over three-quarters of the staple crop plants and for 80 per cent of all flowering plants in the world.” [2]
- Neonicotinoid pesticides (aka “neonics”) have been proven toxic to bees and other pollinators, persist in the plants and in the soil for many years after application, and have been identified in many commonly consumed foods including 86% of honey in the U.S. as well as apples, cherries, strawberries, and baby food. [3]
- Over 1600 species of native bees can be found in California [4] and maintaining native flowers year-round in our landscapes can attract the maximum pollinators, predators, and parasites for the ecosystem and our crops. [5]



ReScape and PG&E are partnering to offer eight webinars about landscaping practices that address climate change, with a focus on carbon sequestration. This Speaker Series is a part of ReScape’s Climate Change Consortium Demonstration Projects to educate about climate change landscaping challenges and the solutions available using regenerative practices.



What is a Pollinator? Pollinators include bees, beetles, butterflies, and even bats that carry pollen from the male part of the flower (stamen) to the female part of the same or another flower (stigma). Most plants require pollination to become fertilized, produce fruits & seeds, and reproduce. [6]

Protect Habitat and Mitigate the Impact of Climate Change

- **Include a diversity of plants** to maximize habitat value using evergreen and deciduous plants, species that bloom at different times of the year and those that bear fruit or berries. Include plants that also occupy different canopy levels and root zones.
- **Choose California natives first** which are critical to creating wildlife habitat as our local fauna are adapted to them. The best natives for landscapes are local species, which are very important to plant on sites that interface with wild lands.
- Nesting sites and shelter, including large native trees and shrubs and boulders, as well as a clean, fresh water source, are all essential to encourage and support wildlife. **Avoid creating breeding sites for mosquitoes, however.**
- **Avoid pesticides which not kill only the target pest species.** Birds, bees, butterflies and other creatures are also vulnerable, and in many cases they are more sensitive, to the toxins than the pests.
- **Conserve or restore natural areas and wildlife corridors**, especially for new development along the urban-wildland interface, to protect biodiversity. These natural areas and corridors increase habitat and range, support a diversity of organisms and allow them to travel safely between sites.

ReScape is a non-profit organization that advocates for a regenerative, whole systems approach to landscaping education and advocacy, addressing earthscape climate change issues.

www.rescapeca.org

As a provider of gas and electricity to millions of Californians, **PG&E** strives to be an environmental leader, demonstrating this commitment through action. Doing so is integral to their ongoing efforts to provide safe, reliable, affordable and clean energy.

www.pge.com

More Resources

The Xerces Society for Invertebrate Conservation is a science-based international nonprofit organization that protects the natural world through the conservation of invertebrates and their habitats.

California Native Plant Society (CNPS) brings together science, education, conservation, and gardening to power the native plant movement, protecting and enhancing California's native ecosystems.

Calscape, a project of the CNPS, is an online database that identifies which plants are native to specific regions, where to purchase and how to grow them.

Las Pilitas Nursery provides a wealth of information online about selecting and growing native California plants, attracting pollinators and wildlife, and nurturing our native ecosystems.

ReScape Landscape Guidelines provide detailed recommendations for creating habitat, and managing these landscapes naturally, without the use of toxic chemicals.

1. University of Zurich. "Diverse landscapes are more productive and adapt better to climate change." ScienceDaily. 4 September 2017.
2. Ahmad, Shahnawaz & Khan, et al. (2019). "Pollinator Biodiversity and their Conservation". Accessed February 16, 2021 through Research Gate.
3. Daniel Raichel. "10 Things You Always Wanted to Know About Neonics". NRDC, November 09, 2018. Accessed February 16, 2021. <https://www.nrdc.org/experts/daniel-raichel/ten-things-you-always-wanted-know-about-neonics>
4. UC Davis Arboretum. April 3, 2018. "Beyond the honey bee: Learn more about California native bees". Accessed February 13, 2021. <https://arboretum.ucdavis.edu/blog/beyond-honey-bee-learn-more-about-california-native-bees>
5. Las Pilitas Nursery, "California Native Insect Pollinators: Creating a Pollinator Habitat" Accessed February 15, 2021. <https://www.laspilitas.com/insects/california-insect-pollinators.htm>
6. Source: National Park Service, "What is a Pollinator", Accessed February 12, 2021. <https://www.nps.gov/subjects/pollinators/what-is-a-pollinator.htm>