

# Natural Resources & Biodiversity Conservation

The USDA National Organic Program (NOP) regulations require certified operations to maintain or improve the natural resources of their operations, including soil, water, wetlands, woodlands, and wildlife. Considering their own site-specific conditions, certified operations must integrate cultural, biological, and mechanical practices that foster nutrient cycling, promote ecological balance, and conserve biodiversity.

During your inspection, you and your inspector will evaluate the effectiveness of your conservation program and identify where improvement is needed. The following resources will help you research, plan, and implement conservation strategies appropriate for your operation and help you prepare for your inspection.

**Resource conservation and species diversity, as defined by the NOP, provide many benefits to organic producers, including:**

- » Improved soil fertility and water retention, reduced erosion
- » More and diversified pollinators, predators, and other beneficial insects
- » Cultural pest, disease, and weed control
- » Improved water quality and quantity
- » Less reliance on off-farm fertility and pest control inputs
- » Overall farm stability and resiliency

### The National Organic Program Regulations: 7 CFR Part 205

The regulations define organic production as a production system that is managed “to respond to site-specific conditions by integrating cultural, biological, and mechanical practices that foster cycling of resources, promote ecological balance, and conserve biodiversity.” Natural resources include soil, water, wetlands, woodlands, and wildlife.

Section 205.200 requires certified operations to “maintain or improve the natural resources of the operation, including soil and water quality.”

Section 205.203 requires certified operators to use tillage practices, crop rotation, cover crops, and the application of plant and animal materials to maintain soil fertility and minimize erosion.

Section 205.205 requires certified operators to use crop rotation, sod, green manure crops and catch crops to maintain healthy soils, control pests, and minimize erosion. Perennial cropping systems and container production systems must use practices to introduce biological diversity in lieu of crop rotation (for example, alley cropping, intercropping, hedgerows, etc).

Section 205.206 requires certified operators to use crop rotation and the development of habitat for natural pest enemies, among other cultural and mechanical methods, to control pests.

### Guidance 5020: Natural Resources and Biodiversity Conservation

Guidance 5020 provides specific examples from the NOP of production practices that maintain or improve natural resources. It requires certified operations to explain, in their OSP, how they will maintain or improve natural resources, conserve biodiversity, and keep records that monitor the effectiveness of their program. Certified operations may demonstrate compliance through participation in USDA Natural Resources Conservation Service (NRCS) activities.

### Ocal Regulations

Ocal cannabis cultivators are held to the same natural resource and biodiversity conservation standards as organic operations and can benefit from the same implementation strategies. While NRCS federal funding is not available to licensed California cannabis cultivators, there may be opportunity for assistance at the state level.



## Strategies for Species Diversity in Annual and Perennial Production

For healthy soil and natural pest control, increase plant species diversity in production areas through crop rotation, cover cropping, interplanting, alley-planting, green manure crops, sod, catch crops, and end-row planting.



For orchards, vineyards, and other perennial systems, cover-cropping, alley-cropping, and interplanting can meet the NOP requirement for species diversity in lieu of crop rotation, while helping to provide the same benefits.



Hedgerows, in the form of trees, shrubs, forbs, and grasses, provide habitats for beneficial insects, act as windbreaks for organic crops, stabilize soil, slow erosion, and help intercept drift from neighboring land.



Keep riparian and non-crop areas vegetated to attract beneficial insects, protect water sources, and prevent erosion. Avoid invasive species!



Raptor perches, owl boxes, bird boxes, clean water, and diverse native plantings in and around production areas will attract birds, pollinators, and other beneficial insects and wildlife.



Wildlife-friendly fences; leaving wetlands, woodlands, and native habitat undisturbed; and restoring degraded areas all benefit wildlife.



## Recordkeeping

Organic growers must keep records of how they are maintaining or improving the farm's natural resources. Records can include, but are not limited to:

- » Soil quality and fertility tests
- » Tracking fertility and pest control costs
- » Water quality and use metering
- » Plant, animal, and insect surveys
- » Before and after photographs of restored or improved areas (i.e., a restored wetland area, a new hedgerow or pollinator garden, or the installation of bee and bat boxes)
- » Crop rotation journal
- » Visual observations documented in writing or photographs of your farm's overall changes in water, soil, wildlife, insects, and crop productivity

## More Information

There are many strategies to maintain and improve your operation's natural resources and for you to enjoy the long-term benefits of a species rich farm. We encourage you to begin by exploring [www.ccof.org/page/natural-resource-conservation](http://www.ccof.org/page/natural-resource-conservation), which includes information on pollinators, hedgerows, water quality, farming for biological diversity, and more! You will also find links to the NRCS which assists growers with on-site conservation planning at little or no cost.

Sample forms can be found at:

[www.ccof.org/page/natural-resource-conservation](http://www.ccof.org/page/natural-resource-conservation).

