

SAN FRANCISCO BIODIVERSITY GUIDELINES

	1. Plants and Wildlife – For projects with landscaping	
1.1	Consult with local subject matter experts and/or a local ecologist with demonstrated experience in San Francisco ecology, wildlife, and native plants.	
1.2	Maximize planting local San Francisco native plants that provide wildlife habitat, are climate appropriate, and suited to your project site conditions.	SF Plant Finder
1.3	Source native plant species from local native plant nurseries to the greatest extent possible.	Bee-Friendly Nurseries
1.4	Support diverse pollinators by planting diverse flowering species that will bloom in all four seasons, and plant patches of the same two or three species.	SF Environment- Pollinator Portal
1.5	Design pests out of your landscapes to decrease your ongoing maintenance costs by using established pest prevention guidelines.	SF Environment-Pest Prevention by Design

	2. Community Benefits and Quality of Life	
2.1	Evaluate the feasibility of installing lighting that protects resident and migratory wildlife and improves dark night skies . If feasible, consult best management practices for this action.	
2.2	Consult the Green Connections Plan for public realm design guidance and to see if your project is in one of the six focus neighborhoods.	SF Planning-Green Connections Plan
2.3	If appropriate, install interpretive elements that inform and connect people to historical and current ecology and that do not visually clutter the landscape.	
2.4	If urban agriculture is part of the project, plant “habitat hedgerows” of local native shrubs and perennials to encourage healthy populations of pollinating insects.	
	3. Compliance and Relationship with Existing Local Ordinances	
3.1	Determine if your project is required to comply with the Better Roof Ordinance (BRO) and then consider installing a living roof, and then follow the planting guidelines in Section 1. If your project does not have to comply with the BRO, consider installing a living roof in any case, and then follow the planting guidelines in Section 1.	Better Roofs Ordinance
3.2	Determine if your project must comply with the Stormwater Management Ordinance (for projects that create or replace an impervious surface ≥5,000 square feet follow the Large Project requirements; for a project 2,500-5,000 square feet in separate sewer areas follow the Small Project requirements), and then follow the planting guidelines in Section 1.	Stormwater Ordinance
3.3	Follow the City's Integrated Pest Management (IPM) program and identify and document invasive plants in and around the project site during the establishment phase.	SF Environment- IPM checklist
3.4	Determine if your project must comply with the Bird-Safe Building Ordinance (BSBO) and then consider installing the most bird-friendly alternatives for windows and glass. If your project does not have to comply with the BSBO, consider implementing those measures in any case.	SF Planning- Bird Safe Buildings

GUIDE TO THE GUIDELINES

The information below serves as an elaboration of the guidelines, as a list of resources, and is meant to provide a deeper dive into the San Francisco Biodiversity Guidelines.

1. Plants and Wildlife

1.1 Consult with the local subject matter experts and/or a local ecologist with demonstrated experience in San Francisco ecology, wildlife, and native plants.

Hiring a local ecologist, or having one on staff, allows you to consult with a professional who understands the local plant and animal species your project has the potential to support. They will be able to guide your project's use of space, plants, and infrastructure to promote urban biodiversity and to complement existing ecological systems through understanding plant and animal preferences and behavior and even wildlife corridors.

1.2 Maximize planting local native plants that provide wildlife habitat, are climate appropriate, and suited to your project site conditions.

Maximizing local San Francisco natives (over 500 species) that are adapted to thrive in local conditions means they will have a better chance of taking root and surviving local weather fluctuations and provide habitat to local wildlife species. Our local native plants have evolved for millennia upon millennia, living through, and adapting to massive deluges and mega-droughts, and so they have deep genetic memory to be able to continue to adapt to our more rapidly changing climate.

California natives are any species native to the [California Floristic Province](#), that is not considered indigenous to San Francisco, but including cultivars of species that may be native to San Francisco. Remember that just because a plant is native to California does not mean that it is appropriate to plant in San Francisco. For example, one would not choose to plant a Joshua tree, nor a western red cedar.

The [San Francisco Plant Finder](#) allows you to search for plants that suit your project's specific needs. You can filter your search results using the following categories, for example: Native (to SF or to CA), Water Needs, Soil Type, Site Conditions, Habitat Value, Plant Type, Bloom Time, Maturity Size, and Appropriate Location. You can also browse lists of plants including an inventory of SF natives, City approved planting lists, and several plant palettes. These resources can facilitate the choice of local native plants that are suited to your project's site conditions.

1.3 Source native plant species from local native plant nurseries to the greatest extent possible.

Sourcing plants from a [local native plant nursery](#) means that the plants you purchase are accustomed to the soil and climate in your area, have a better chance of survival than plants that did not evolve locally, are grown from seeds and cuttings from local sources, and are directly compatible with local wildlife. Contact and work with the nurseries at least six, but ideally twelve months before you need to get your plants in the ground. Ask directly about their local San Francisco genetic stock. Ensure that the [nursery](#) has implemented best management practices to [prevent the introduction of Phytophthora](#). Using local native plant nurseries can ensure that your plants are from San Francisco genetic stock but using plants that are indigenous to San Francisco that are sourced from genetic stock that originates in one of the nine Bay Area counties is the next best thing.

1.4 Support diverse pollinators by planting diverse flowering species that will bloom in all four seasons, and plant patches of the same two or three species.

[Support pollinators](#) by planting diverse flowering species that will bloom in all four seasons and plant patches of the same two or three species. Due to our global biodiversity and ecosystems crisis, pollinators are in decline everywhere. Birds, bees, butterflies, bats, and many other insect and other wildlife species will benefit from intentional selection and installation of a diversity of pollinator-friendly species. Sustaining pollinator populations also supports urban agriculture efforts.

1.5 Design pests out of your landscapes to decrease your ongoing maintenance costs by using established pest prevention guidelines.

Consult the [Pest Prevention by Design Guidelines](#) (section 6, Landscapes) for the six landscape design principles and any other additional design principles that are relevant to your site conditions.

Plants and Wildlife Resources

- [9 Pollinator-Friendly Local Native Plants](#)
- [Gardening for Pollinators FAQ](#)
- [Inviting Wildlife into Your Backyard](#)
- [Native Plant Nurseries](#)
- [Plant for Backyard Habitat](#)
- [Pollinator-Friendly Nurseries](#)
- [Protect the Pollinators](#)
- [San Francisco Plant Finder](#)
- [Super 60 \(common, relatively hardy, local native plants that create high quality wildlife habitat\)](#)
- [Top 20 Plants](#)
- [Yerba Buena Chapter, California Native Plant Society](#)

Pest Prevention Resources

- [Accreditation to Improve Restoration and Native Plant Nursery Stock Cleanliness](#)
- [Best Management Practices for Creating Clean Nursery Stock](#)
- [California Horticultural Invasive Prevention Partnership \(Cal-HIP\)](#)
- [California Invasive Plant Inventory](#)
- [Phytophthora in Nursery Stock and Restoration Plantings](#)
- [Plant Right](#)
- [Sustainable Landscaping Resources](#)

2. Community Benefits and Quality of Life

2.1 Evaluate the feasibility of installing lighting that protects resident and migratory wildlife and improves [dark night skies](#). If feasible, consult [best management practices](#) for this action.

Install [lighting](#) that protects resident and migratory wildlife and contributes to [dark night skies goals](#). Taking opportunities to reduce light pollution can also conserve energy and provide capital and maintenance savings.

2.2 Consult the Green Connections Plan for public realm design guidance and to see if your project is in one of the six focus neighborhoods.

The [Green Connections Plan](#) envisions a city with a network of 'green connectors' that will make life more pleasant and livable for people to travel to parks by walking, biking, and other forms of active transportation. Green Connections is also meant to inspire the City and the community to enhance urban ecology and connect habitat for native birds and pollinators. The plan includes a Design Toolkit for 18 typologies for streets, intersections, and blocks that can be applied to your project, as well as a Community Resource list, local Ecology Guides and Neighborhood Concept Designs. Determine if your project is located in one of the [six focus neighborhoods](#) and apply the recommendations as appropriate and feasible.

Consult the design typologies on [SF better streets](#) for streets, intersections, and alleys that can be applied to projects based on local conditions and priorities. This site describes the overlapping benefits including safety, health, aesthetics, and habitat enrichment that can result from designing more "complete streets". It is also a reference for the [permitting process](#) for making changes to streets or sidewalks.

2.3 If appropriate, install interpretive elements that inform and connect people to historical and current ecology and that do not visually clutter the landscape.

If appropriate, install interpretive elements and demonstration areas that inform and connect people to historical and current ecological systems and inspire community stewardship. Install appropriately sited signage to:

- Recognize and connect people to the historical natural landscape and the current natural ecology.
- Encourage local ecological community stewardship.
- Demonstrate how humans are part of nature.

2.4 If urban agriculture is part of the project, plant "habitat hedgerows" of local native shrubs and perennials to encourage healthy populations of pollinating insects.

Support [urban agriculture](#) by planting "habitat hedgerows," clusters of native shrubs and perennials of varied sizes that encourage healthy populations of pollinating insects and provide shelter, nesting sites, and food sources for wildlife. The many benefits of urban farming can be consistent with and supported by designing to boost biodiversity. A project that incorporates urban agriculture should still meet the biodiversity guideline 1.4 requiring maximizing of San Francisco natives in areas surrounding the urban farm. Habitat hedgerows will attract pollinators to the urban farm that will pollinate crops and can shelter your site from wind and other disruptions.

Community Benefits and Quality of Life Resources

- [Green Connections Six Focus Neighborhoods](#)
- [Hedgerows for California Agriculture](#)
- [National Park Service Dark Night Skies](#)
- [National Park Service Outdoor Lighting Retrofits](#)
- [National Park Service Wayside Exhibit Design](#)
- [San Francisco Better Streets Plan](#)
- [San Francisco Urban Agriculture Program](#)
- [Urban Agriculture Resources and Information](#)
- [Urban Agriculture Incentives Zone Act and Procedure](#)

- [Water Efficient Landscape Ordinance](#)

3. Compliance and Relationship with Existing Local Ordinances

3.1 Determine if your project is required to comply with the Better Roof Ordinance (BRO) and then consider installing a living roof, and then follow the planting guidelines in Section 1. If your project does not have to comply with the BRO, consider installing a living roof in any case, and then follow the planting guidelines in Section 1.

Living roofs are an important option for supporting biodiversity in the built environment. Insects and birds use living roofs for food and roosting and potentially for nesting. Determine if your project is [required to comply](#), and if so, consider installing a living roof and use local native plants as outlined above in the Plants and Wildlife section of these guidelines.

3.2 Determine if your project must comply with the Stormwater Management Ordinance (for projects that create or replace an impervious surface $\geq 5,000$ square feet follow the Large Project requirements; for a project 2,500-5,000 square feet in separate sewer areas follow the Small Project requirements), and then follow the planting guidelines in Section 1.

Comply with the [Stormwater Management Ordinance](#). For projects that create or replace an impervious surface $\geq 5,000$ square feet, follow the Large Project requirements. For a project 2,500-5,000 square feet in separate sewer areas, follow the Small Project requirements. Capture all stormwater on-site via low impact design/green infrastructure solutions, install appropriate erosion control measures as needed, and install local native plants as outlined above in the Plants and Wildlife section of these guidelines.

3.3 Follow the City's Integrated Pest Management (IPM) program and identify and document invasive plants in and around the project site during the establishment phase.

Understanding which plants and pests could invade your project area and planning for them will allow you to react quickly when invasive plants or pests are spotted. Consult local invasive plant authorities and lists to avoid planting known invasive plant species: [California Invasive Plant Council](#) (Cal-IPC), [Plant Right](#) (Sustainable Conservation), the local [Weed Management Area](#) (WMA), and local natural resources managers.

Establish an [Integrated Pest Management](#) (IPM) program for the project, including restrictions on pesticide use (required for City projects). Using an IPM approach to pest management facilitates planning and careful assessment and will lead to selecting pest management with the least risk to people, the environment and ultimately to project costs. The following best practices will reduce your pest management problem, help reduce the use of chemical pesticides, and establish a sustainable maintenance regime:

- Make proper site selection and spacing, e.g., space plantings appropriately to avoid unnecessary and wasteful pruning and trimming.
- Design a waste management system to prevent pests and promote healthy wildlife.
- Mulch and sheet mulch with clean and sustainable materials.
- Design with hydro-zones for sustainable water management and avoiding fungal pathogen buildup.
- Loose the lawn – minimize turf – try native grass approaches like bentgrass or red fescue.
- Plant production in the Bay Area has been the victim of various strains of the fungus Phytophthora, which is the same genus as Sudden Oak Death. Follow Best Management Practices for preventing the spread of this deadly fungal disease.

- Use recycled materials for landscape infrastructure.

3.4 Determine if your project must comply with the Bird-Safe Building Ordinance (BSBO) and then consider installing the most bird-friendly alternatives for windows and glass. If your project does not have to comply with the BSBO, consider implementing those measures in any case.

Install bird-friendly windows and glass in compliance with the [Bird-Safe Building Ordinance](#), required when a building is in a clear flight path of less than 300 feet from an [Urban Bird Refuge](#) (open spaces two acres and larger dominated by vegetation, vegetated landscaping, forest, meadows, grassland, wetlands or open water) or when a building has uninterrupted glazed segments of glass twenty-four square feet or larger.

Local Ordinance Resources

- [Better Roof Ordinance](#)
- [Bird-Safe Building Ordinance](#)
- [Integrated Pest Management Program](#)
- [Stormwater Management Requirements](#)
- [Urban Bird Refuge Poster](#)
- [What is Green Infrastructure?](#)

Integrated Pest Management Resources

- [California Invasive Plant Council](#)
- [Garden for the Environment Resources](#)
- [Our Water, Our World](#)
- [Pest Management Resources](#)
- [Safely Care for Plants and Pollinators](#)
- [San Francisco Weed Management Area](#)
- [UC IPM Statewide Integrated Pest Management Program](#)
- [What is Integrated Pest Management?](#)