

Attachment 1 – Strategy for Implementing Pollinator-Friendly Landscaping Design and Maintenance at Department of the Interior Sites

This document is an attachment to the Department of the Interior memorandum, *Increasing and Improving Pollinator Habitat through Landscaping*. It outlines specific actions and best management practices that bureaus shall implement at sites and facilities, as appropriate, to support pollinator health.

1. Background

Pollinators contribute substantially to the economy of the United States. In 2010, pollination by honey bees contributed to more than \$19 billion of crops in the United States, while other insect pollinators contributed to nearly \$10 billion of crops. Over the past few decades, there has been a significant loss of pollinators, including honey bees, native bees, birds, bats, and butterflies, from the environment. A variety of factors has caused this population decline: the loss, degradation, and fragmentation of habitat; diminished quantity and quality of food sources; reduced availability of sites for mating, nesting, and migration; exposure to pesticides; and increased adverse effects from pathogens, arthropod pests, and parasites.

The June 2014 Presidential Memorandum – *Creating a Federal Strategy to Promote the Health of Honey Bees and Other Pollinators* – directs agencies to take steps to reverse pollinator losses and help restore populations to healthy levels. Federal actions include promoting pollinator-friendly habitat through landscaping practices at federal facilities, restoration and reclamation projects, grants, land management policies, and policies affecting easements, roads, and other rights-of-way.

Improving habitat for pollinators will have collateral benefits in improving ecosystems more broadly through encouraging development and maintenance of native habitats and more ecologically sustainable land management practices. Pollinator-friendly habitat may require less frequent watering and maintenance (e.g., mowing) than traditional landscaping, which may reduce operations and maintenance expenses and the Department's carbon footprint. Finally, planting and maintaining pollinator-friendly habitat at departmental sites and facilities serves as an opportunity to educate the public about the vital role pollinators play in the ecosystem and economy and the threats they face.

2. Scope

The Departmental memorandum, *Increasing and Improving Pollinator Habitat through Landscaping*, applies to all bureaus and offices within the Department that have authority over the operations and maintenance of lands and facilities, including: (1) Department-owned lands and facilities, and (2) leased and General Services Administration (GSA) provided space where a

bureau or office has delegated authority over the management and/or physical operations and maintenance, including landscaping.

3. Authorities

- Presidential Memorandum – Creating a Federal Strategy to Promote the Health of Honey Bees and Other Pollinators, June 2014
- National Strategy to Promote the Health of Honey Bees and Other Pollinators, May 2015

4. Actions

Bureaus and offices shall be responsible for:

- Taking steps to support pollinator health through landscaping design and maintenance in line with the best management practices described in Section 4.2 to provide forage, water, and habitat for pollinators; and,
- Balancing practices to improve pollinator health with other important elements, such as mission, operations and maintenance requirements, security, sustainability, and wildlife protection, while considering cultural, historical, aesthetic, recreational, and environmental resources inherent to the landscape.

4.1 Specific Actions

Bureaus and offices shall be responsible for the following actions to the extent that they are appropriate for, and consistent with, the mission and function of the facility/site and the other important elements described in the second bullet above:

New Construction and Major Renovations

- Planning for pollinator-friendly landscaping design and maintenance in the design phase of new construction and major renovations where the existing landscaping will be disturbed.

Existing Sites

- Implementing pollinator-friendly landscaping design and maintenance at designed landscapes adjacent to, or part of, the following existing sites according to periodic maintenance and replanting schedules:
 - Buildings meeting or striving to meet the Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings;
 - Buildings and points of interest that welcome visitors such as visitor centers, viewpoints, waysides, etc.;
 - Green or natural infrastructure, including green roofs, where feasible; and
 - Roads, spillways, and other rights-of-way.

- Restoring, protecting, and/or enhancing existing native vegetation that is currently pollinator friendly, including the restoration of landscapes disturbed by construction, demolition, or removal of assets.

Contracts

- Specifying pollinator-friendly landscaping design and maintenance in new landscaping and grounds maintenance contracts, where appropriate.

Leases and Occupancy Agreements

- Encouraging the use of pollinator-friendly landscaping design and maintenance as landscaping opportunities arise in association with leases and occupancy agreements.

Education/Outreach

- Communicating pollinator-friendly landscaping design and maintenance practices to employees and visitors.

4.2 Best Management Practices

Bureaus and offices shall refer to the following guidance documents in developing best management practices to promote pollinator health:

- *Supporting the Health of Honey Bees and Other Pollinators*, Council on Environmental Quality, October 2014; and
- *Pollinator-Friendly Best Management Practices for Federal Lands*, Bureau of Land Management and U.S. Forest Service, May 2015.

These best management practices include, but are not limited to:

- Choosing native plants that support the forage, reproduction, shelter, roosting, and/or hibernation of pollinators;
- Choosing plants that are adapted for the local ecoregion with a strong preference for native plants;
- Choosing native plants that bloom at different times across seasons to provide a continuous source of nectar;
- Locating plantings where they are visible to the public but with space to buffer pollinators from disturbance;
- Providing nesting sites for pollinators (e.g., bees, butterflies, birds, bats, etc.);
- Reducing or altering the timing of mowing to preserve plant material such as blooms and nesting material in turf that is beneficial to pollinators;
- Employing principles of integrated pest management and integrated vegetation

management such that insecticides and herbicides are only used when a documented pest problem exists, action thresholds are exceeded, and after other non-toxic alternatives are exhausted;

- Incorporating pest free design elements in the planning phase of new construction and major renovations to reduce or eliminate pests from the landscape;
- Ensuring proper timing for garden clean-up, cut-backs, and pruning to avoid impacts to pollinators such as loss of nesting sites and material;
- Providing access to transitory or moving clean, shallow water, while using reclaimed water or rainwater where feasible;
- Safeguarding against bird collisions with windows;
- Creating educational gardens and signage, including information on the current status of pollinator health and the link to human and environmental health; and
- Employing principles of adaptive management.

4.3 Historic and Cultural Landscapes

Historic or cultural landscapes may not be appropriate sites for implementing pollinator-friendly landscaping. Plants that are character-defining features of a historic or cultural landscape should be preserved, regardless of their benefit to pollinators. Where appropriate, a landscape architect specializing in historic preservation should be consulted in order to assist in meeting sustainability goals while protecting the integrity of the cultural landscape. See the *Guidance for Federal Agencies on Sustainable Practices for Designed Landscapes* (Council on Environmental Quality, October 2011) for more information.

4.4 Reporting Metrics

As this initiative matures, bureaus and offices may be required to establish goals and metrics to measure and report progress in implementing pollinator-friendly landscaping design and maintenance.

5. Definitions

Adaptive Management is a decision process that promotes flexible decision making that can be adjusted in the face of uncertainties as outcomes from management actions and other events become better understood.

Designed Landscape is a landscape that is laid to fulfill a specific function. Applicable outdoor areas may include, but are not limited to, the following:

- Building entryway systems;
- Gardens;
- Tree boxes and planters;

- Pedestrian pathways;
- Courtyards;
- Campuses or facilities with accumulated acreage in open space;
- Access roadsides; and
- Spillways adjacent to facilities.

Forage refers to food gathered by a pollinator for itself or its offspring.

Green Infrastructure or Natural Infrastructure refers to nature-based approaches designed to mimic natural processes and provide specific services, such as reducing flood risks or improving water quality. Examples of green infrastructure include wetlands or estuary restoration/protection, and bioswales and green roofs for stormwater management.

Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings (Guiding Principles) were established in the 2006 Federal Leadership in High Performance and Sustainable Buildings Memorandum of Understanding and required by Executive Order 13423. As of September 2015, the Guiding Principles are:

- (1) Employment of integrated design principles;
- (2) Optimization of energy efficiency and use of renewable energy;
- (3) Protection and conservation of water;
- (4) Enhancement of indoor environmental quality; and
- (5) Reduction of environmental impacts of materials.

Executive Order 13693 requires the Guiding Principles to be updated. Please refer to the updated Guiding Principles when they are available.

Integrated Pest Management (IPM), as defined in 517 DM 1, Integrated Pest Management Policy, is a sustainable approach to managing pests by combining biological, cultural, physical, and chemical tools in a way that minimizes economic, health, and environmental risks. Examples of IPM tools include, but are not limited to, the following:

- (1) Biological tools - predators, parasites, and pathogens;
- (2) Cultural tools - crop rotation, alterations in planting dates, and sanitation;
- (3) Physical tools - barriers, traps, hand-pulling, hoeing, mowing, and tilling;
- (4) Chemical tools - pesticides, such as herbicides, insecticides, or fungicides.

Integrated Vegetation Management (IVM) is a systematic approach to address undesirable plant species. An IVM program is generally defined as the practice of planning and promoting desirable, stable, plant communities that resist invasion by undesirable plants.

Major Renovation refers to any repair, reconstruction, rehabilitation, or improvement of a building or structure, the cost of which equals or exceeds 50 percent of the current replacement value of the building or structure before the improvement or repair is started.

Native Plants refer to species that occur naturally in a particular habitat, ecosystem, or region of the United States and its Territories or Possessions, without direct or indirect human actions.

Nesting Material refers to grass, twigs, mud and other natural material gathered by a pollinator to build a nest for itself or its offspring.

Pollinator is an animal that moves pollen and can affect pollination. Examples include birds, bats, native bees, European honey bees, butterflies, and other insects.

6. References

- [Presidential Memorandum – Creating a Federal Strategy to Promote the Health of Honey Bees and Other Pollinators](#)
- [Executive Order 13693, Planning for Federal Sustainability in the Next Decade](#)
- [National Strategy to Promote the Health of Honey Bees and Other Pollinators](#) (Pollinator Health Task Force)
- [Guidance for Federal Agencies on Sustainable Practices for Designed Landscapes](#) (Council on Environmental Quality)
- [Supporting the Health of Honey Bees and Other Pollinators](#) (Council on Environmental Quality)
- [Pollinator-Friendly Best Management Practices for Federal Lands](#) (U.S. Forest Service and Bureau of Land Management)
- [Department of the Interior Pollinator Protection Plan](#)
- [517 DM 1, Integrated Pest Management Policy](#)