

Recommended Biodiversity Conservation Additions to the Organic System Plan

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ORGANIC SYSTEM PLAN – NATURAL RESOURCES SECTION

Note–Black Text Is New & Blue, Underlined Text Is From Original OSP

D. NATURAL RESOURCES SECTION

NOP Rule 205.200 requires that “production practices... maintain or improve the natural resources of the operation”. 205.203(a) requires that production practices “maintain or improve the physical, chemical, and biological condition of the soil...”. The Rule defines **Organic Production** as, “A production system that is managed in accordance with the Act and regulations to respond to site-specific conditions by integrating cultural, biological, and mechanical practices that foster cycling of resources, *promote ecological balance, and conserve biodiversity.*” The Rule also defines **Natural Resources of the Operation** as, “The physical, hydrological, and biological features of a production operation, including *soil, water, wetlands, woodlands, and wildlife.*” Appropriate conservation practices and measures that conserve biodiversity and maintain and improve native species and habitats must be incorporated in the farm system. Methods to conserve water should be part of the irrigation plan. Practices must minimize erosion.

Please attach a map and highlight any changes to natural resource and biodiversity conservation features since last inspection. A map with conservation features is attached (see map cover sheet for full map requirements)

SOIL CONSERVATION AND QUALITY:

What soil conservation practices are used? terraces contour farming strip cropping filter strips
 winter cover or cover crops tree lines hedgerows windbreaks or shelterbelts undersowing/interplanting
conservation (minimum) tillage no till or permanent cover permanent grassed waterways firebreaks retention ponds riparian management maintain wildlife habitat irrigation management other (specify)

What soil erosion problems do you experience (why and on which fields)? none

Describe your efforts to minimize soil erosion problems listed above.

Describe any practices to build and maintain soil biota.

Describe how you monitor the effectiveness of your soil conservation program.

How often do you conduct this monitoring? weekly monthly annually as needed other (specify)

WATER CONSERVATION AND QUALITY:

Water use: irrigation foliar sprays washing crops greenhouse wildlife other (specify) none

Water source:

on-site well(s) river/creek/pond spring municipal/county irrigation district other (specify)

Attach current water tests for nitrates and coliform bacteria, per certifying agent policy. test(s) attached N/A

If water is taken from a natural surface water source (e.g. river, creek, pond, spring), what is done to reduce negative impacts to priority (endangered, threatened, species of special concern or keystone-species – see p.4 for definitions) and other native species and habitats?

If water is conserved or managed for native species and ecosystem function, particularly at critical times of the year, please explain (e.g. describe approximate quantity, timing, delivery, and use by species and ecosystems).

Type of irrigation system none drip flood sprinkler center pivot other (specify)

What input products are applied through the irrigation system? none

What products do you use to clean irrigation lines/nozzles? none

Is the system shared with another operator? Yes No

___ If yes, what products do they use?

Is the system flushed and documented between conventional and organic use? Yes No

List known contaminants in water supplies in your area. Attach residue analysis and/or salinity test results, if applicable.

Describe your efforts to minimize water contamination problems listed above. N/A

NATURAL RESOURCES SECTION: Water Conservation and Quality continued

What practices are used to conserve and deliver water? [scheduled use of water](#) crop selection [tensiometer](#)
 drip irrigation micro-spray other (specify) none (explain)

[What practices are used to protect water quality?](#)

keep sources of contamination separate from waterways and wetlands planting (or maintenance of existing vegetation) in margins to filter sediments [laser leveling/land forming](#) tailwater ponds to collect sediment avoid use of excess fertilizer soil conservation practices listed above (specify) none (explain)

[Describe how you monitor the effectiveness of your water quality program.](#)

[How often do you conduct water quality monitoring?](#) weekly monthly annually as needed other (specify)

WILDLIFE CONSERVATION (includes native plants and animals):

What practices do you use (1) or plan to use (2) on cropped land and field margins to conserve and maintain health of native plants and animals? (Place corresponding # in box) hedgerows and windbreaks benefit native species and provide ecosystem services to the farm crop management and timing accommodate sensitive life stages, such as nesting, spawning, and migration, of priority and other native species crop diversity and rotation practices benefit native species field margins, roadsides, fencerows, and areas around buildings support native vegetation as habitat for native species natural roosting sites (such as hedges, trees, and snags) for pollinators, natural enemy insects, birds, and bats are well maintained and protected from removal provide habitat enhancements such as for roosting and nesting (e.g. poles, bat houses, bird houses) other (specify) none

What additional practices do you use (1) or plan to use (2) on non-cropped land (e.g. grassland, woodland, fallow areas) or overall to provide habitat needs of native plants and animals? (Place corresponding # in box) native species and their habitats are identified and managed (including protection against inadvertent destruction by farm owners, employees, or others) for long-term health and conservation farm areas are fenced only when necessary and do not disrupt movement and migration of native species management accommodates sensitive life stages, such as nesting, spawning, and migration of priority species habitat enhancements such as for roosting and nesting (e.g. poles, bathhouses, bird houses) other (specify) none

Have any changes been made that impact natural resource features including priority and other native species and habitats since the last inspection. no yes. If yes, please explain changes made, the purpose, and impacts (positive and negative) to priority species and habitats.

INVASIVE SPECIES AND PEST MANAGEMENT: NOP Rule 205.206(a) Producers are specifically required to “use management practices to prevent crop pests, weeds, and diseases...” Invasive species (primarily non-native plants, animals, and pathogens) have major economic and ecological impacts on native ecosystems as well as on agricultural operations. Invasive species often displace, out-compete, or directly kill native species. They alter or destroy natural habitats and food webs and negatively influence ecosystem processes such as hydrology and fire.

Do you control invasive species and pests in ways that have minimal negative effects on priority and other native species, ecosystems, or ecosystem function? yes no (explain) *Map any problem areas.*

What information sources do you use to stay current on invasive species that are a problem to your operation? (list)
Are you aware of potential new invasives; what are they? yes no (list)

Describe your efforts to prevent the introduction and spread of non-native invasive plants, animals, and pathogens **not already present in your operation:** ensure that products introduced to the farm (products for mulch and compost, gravel roads, seeds and plants for use in cropped and non-cropped areas, building materials, etc.) are free of weed seeds ensure products are free of potential pests (invertebrates, insect larvae, etc.) ensure products are free of potential pathogens (sudden oak death, west Nile virus, etc.) clean vehicles and equipment used elsewhere that have the potential to introduce pests take steps to remove potential invaders with minimum impact to native species and ecosystems. other (describe)

Describe your efforts to protect aquatic systems and priority native species from invasive non-native species. prevent the introduction of and/or remove invasive aquatic vegetation and restore natural habitats prevent the introduction of and remove non-native animals that have a negative impact on native species (eg. in the West, invasive non-native species would include bass and bullfrogs, in the Midwest Zebra mussels, and in Florida Cuban tree frogs).

Describe how you monitor the effectiveness of efforts to prohibit spread and introduction of invasive species?

How often do you conduct monitoring? weekly monthly annually as needed other (specify)

BIODIVERSITY CONSERVATION:

Practices that benefit native biodiversity must be incorporated in the farm system. Biodiversity refers to the variety of all forms of life, from bacteria and fungi to grasses, ferns, tree, insects, and mammals. It encompasses the diversity found among all levels of organization, from genetic differences between individuals and populations (groups of related individuals) to the types of natural communities (groups of interacting species) found in a particular area. Biodiversity also includes the full range of natural processes upon which life depends, such as nutrient cycling, carbon and nitrogen fixation, predation, symbiosis, and natural succession. This section highlights meaningful and practical approaches to biodiversity conservation, especially in the context of larger ecosystems and through collaboration with others to plan and implement beneficial management practices.

What is your knowledge of biodiversity conservation issues and goals in your region?

- understand the farm's location in watershed, relationship to conservation areas, and how it fits into larger ecosystem
 familiar with regional biodiversity conservation goals and actions taken by farm neighbors other (specify) none

Do you have a biodiversity conservation component of the OSP for your farm? maintain a complete and current map of important natural resource features on and near the farm plan developed with help of a qualified wildlife biologist, ecologist, etc. areas where priority animal and plant species are present on farm are identified areas where priority species may occur on farm are identified other (specify) no plan developed

List your primary partners and their role in planning or implementing your biodiversity conservation plan:

What cooperative biodiversity conservation practices are used? apply management practices in collaboration with public or private partners to support regional biodiversity conservation goals protect and manage habitat for priority species retain, restore and manage natural habitats (grasslands, woodlands, etc.) in significant blocks or corridors to benefit broader network of conservation areas manage lands to provide for the safe movement and migration of native species take action to help support function of significant large-scale ecosystem processes (e.g. natural flow of river, fire) have a conservation easement in place other (specify) none

Have you or a previous owner/manager converted or otherwise altered any native habitats (e.g. native grassland, prairie, woodland, shrublands, desert)? no yes, within the past five years on land for which you are seeking certification yes, since the last inspection on lands that were certified organic prior to conversion. If yes, please state here and show on your map the size and location of the area. Describe its character and ecological significance before and after the conversion or alteration. Explain when the conversion or alteration took place and why, and how this activity maintains or improves the natural resources of the operation and conserves biodiversity.

Describe how you monitor the effectiveness of efforts to maintain and restore biodiversity?

- photo points surveys/inventories conducted by qualified individuals at appropriate times of the year other (specify)

How often do you conduct monitoring? weekly monthly annually as needed other (specify)

WETLAND, RIPARIAN AND AQUATIC HABITAT CONSERVATION:

N/A

What practices are being used (1) or are planned (2) to maintain or restore the natural hydrology? (Place corresponding # in box) participate in a multi-owner watershed conservation program manage riparian zones to allow natural hydrological processes to occur wetlands, ponds, and vernal pools are retained, restored if needed, and managed for ecosystem health wetland recharges aquifer other (specify) none

What practices are being used (1) or are planned (2) to maintain or restore wetland, riparian, and aquatic habitats? (Place corresponding # in box) wetlands, riparian areas, and aquatic habitats are retained and managed to benefit species native to the region active restoration habitats are linked in a regional conservation network specific habitat management actions for priority species farmed areas are separated from wetland habitats by vegetative buffer sediment basin or bioengineering are used to prevent soil erosion, sedimentation, and degradation of aquatic habitats other (specify) none

List any specific priority species or habitats that are the focus of your wetland, riparian and aquatic management and restoration efforts. Describe how you monitor the effectiveness of maintaining natural hydrology and/or wetland, riparian and aquatic habitat conservation program. photo points surveys/inventories by qualified individuals other (specify)

How often do you conduct monitoring? weekly monthly annually as needed other (specify)

ORGANIC SYSTEM PLAN – WILD CROP HARVEST PRACTICES (new section)

NOP Rule 205.207(b) “Wild crops must be harvested in a manner that ensures that such harvesting or gathering will not be destructive to the environment and will sustain the growth and production of the wild crop.” **NOP Rule (Subpart A - definitions)** defines a wild crop as “any plant or portion of a plant that is collected or harvested from a site that is not maintained under cultivation or other agricultural management”.

1) List wild crop(s) and harvest methods in detail. Use additional paper if necessary.

| Field Letter / Number | List Crops You are Harvesting as Wild (plant or portion of a plant). | When Harvested | Harvest Method | Amount Harvested (how much and how often) | What Methods Ensure No Over-harvesting or Degradation of Ecosystem | Unavoidable Negative Impacts to Native Plants, Animals, and Ecosystem |
|-----------------------|--|----------------|----------------|---|--|---|
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2) List all fields to be certified. Attach a map of harvest areas. For the purpose of certification, any wild crop harvest area (woodlot, prairie, grassland, pond, etc.) is considered a “field.”

| Field Letter / Number | Size (acres) | Owned/ Leased/ Public Land | Year First Managed Organically | Wild Crop(s) Harvested | Land Character (forest type, prairie, wetland, etc.) | Priority Native Species or Ecosystems Known to be Present or Use the Area for Habitat and Time of Year Used |
|-----------------------|--------------|----------------------------|--------------------------------|------------------------|--|---|
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3) What techniques do you use to insure that your harvest of the crop does not degrade land or water where it grows? use only authorized access points (road and trails) to minimize erosion and spread of invasives take care with clean equipment, clothing, etc. to prevent introduction of invasive non-native species to wild areas plan timing (season and time of day) and activities to minimize disruption of priority and other native species, including their reproductive or other sensitive life stages conduct harvest activities in full accordance with laws and permits required or recommended by government authorities to protect natural resources, native species and ecosystems other (describe)

4) Describe how you monitor the effectiveness of biodiversity conservation in relation to you wild crop harvest activities.

5) How often do you conduct monitoring? weekly monthly annually as needed (when?) other (specify)

ORGANIC SYSTEM PLAN – LIVESTOCK (new section)

Note: This section addresses only livestock issues related to conservation; other issues typically included in a questionnaire are livestock living conditions, sources of livestock, and questions on feed, water and health management.

PASTURE MANAGEMENT:

NOP Rule 205.237 (Livestock Feed) requires livestock must be provided “with a total feed ration composed of agricultural products, including pasture and forage that are organically produced”. **NOP Rule 205.238** (Livestock Health Care) requires “establishment of appropriate housing, pasture conditions, and sanitation practices to minimize the occurrence and spread of diseases and parasites...”, and **NOP Rule 205.239** (Livestock Living Conditions) requires management of “manure in a manner that does not contribute to contamination of crops, soil, or water by plant nutrients, heavy metals, or pathogenic organisms and optimizes recycling of nutrients.” **NOP Rule (Subpart A - definitions)** defines pasture as, “Land used for livestock grazing that is managed to provide feed value and maintain or improve soil, water, and vegetative resources.”

Please describe all pastures and rangelands used by livestock. All pastures/rangelands must be indicated on maps and field history forms. no pasture used for livestock cultivated land/planted pasture uncultivated range or pasture lands: grassland prairie shrublands woodland/forest wetland other (describe)

What months are livestock pastured? What techniques are used to protect water sources from potential sources of contamination, such as manure?

What techniques are used to prevent erosion? What techniques are used to prevent overgrazing with its associated problems of invasive species, soil erosion, water contamination, and native habitat degradation? none
if none, explain

What priority native species or their habitats exist on uncultivated lands (grassland, woodland) used by livestock?
 none

What livestock management techniques are used to maintain or improve conditions for priority species and habitats? fencing is used to keep livestock out of sensitive areas without negative impacts to native species the frequency, intensity, and timing of livestock grazing are managed to benefit or minimize negative impacts to priority species and habitats prevent unsanitary pasture conditions which can compromise wildlife and ecosystem health other
 none if none, explain

How do you ensure buffers are maintained between grazing areas and land not under organic management?

Describe how you monitor the effectiveness of your pasture management program to control erosion and waste runoff and conserve biodiversity? How often do you conduct monitoring? weekly monthly annually
 as needed other (specify)

WATER AND HABITAT CONSERVATION:

What are your sources of water for livestock?

on-site well(s) river/creek/pond spring municipal/county irrigation district other (specify)

What is the date of your last water test for coliform bacteria and nitrates?

Attach current water tests for nitrates and coliform bacteria, per certifying agent policy.

If you use, or plan to use, additives in the water, list them and state when used or planned and reason for use: no
 additives used

If livestock have access to natural water sources such as a pond, river, creek, or spring, describe source and how you prevent bank erosion? Describe condition of banks. no access fencing other

If livestock have access to a permanent pond, river, creek, or spring, describe water feature and steps taken to ensure priority native species and habitats are conserved and maintained in aquatic and riparian environments?
 no access

LIVESTOCK SECTION: Water and Habitat Conservation continued

If livestock have access to seasonal water bodies (e.g. ponds, streams, vernal pools), describe steps taken to conserve special flora and fauna especially those that benefit from these seasonal or intermittent habitats.

no access

What practices are being used to protect water quality? keep sources of contamination separate from waterways and wetlands plant native grasses in margins to filter sediments tailwater ponds to collect sediment only the exact amount of fertilizer required is applied soil conservation practices listed in OSP none if none, explain

Describe how you monitor the effectiveness of your water quality program.

How often do you conduct water quality monitoring? weekly monthly annually other (specify)

WEED MANAGEMENT:

List invasive plant species that are a problem in your operation.

What methods do you use to control established invasive plant species and prevent their spread, especially on uncultivated grazing lands?

What methods do you use to prevent the introduction and spread of new invasive plant species?

DISEASE MANAGEMENT:

List problem diseases in your operation that could affect native species and systems?

What methods do you use to prevent the spread of these diseases to susceptible native plants and animals?

What methods do you use to prevent the introduction and spread of new diseases that could negatively impact the health of native plants and animals?

WILDLIFE MANAGEMENT:

Organic producers should attempt to reduce conflicts and problems related to native species and livestock by using means that are least destructive to native species and ecosystems whenever possible.

Describe any predators that are a problem or concern in your operation. none

If predators are a problem in your operation, describe how you handle or plan to handle the predator problems, including physical, mechanical or substance controls and products used. guard animals, such as llamas, donkeys, or dogs, help protect livestock cattle are herded with sheep, goats and calves to furnish smaller animals' protection fencing is designed and managed to keep out predators, but corridors are left for wildlife, when possible pasture use is scheduled when predation pressure is low other practices that minimize harm to native predators and other native species (explain) product(s) (if so, attach sample label) other (explain)

OTHER WILDLIFE ISSUES

Describe any native animals that are considered a problem (other than predation) in your livestock operation and why? (e.g. grazing/food competition, digging holes, damaging fences, etc.) none

What practices are used to address these wildlife problems while helping to conserve biodiversity?

create/maintain habitat for beneficial predators such as raptors, snakes effectively fence key areas to discourage competing herbivores live with the problem other (describe)

ORGANIC SYSTEM PLAN – MAPS (new section)

Instructions and Cover Sheet (Complete one for each set of maps.)

For each parcel, two (2) maps are required. One must be a third-party map such as a Farm Services Agency map or an Assessor's Parcel map if available. The other may be hand-drawn but must clearly show the information required below.

There should be only one continuous block of organically managed land on each map. The map may contain more than one field, but each must be clearly identified.

1) Field name or code: _____

2) Address or location: _____

REQUIRED MAP INFORMATION

Fields or farms where organic products are produced must have distinct, defined boundaries and buffer zones to prevent contact with the land or crops by prohibited substances applied to adjoining nonorganic land.

- 1) Show crop and non-crop areas with field numbers or other identification
- 2) Indicate and describe each boundary (dirt road, paved road, ditch, fence, tree line, etc.)
- 3) Show names of adjoining roads. If not located on a public road, indicate direction of nearest road and distance.
- 4) Show a directional north arrow
- 5) Show date of map (month and year) next to north arrow
- 6) Show and describe neighboring land uses (such as nonorganic cropland, pasture, fallow land, diversion ditch, etc.)
- 7) Show all manmade landmarks such as RR tracks, buildings, etc.
- 8) Show all biodiversity features such as riparian areas, permanent beneficial habitats, ponds, hedgerows, woodlands, grasslands and legal conservation areas. Number the feature and indicate the following including ecological values (connectivity and linkages with habitats on adjacent lands, etc.).

| Feature Number | Biodiversity Feature: woodland, wetland, grassland, riparian, hedgerow, etc. | Ecological Values: connectivity, bird nesting, beneficial insect habitat, natural hydrology | Priority Species Common Name | Scientific Name (if known) | Regional / National Significance | Active Management Needs/Goals (maintain, restore, expand) |
|----------------|--|---|------------------------------|----------------------------|----------------------------------|---|
| | | | | | | |
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- 9) Show specific problem areas for invasive non-native weeds, pests or diseases and indicate the following:

| Problem Number | Invasive Species Common Name | Scientific Name (if known) | Negative Impacts to Crops/Livestock | Negative Impacts to Biodiversity | Control Method and Timing | Effectiveness |
|----------------|------------------------------|----------------------------|-------------------------------------|----------------------------------|---------------------------|---------------|
| | | | | | | |
| | | | | | | |
| | | | | | | |

- 10) Show areas with steep topography and sites where soil is or has the potential of eroding.

11) Show areas that have been converted or otherwise altered any native habitats (e.g. native grassland, prairie, woodland, shrubland, and desert) within the past five years on land for which you are seeking certification, and since the last inspection on lands that were certified organic prior to conversion.

- 12) If your irrigation source is used for application of prohibited materials, show a piping diagram to show valves and/or backflow prevention devices that prevent contact with prohibited materials, or attach a separate map.

DEFINITIONS:

Endangered Species are those that are in danger of becoming extinct within the foreseeable future throughout all or a significant portion of their range. Species may be legally classified as endangered at the state and/or federal level.

Keystone Species is one whose impacts on its community or ecosystem are large and often greater than would be expected from its relative abundance or total biomass. Because it makes a significant contribution to the maintenance and modification of the ecosystem of which it is a part, its decline would lead to the decline of many other species. For example the beaver is not an endangered species, but is essential to protect because it actively expands and maintains riparian habitats and functions upon which many other species depend.

Priority Habitats are those that are in need of special conservation attention usually determined by a statewide or regional biodiversity assessment. Priority habitats have declined significantly from their historic range. For example, white oak savannas were historically common in Oregon and now only cover one to two percent of their previous range. Priority habitats may also be vegetation types that are not well represented in existing conservation networks.

Priority Species are “threatened” and “endangered” species, “species of special concern,” and “keystone species”.

Riparian Area is defined as a zone of transition from an aquatic ecosystem to a terrestrial ecosystem, dependent upon surface or subsurface water, that reveals through the zone’s existing or potential soil-vegetation complex the influence of such surface or subsurface water. A riparian area may be located adjacent to a lake, reservoir, estuary, pothole, spring, bog, wet meadow, muskeg or ephemeral, intermittent or perennial stream.

Species of Special Concern is an informal term used by many public agencies to identify species that are potentially at risk, declining in numbers or in need of concentrated conservation actions to prevent decline. A common definition is a species or subspecies that has entered a long-term decline in abundance or is vulnerable to a significant decline due to low numbers, restricted distribution, dependence on limited habitat resources, or sensitivity to environmental disturbance. Categorization as a species of concern generally carries no procedural or substantive protections.

Threatened Species are those likely to become endangered within the foreseeable future. Species may be legally classified as threatened at the state and/or federal level.