



“Taking Care of the Land and Community”



U.S. Department of Agriculture
Natural Resources Conservation Service

Gichi Manidoo Giizis
Black Bear Casino Resort
January 14, 2017

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“Helping people help the land.”

- ▶ NRCES offers technical and financial assistance for voluntary conservation
 - ▶ Technical assistance is provided through an on-site assessment with the landowner to determine goals and objectives, and it could include:
 - ▶ Develop pollinator habitat
 - ▶ Improve forest health
 - ▶ Controlling soil erosion
 - ▶ Financial assistance is provided through Farm Bill Programs, and could include:
 - ▶ The Conservation Stewardship Program (CSP)
 - ▶ The Environmental Quality Incentives Program (EQIP)

NRCS Technical Assistance

1

Planning

To get started with NRCS, we recommend you stop by your local

NRCS field office. We'll discuss your vision for your land.

NRCS provides landowners with free technical assistance, or advice, for their land. Common technical assistance includes: resource assessment, practice design and resource monitoring. Your conservation planner will help you determine if financial assistance is right for you.




NRCS Technical Assistance

- ▶ Conservation Planning
 - ▶ Site visit with you to identify problems and determine your objectives
 - ▶ NRCS develops a range of practice options that treat the problem and meet your objectives
 - ▶ NRCS develops a conservation plan based on what you decide to do





Pollinator Habitat

- Location
 - Extent
 - Native vs. Introduced
 - Pollinators it benefits
- 

Pollinator Habitat

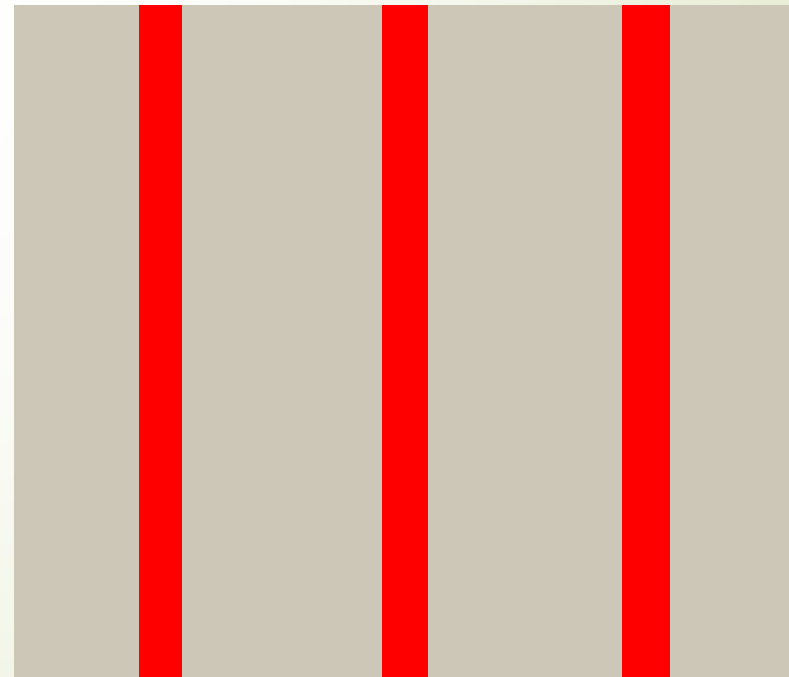
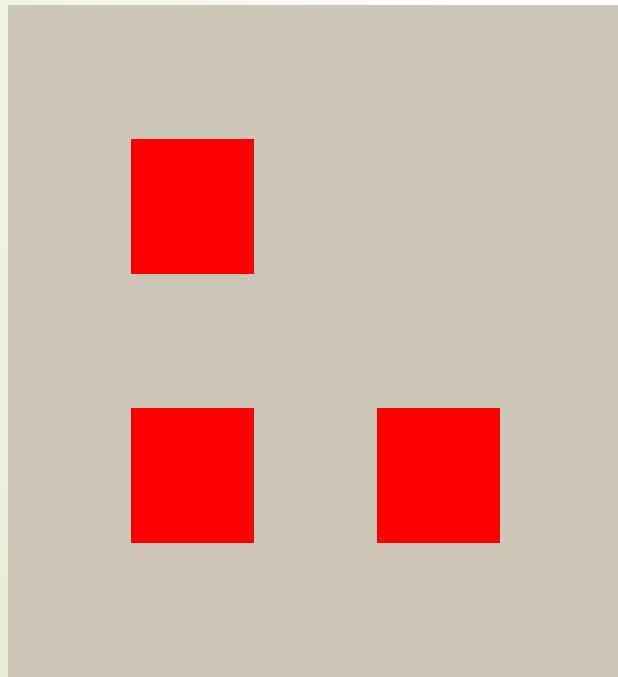
- Location
 - Whole fields



Pollinator Habitat

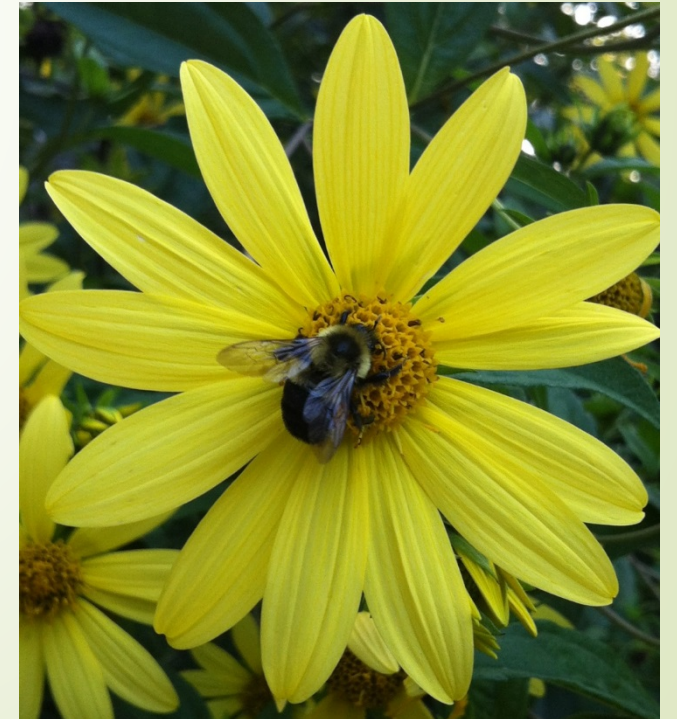
► Location

► Portions of fields



Pollinator Habitat

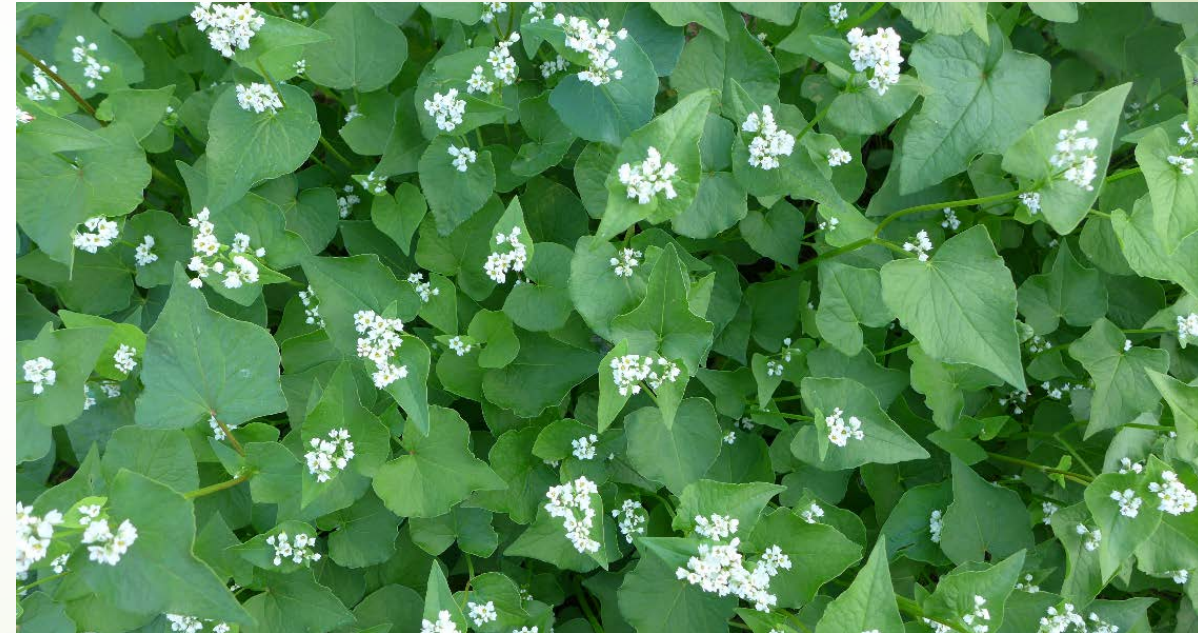
➤ Native species



Pollinator Habitat

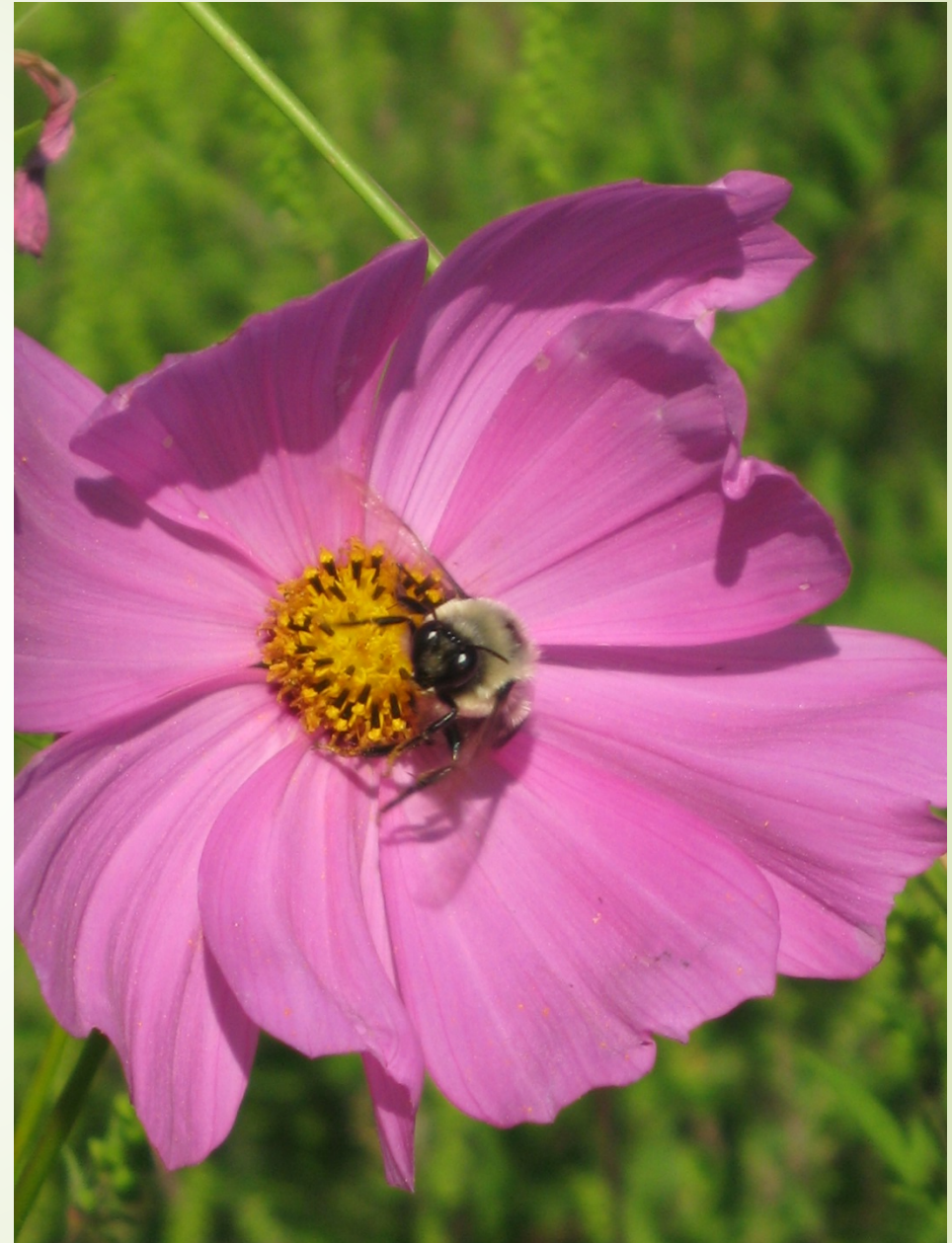


➤ Introduced Species



Pollinator Habitat

➤ Native pollinators



Pollinator Habitat

➤ Honey Bees





Rusty Backed Bumblebee

- ▶ Duluth News Tribune
 - ▶ Wednesday, January 11, 2017

Rusty Backed Bumblebee

Bumblebee declared endangered



The rusty patched bumblebee.

Smithsonian Institution image

By John Myers
jmyers@duluthnews.com

The rusty patched bumblebee, a native of Minnesota and Wisconsin that was once common across the Midwest but which has declined rapidly in recent years, was officially declared endangered Tuesday by the U.S. Fish and Wildlife Service.

It's the first species of native bee in the continental U.S. to be placed on the endangered species list.

The chubby bee with a rusty patch on

its back once thrived in 28 states across the Upper Midwest and East Coast as well as large parts of Canada. But in the past two decades the bee has disappeared from nearly 90 percent of its historic range — seen in the past 15 years in only 13 states, including Minnesota and Wisconsin, as well as Ontario.

Most of the remaining populations are small and isolated, a problem that could speed the bee's demise.

BUMBLEBEE

From Page A1

Experts believe the bee is falling prey to habitat loss, climate change, diseases and, especially, neonicotinoid pesticides — some of the same problems believed to be hurting butterfly populations.

Neonicotinoids are a group of insecticides used widely on farms and in urban landscapes for flowers and gardens. They are absorbed by plants and can be present in pollen and nectar, making them toxic to bees.

The decision to use the Endangered Species Act to try to recover the bee's population comes after years of calls from conservation groups and

scientists to protect the native species. Bumblebees are important pollinators for berries, vegetables, clover and native flowering plants. The value of wild bee pollination is estimated at \$3 billion annually across the U.S., officials say.

"Our top priority is to act quickly to prevent extinction of the rusty patched bumblebee. Listing the bee as endangered will help us mobilize partners and focus resources on finding ways right now to stop the decline," said Tom Melius, U.S. Fish and Wildlife Service Midwest regional director.

The government's move to list the species as endangered is

"the best and probably last hope for the recovery of the rusty patched bumblebee. Bumblebees are dying off, vanishing from our farms, gardens, and parks, where they were once found in great numbers," said Rebecca Riley, senior attorney with the Natural Resources Defense Council, in a statement.

The listing comes after the Xerces Society for Invertebrate Conservation filed a petition to list the rusty patched bumblebee as an endangered species in 2013. Xerces and NRDC filed a lawsuit in 2014 challenging the government's failure to act. The government settled the suit by agreeing in September to list the bee as endangered, action

WHAT YOU CAN DO

To help the rusty patched bumblebee and other pollinators such as butterflies and moths, grow flowers, including flowering trees and shrubs — but make sure they do not contain neonicotinoid pesticides.

Have a mix with something in bloom from early spring through fall. Include native milkwoods for monarch butterflies.

Bumblebees and many other pollinators need a safe place to build their nests and overwinter. Leave some areas of your yard unmowed in summer and unraided in fall; in your garden and flower beds, leave some standing plant stems in winter.

Provide a pesticide-free environment. You can report sightings of the rusty patched bumblebee to bumblebeewatch.org.

Source: U.S. Fish and Wildlife Service

that became final Tuesday.

Rusty patched bumblebees occupied grasslands and tallgrass prairies, many of which have been lost, degraded, or fragmented by conversion to other uses, the U.S. Fish and

Wildlife Service said. The bumblebee needs areas that provide food, nectar and pollen from flowers, as well as nesting sites (underground and abandoned rodent cavities or clumps of grasses above ground) and overwintering sites

for hibernating queens, namely undisturbed soil.

The bee emerges in early spring and is one of the last bumblebee species to go into hibernation in the fall. Because it is active so long, it needs a constant supply of flowers blooming from April through September.

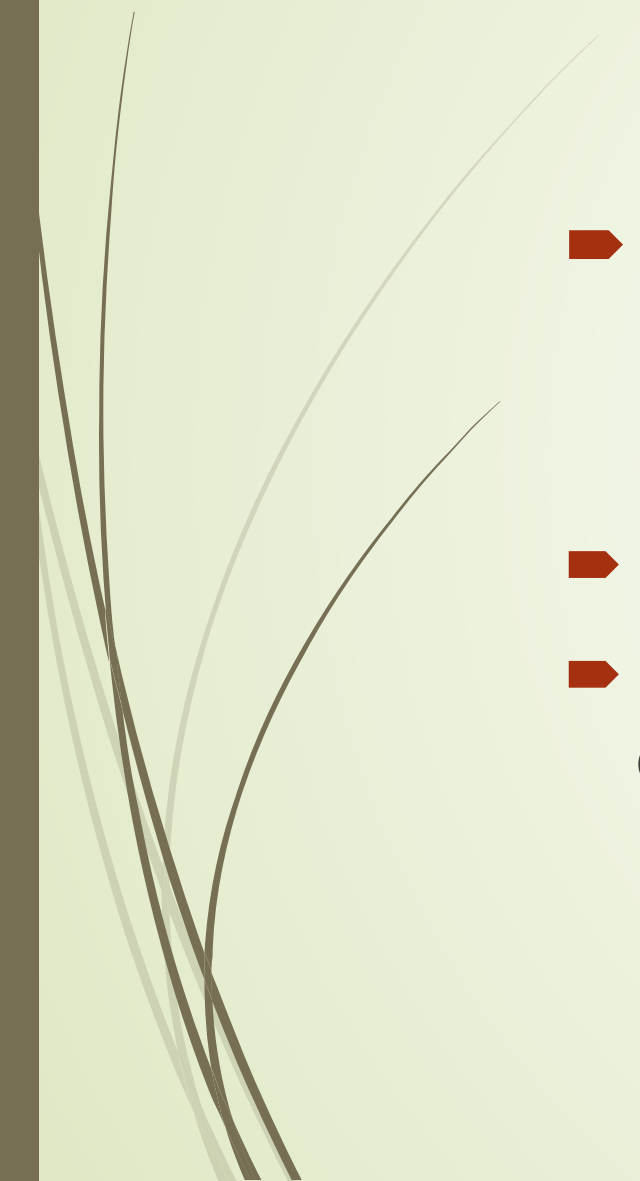
The federal government in September listed seven species of Hawaiian yellow-faced bees as endangered. They were the first bees in the United States listed under the ESA but are found only found in Hawaii, and they are not bumblebees.

The rusty patched was once among the most common of the 17 bumblebee species found in Minnesota.

BUMBLEBEE: Page A4



Rusty Backed Bumblebee


- ▶ Duluth News Tribune
 - ▶ Wednesday, January 11, 2017
 - ▶ "Bumblebee declared endangered"
 - ▶ Native pollinator in Minnesota and Wisconsin
 - ▶ First native bee in the continental U.S. to be placed on the endangered species list
- 

Rusty Backed Bumblebee





Forest Health

- Overstocking
 - Disease and insect damage
 - Fire hazard
 - Wildlife Habitat
- 

Forest Health

► Forest Stand Improvement

Pre-Thinning



Post-Thinning



Forest Health

- Reduce Fire Hazard

Pre-Treatment



Post-Treatment



Forest Health

➤ Wildlife Habitat

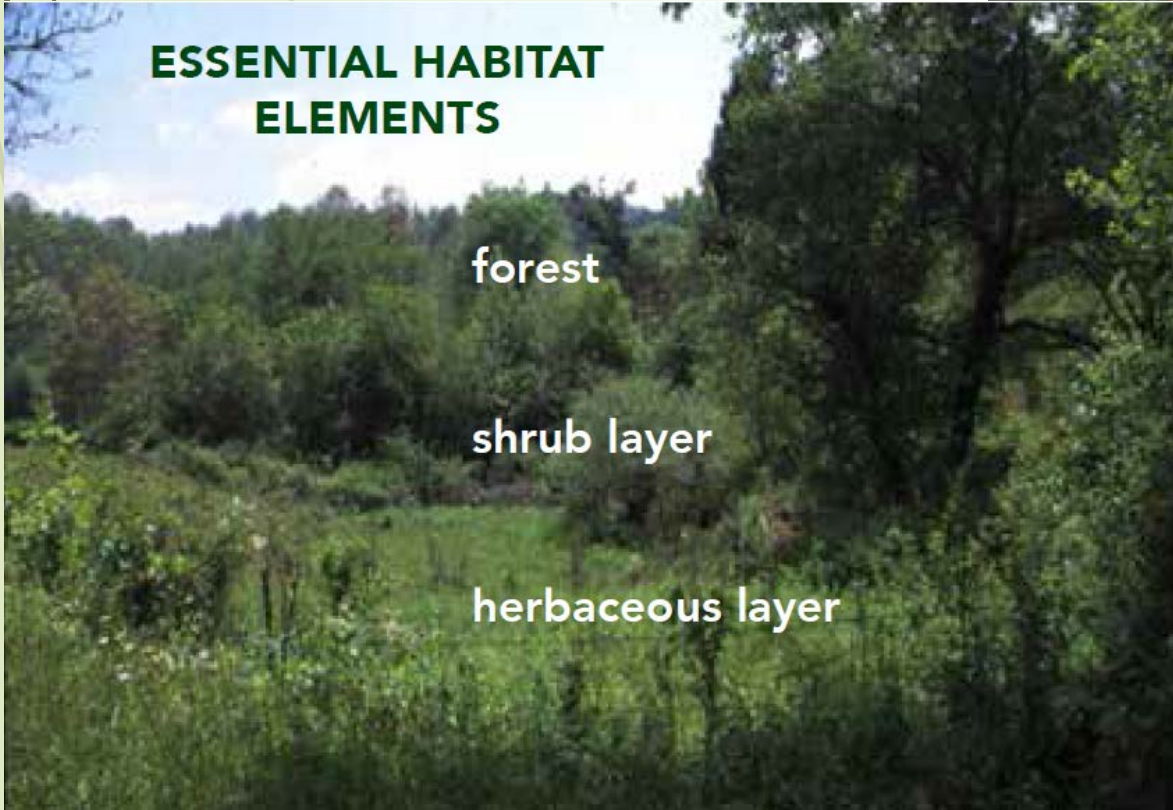


ESSENTIAL HABITAT ELEMENTS

forest

shrub layer

herbaceous layer



High Tunnel

- Sometimes called a hoop house
- Enclosed polyethylene, polycarbonate, plastic, or fabric covered structure
- Used to cover and protect crops from sun, wind excessive rainfall, or cold, to extend the growing season in an environmentally safe manner
- Crops are grown in the natural soil profile not in containers or hydroponics
- Single layer of cover vs double layer used in a greenhouse



High Tunnel – Gothic Style

GOTHIC

- Better Solar Gain, more heat
- Sheds snow load better
- Straight Sidewalls give more workable space
- Better ventilation
- No drip line



High Tunnel – Round Style



ROUND/QUANSET

- Geometrically strong shape
- Often less expensive
- Easier to build without a kit

Benefits of a high tunnel

- Extend growing season
 - Extra 3-4 weeks on each end of growing season
- Controlled environment
 - Protection from heavy rain and wind

<http://www.johnnyseeds.com/>



<https://milkweedfarm.wordpress.com/>

Crops

VEGETABLE CROPS

www.extension.umn.edu



RASPBERRIES

www.extension.umn.edu



Crops



YEAR 1

YEAR 2



Crops

FRUIT TREES FOR GRAFTING



TOMATOES

Other cool stuff...

- ▶ Gutters to catch rainfall runoff and use to irrigate



Other cool stuff...

- Cover crop planted after vegetable harvest
- Chickens!



Challenge: Insects and Disease

- Mold, blight, mildew, cankers, wilt
- Whitefly, aphids, flea beetle, grasshoppers, army worm, slugs

<http://articles.extension.org/>



High Tunnel Challenges



Wind



High Tunnel Challenges

Snow





2 Application

- Apply for financial assistance to implement a practice or practices in your conservation plan
- Work with the Farm Service Agency (FSA) to ensure you have a Farm and Tract Number
- Eligibility forms
 - Compliance – Highly Erodible Land and Wetland Conservation
 - Adjusted Gross Income
- Application form – CPA-1200
- Applications are accepted on a continuous basis

CONSERVATION PROGRAM APPLICATION

Name:	Application Number:
Address:	Application Date:
Email:	County and State:
Telephone:	Watershed:
	Subaccount:
Location (Legal Description or Farm and Tract Number):	

1. **Yes** **No** Do you have farm records established with the appropriate USDA Service Center Agency?

If no, you must establish them with the appropriate USDA Service Center Agency prior to submitting this application.

2. This is an application to participate in the:

<input type="checkbox"/> Agricultural Management Assistance (AMA)	<input checked="" type="checkbox"/> Environmental Quality Incentives Program (EQIP)
<input type="checkbox"/> Conservation Stewardship Program (CSP) <input type="checkbox"/> CSP Renewal	<input type="checkbox"/> Agriculture Conservation Easement Program (ACEP) - Wetland Reserve Easements (WRE)
<input type="checkbox"/> Regional Conservation Partnership Program (RCPP) <input type="checkbox"/> EQIP <input type="checkbox"/> CSP	<input type="checkbox"/> Regional Conservation Partnership Program (RCPP) <input type="checkbox"/> ACEP- (WRE) <input type="checkbox"/> Healthy Forest Reserve Program (HFRP)

3. Are you applying to participate in a conservation program as an (check one of the following):

Individual

a) Please enter your legal name and tax identification number:

Name:

Tax Number:

Entity (Corporation, Limited Partnership, Trust, Estate, etc.)

a) Please enter entity legal name and tax identification number:

Name:

Tax Number:

b) **Yes** **No** Do you have appropriate documents including proof to sign for the entity?

Joint Operation (General Partnership, Joint Venture)

a) Please enter joint operation legal name and tax identification number:

Name:

Tax Number:

b) **Yes** **No** Do you have appropriate documents including proof to sign for the joint operation?



3

Eligibility

- Producer eligibility-Applicant must:
 - Establish USDA Farm Service Agency (FSA) Records
 - Farm and Tract number
 - Provide tax identification number that will be associated with the application and contract.
 - Be an agricultural producer
 - Person
 - Legal entity
 - Indian Tribe
 - Joint Operation



3

Eligibility

- ▶ Have control of the land for the term of the proposed contract period
- ▶ Be within payment limitation requirements
 - ▶ Each contract is limited to no more than \$450,000
- ▶ Be in compliance with
 - ▶ Highly erodible land and wetland conservation compliance provisions
 - ▶ Adjustable Gross Income (AGI) requirements



3

Eligibility

Land Eligibility Requirements

- ▶ Be agricultural land, nonindustrial private forest land, Tribal land or other on land which agricultural products, livestock, or forest-related products are produced
- ▶ Participant provides written permission from the landowner to allow implementation of structural or vegetative practices, if necessary
- ▶ Planned practices will address an identified natural resource concern



4

Ranking

- NRCS will rank applications according to:
 - According to local resource concerns
 - Amount of conservation benefits
- Highest ranking applications are selected for funding.



5

Implementing

- ▶ If you're selected, you can choose whether to sign the contract.
- ▶ The contract contains a Schedule of Operations, which designates the practice installation timeline.
- ▶ Install practices according to NRCS standards and specifications.
- ▶ Once the work is implemented and inspected complete a payment request to receive financial assistance.

5

Steps to Assistance

How to Get Assistance from NRCS for Farms, Ranches and Forests

1

PLANNING

Visit your local NRCS field office to discuss your goals and work with staff on a conservation plan.

2

APPLICATION

With the help of NRCS, complete an application for financial assistance programs.

3

ELIGIBILITY

Find out if you're eligible for NRCS' variety of financial assistance programs.

4

RANKING

NRCS ranks applications according to local resource concerns.

5

IMPLEMENTING

Put conservation to work by signing a contract and implementing conservation practices.

Get help and access your information online using Client Gateway



The graphic features a laptop on the left displaying a rural landscape. The background is a large image of a similar landscape under a blue sky with clouds. The text is arranged in a clean, modern layout with various icons and a list of features.

USDA
United States Department of Agriculture

NATURAL RESOURCES CONSERVATION SERVICE
CLIENT GATEWAY
CONSERVATION ASSISTANCE IS JUST A **CLICK** AWAY

Client Gateway is a new public website that allows clients secure ability to request conservation technical and financial assistance from the USDA.

Through Client Gateway, clients can also access their:

- conservation plans,
- conservation program applications and contracts,
- financial assistance contract payments,
- and much more.

ONLINE FEATURES
www.nrcs.usda.gov/clientgateway

USDA is an equal opportunity provider and employer.

- REQUEST TECHNICAL ASSISTANCE
- APPLY FOR CONSERVATION PROGRAM FINANCIAL ASSISTANCE
- REVIEW, SIGN, AND SUBMIT APPLICATIONS, CONTRACTS, AND CONSERVATION PLANS
- TRACK PAYMENTS DUE CLIENTS



Get help and access your information online using Client Gateway

- Conservation Client Gateway enables you to:
- Request conservation technical assistance
- Apply for financial assistance through Farm Bill's conservation programs
- Review and sign conservation plans and other documents
- Document completed practices and request practice certification
- Store and retrieve your conservation files, including documents and photograph
- NRCS staff will still be available in field offices to work with you face-to-face

Conservation Assistance: Questions?



**United States
Department of
Agriculture**

An Equal Opportunity Provider and Employer