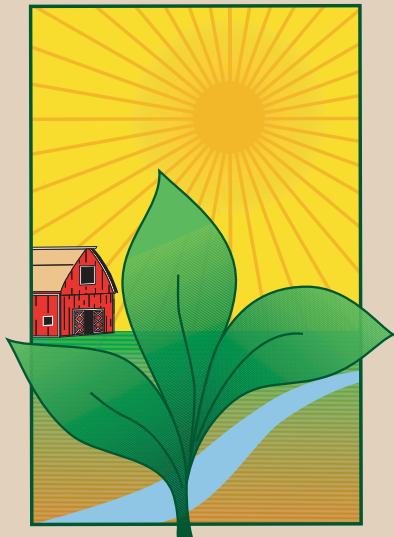


# WISCONSIN



# HEALTHY GROWN POTATOES



*The actions taken by enrolled growers have the potential to greatly enhance regional species diversity and ecosystem services.*

## The Healthy Grown Potato Program® Natural Community Standard:

Building capacity for grower stewardship of Wisconsin ecosystems

### BACKGROUND

The Wisconsin Healthy Grown® program is a partnership between the Wisconsin Potato and Vegetable Growers Association and the University of Wisconsin that works to promote more ecologically sound potato and vegetable agricultural systems. Since 1996, the Healthy Grown® Program has included sections on pesticide reduction and ecological potato production in its criteria for certification. In 2003, the ecolabel was expanded to include the Natural Community Standard, with the goal of promoting conservation of native ecosystems on enrolled farms. A number of organizations have also been instrumental in the development of the program; the World Wildlife Fund was a founding partner in the creation and implementation of the program, and the International Crane Foundation and the Defenders of Wildlife facilitated the development of the conservation vision for the program. The goal of this unique collaboration, comprised of an interdisciplinary team of growers, industry leaders, and agricultural and ecological scientists, is to promote the development and implementation of an ecologically and economically sustainable potato production system.

*The Natural Community Standard for the Wisconsin Healthy Grown® Potato Program promotes active landowner stewardship of farm ecological health within a regional conservation framework.*

Note that for the Natural Community Standard we are only referring to non-cropped lands on enrolled farms. The health of the farm agroecosystem may be improved by in-field agronomic practices (e.g. cover cropping, conservation tillage, intercropping) but for auditing and certification, the Natural Community Standard will only include non-cropped lands on the farm at this time.

### A STANDARD GUIDED BY ECOSYSTEM SCIENCE

#### Biodiversity Conservation & Ecosystem Services

**Biodiversity** can be defined in many ways, but for purposes of the Natural Community Standard, we are referring to the number of regionally-appropriate native species that can be found within an area. Ecosystem research has shown that more diverse areas are considered to be more resilient to disturbance, and are better equipped to provide people with benefits called 'ecosystem services.' **Ecosystem services** are essential to human well-being, and include important functions such as flood mitigation, water filtration, groundwater recharge, provisioning of wildlife habitat, soil nutrient cycling, pollination, and insect pest predation.

There is a direct agricultural and societal benefit to enhancing biodiversity on field edges, in natural landscapes between fields, and in privately owned landscapes. When ecological restoration plans also take into consideration the surrounding landscapes, including publicly-owned conservation areas and privately-owned remnant natural communities, the benefits of Natural Community management actions can be amplified.



## Ecological Restoration

**Ecological restoration** is the process of restoring degraded, damaged, or destroyed ecosystems. This process is best guided by a long-term management plan, coupled with annual prescriptions and assessments that move the targeted site closer to recovery. Restored ecosystems are more diverse than degraded systems and provide greater ecosystem services.

In the Central Sands region, prescribed management under the Natural Community Standard prioritizes restoration of native ecosystems. These ecosystems are well-suited to local conditions and provide the greatest opportunity to conserve local biological diversity. Although management plans written under the Natural Community Standard will vary based on the unique conditions of enrolled farms, ecosystems targeted for restoration in the Central Sands generally include the native grassland, forest, and wetland systems that were found in the region prior to European settlement.

This 'pre-Euro-settlement' target **is not arbitrary**. Restoration ecologists working in the United States typically choose pre-European settlement ecosystems as a restoration target for the following reasons:

- The ecosystems that were common in the landscape at this time still exist as small remnants and without management will likely lose diversity and function over time;
- The plant and animal species that depended on these ecosystems are, in many cases, in steep decline and are regional conservation priorities;
- There are excellent records regarding the spatial extent and species composition of these ecosystems based on work of early surveyors and naturalists.

The typical approach in designing an ecosystem restoration plan is to 1) assess the current conditions of the proposed restoration site, 2) consider regional conservation goals, and 3) recommend a suitable restoration target. Restoration plans vary in their complexity and may be as simple as reintroducing regular fire to maintain a remnant savanna or pine barren ecosystem, or in other cases, planting a waste area into a functioning prairie ecosystem, or restoring a degraded stream ecosystem.



## Farm Planning Informed by Principles of Conservation Biology and Restoration Ecology

In order to enhance the conservation potential of ecosystem management practices implemented at the farm level, the Natural Community Standard adheres to the following principles of **Conservation Biology** and **Restoration Ecology**:

- Ecological remnants, or sites which contain intact native plant and animal communities and have retained significant ecological function, should be protected from conversion to other land uses because these sites are often important areas for native biological diversity.
- Ecological restoration priorities should be selected with regard to regional **contiguity and connectivity** – including established links between existing protected areas and/or high-quality remnants and existing conservation areas along **conservation corridors**.





- Farm ecological management plans should identify opportunities to maximize the proportion of farm acreage in **perennial vegetation**; although restoration of native vegetation is ideal for maximizing biological diversity and ecosystem services gains, even nonnative perennial grassland vegetation will benefit soil and water conservation, as well as create structural habitat for at-risk species, and particularly grassland birds.
- Ecological restoration sites may be prioritized to alleviate other natural resources concerns, including soil stabilization, creation of pollinator habitat, or creation of buffer vegetation along waterways. Farm ecological management plans should be constructed with regard to the whole-farm ecosystem, within its regional context.

## HOW IT WORKS: THE NATURAL COMMUNITY STANDARD CERTIFICATION PROCESS

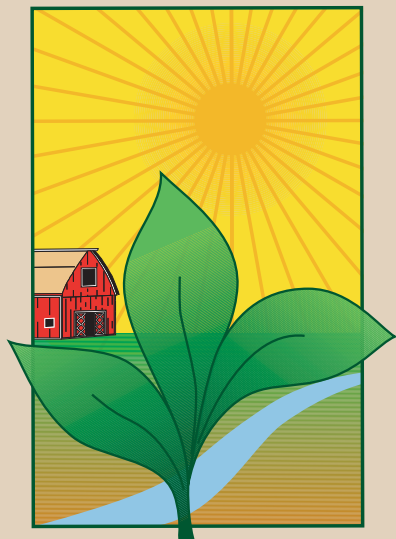
The goal of the Natural Community Standard is to create individual farm restoration plans that fit within the context of regional conservation priorities. This approach is based on The Nature Conservancy's Five-S Framework for Site Conservation, which takes an eco-regional approach to identifying conservation priorities that will most likely ensure the long-term survival of native species diversity and ecosystem function.

Upon enrollment in the Healthy Grown® Program, growers go through the following steps to meet the Natural Community Standard:

1. **Meet with a qualified ecologist** to map the farm and conduct a rough inventory of its non-cropped areas. A qualified ecologist will be one who is designated by the Healthy Grown® Executive Committee as a person who can write a holistic farm management and ecological restoration plan.
2. With the ecologist, **select high priority natural area(s)** for ecological restoration. Restoration priorities determined based on criteria explained above.
3. With the ecologist, growers **develop a long-term farm ecological management plan** for managing prioritized selected natural area(s) and documenting activities. This approach allows growers to expand restoration efforts as farm capacity grows.
4. With the ecologist, **determine an annual farm workplan** that will facilitate progress toward the long-term farm restoration priorities. This annual workplan includes specific practices which are required for the certification year, as well as optional recommendations.
5. **Complete the activities specified in the annual workplan**; the number and type of practices will be dependent on farm capacity to complete the restoration work. This workplan will be reviewed as a part of the certification process each year to ensure program credibility.
6. **Get certified**, based on the completion of required activities listed in the annual workplan. Auditors will verify that growers have completed and documented the designated required activities.



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## LONG-TERM FARM ECOLOGICAL MANAGEMENT PLAN

As described, enrolled growers first work with an ecologist to develop a long-term farm ecological management plan, in which the grower and the ecologist together identify site restoration priorities and long-term conservation goals for the farm. The site restoration priorities are selected based on the particular circumstances of the farm and its landscape context. Farm restoration activities are grouped into tier priorities, so that the grower can expand efforts as the farm capacity for restoration grows.

In general, the **long-term farm ecological management plan** will include:

- Measurable farm-level conservation goals (e.g., “Maintain 10% of total farm acreage in perennial vegetation”) and site-level restoration objectives (e.g., “Priority site 1 will have at least 30 native plant species from the site 1 species list”) that can be used as internal benchmarks for progress towards restoration goals.
- A map delineating the tiered restoration priorities, locations of adjacent or nearby areas of conservation interest (e.g., neighboring conservation properties or protected areas, or vulnerable sites such as streams or wetlands), and opportunities for collaboration with neighbors on conservation projects.
- A restoration plan for each of the top-tier priorities identified in the map.
- Detailed descriptions of the target restoration ecosystems, including photographs of reference sites and their regional conservation significance.
- Management strategies and tools that are relevant to the farm, with “how-to” instructions (e.g., prescribed burning, herbicide use for invasive species control, etc).
- Farm species lists with photographs to aid in identification, including species of management concern (e.g., invasive species in the area or on the farm) and species of conservation interest (e.g., rare or interesting species that may occur on the farm).
- Documentation of any ecological research that has occurred on the farm.

The plan is intended to be a helpful tool and resource for the grower, and can be modified to reflect the needs and interests of each enrollee. Many of the above sections, however, will be similar among enrolled farms, improving program efficiency in crafting the farm plans.

### For more information, contact:

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