



# Improving Water Quality One Field at a Time: NRCS Practices for Producers

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The Natural Resources Conservation Service (NRCS) is a federal agency within the U.S. Department of Agriculture that works with private landowners and operators, through voluntary conservation, to promote productive and sustainable lands.



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## Origin of NRCS



The Soil Conservation Service (SCS) was created during the Dust Bowl in the 1930s to control soil erosion on farms.

In 1994, SCS became the Natural Resources Conservation Service (NRCS) & now in addition to soil as a resource, also addresses; water, air, plants, animals, and energy on farms.

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# NRCS Practices and Water Quality



- Agricultural producers can play a critical role in reducing erosion, nutrient movement and sedimentation, and deliver lasting solutions to Water Quality Resource Concerns
- Implementation of conservation practices can also help farmers adapt to weather extremes and can help mitigate effects of climate change.



NRCS helps farmers improve soil health, water (quality & quantity), air quality, plant health, animals (livestock & wildlife habitat), and energy conservation through;



- **Technical Assistance** - available to assist landowners [or operators] who want to make conservation improvements on their land.
- **Financial Assistance** - available to eligible producers through program contracts, who want financial support to implement recommended conservation practices.

NRCS supports farmers, ranchers, and private forest landowners in meeting their conservation goals, ***regardless of the size, location, and type of operation.*** We can assist with traditional farming operations, as well as urban farms and forest lands





# NRCS Water Quality Resource Concerns

- Nutrients transported to surface and ground water
- Pesticides transported to surface and groundwater
- Pathogens and chemicals from manure, bio-solids or compost applications transported to surface and groundwater
- Salts transported to surface and groundwater
- Petroleum, heavy metals and other pollutants transported to surface and groundwater
- Sediment transported to surface water



## NRCS Soil Resource Concerns (selected)

- Sheet and Rill Erosion
- Wind Erosion
- Ephemeral Gully Erosion
- Classic Gully Erosion
- Bank Erosion from streams, shorelines or water conveyance channels
- Soil organism habitat loss or degradation

# Erosion – A Soil and Water Quality Issue

Sheet and Rill  
Erosion and  
Ephemeral  
Gully Erosion  
on a corn field  
in spring



# Erosion – a Soil and Water Quality Issue

Classic Gully  
erosion from a  
hay field, and  
why bandaids  
may not work.



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## Water Quality – input impacts

Spreading farm  
inputs – whether  
manure, compost,  
pesticides or lime –  
can provide a  
pathway water  
quality impacts



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## Water Quality – animal damage

Pasturing animals in wet soils or during the wrong season can cause sedimentation and water quality issues.



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## Forest Erosion

Forestry can bring water quality issues. A poorly placed forest trail can erode.



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So how does NRCS help landowners with these resource concerns?

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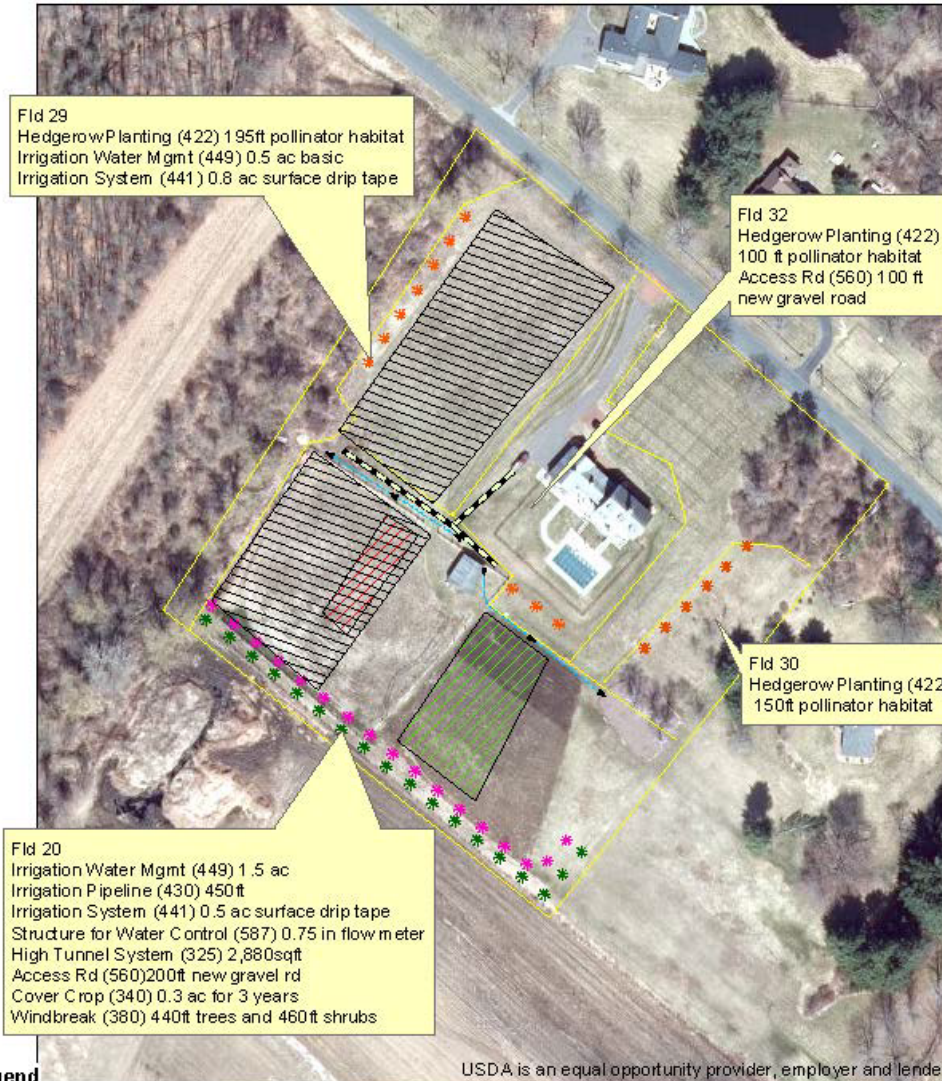
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It starts with a Conservation Plan with practices chosen to fix the resource concerns.

# Conservation Plan Map

Agency: USDA NRCS  
 Assisted By: Conservationist  
 County: CT COUNTY  
 District: LOCAL CONS DISTRICT

Customer(s): JOSEPHINE FARMER  
 Farm# 123 Tract# 4567



**Fld 29**  
 Hedgerow Planting (422) 195ft pollinator habitat  
 Irrigation Water Mgmt (449) 0.5 ac basic  
 Irrigation System (441) 0.8 ac surface drip tape

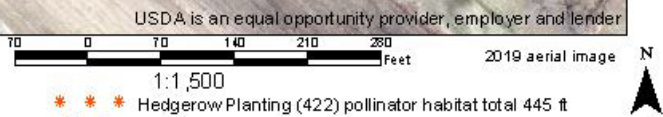
**Fld 32**  
 Hedgerow Planting (422)  
 100 ft pollinator habitat  
 Access Rd (560) 100 ft  
 new gravel road

**Fld 30**  
 Hedgerow Planting (422)  
 150ft pollinator habitat

**Fld 20**  
 Irrigation Water Mgmt (449) 1.5 ac  
 Irrigation Pipeline (430) 450 ft  
 Irrigation System (441) 0.5 ac surface drip tape  
 Structure for Water Control (587) 0.75 in flow meter  
 High Tunnel System (325) 2,880sqft  
 Access Rd (560) 200ft new gravel rd  
 Cover Crop (340) 0.3 ac for 3 years  
 Windbreak (380) 440ft trees and 460ft shrubs

**Legend**

- High Tunnel (325) 2880sqft
- Access Rd (560) 300ft new gravel rd
- Irrigation System, Microirrigation (441) 1 acre surface tape
- Cover Crop (340) 0.3 ac
- Hedgerow Planting (422) pollinator habitat total 445 ft
- Windbreak E st. (380) 440ft conifer trees
- Windrow E st. (380) 460ft shrubs



Prepared with assistance from the USDA Natural Resources Conservation Service



## Planning Practices

Payments to producers to pay for the development of a Resource Management Plan, Implementation requirement or Testing.

Nutrient Management Plan

Comprehensive Nutrient Management Plan

Grazing Management Plan

Soil Health Management Plan

Forest Management Plan

Soil and Source Testing for Nutrient Management

Site Assessment and Soil Testing for Contaminant Activity

# Implementation Practices

## Payments to producers for the Installation of a Practice





## Erosion Control Practice Examples

No-Till

Cover Crop (multi- species )

Raised Beds and Mulch

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## Erosion Control Practice Examples

Contour Farming

Stripcrop and Terraces

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## Gully Erosion Control Practice Examples

Diversion

Grassed Waterway

Stone Lined Waterway

Water Control Structure

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## Streambank Erosion Control Practice Examples

Riparian Buffer  
Streambank Stabilization

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## Waste Storage Practice Examples

Waste Storage Facility -  
Composted Bedded Pack  
Waste Storage – tank  
Compost Facility

Nutrient Management on Fields







## Pasture Practice Examples

### Rotational Grazing

### Fencing

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## Pasture Practice Examples

Animal Trails

Fencing

Livestock Pipeline

Watering Facility

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## Forestry Practice Examples

Early Successional Habitat Management

Timber Stand Improvement

Forest Trails and Landings

Feather Edging

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## Wildlife Practice Examples

Diversion

Hedgerow

Pollinator Habitat

Field Borders





There are over 120 practices available from which to develop a Conservation Plan. Each one is designed to resolve a resource concern either alone or in concert with other practices.

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## Index of Conservation Practice Standards

### Connecticut

Practice Name and Units	Practice Code	Date of Current CPS	Lead Discipline	Practice Lifespan
Access Control (ac)	472	10/18	ECS	10
Access Road (ft)	560	05/21	ENG	10
Agrichemical Handling Facility (no)	309	04/17	ENG	15
Air Filtration and Scrubbing (no)	371	02/11	ENG	10
Alley Cropping (ac)	311	04/18	ECS	15
Amending Soil Properties with Lime (ac)	805	09/22	ECS	3
Amendments for Treatment of Agricultural Waste (au)	591	04/14	ENG	1
Animal Mortality Facility (no)	316	03/18	ENG	15
Aquaculture Pond (ac)	397	02/21	ENG	10
Aquatic Organism Passage (mi)	396	10/11	ECS	5
Bivalve Aquaculture Gear and Biofouling Control (ac)	400	02/21	ECS	1
Brush Management (ac)	314	05/18	ECS	10
Channel Bed Stabilization (ft)	584	02/18	ENG	10
Clearing and Snagging (ft)	326	07/17	ENG	5
Combustion System Improvement (no)	372	02/21	ENG	10
Composting Facility (no)	317	05/21	ENG	15
Conservation Cover (ac)	327	01/17	ECS	5
Conservation Crop Rotation (ac)	328	01/17	ECS	1
Constructed Wetland (ac)	656	04/18	ENG	15
Contour Buffer Strips (ac)	332	12/13	ECS	5
Contour Farming (ac)	330	04/18	ECS	5
Contour Orchard and Other Perennial Crops (ac)	331	07/17	ECS	10
Controlled Traffic Farming (ac)	334	07/17	ECS	5
Cover Crop (ac)	340	01/17	ECS	1
Critical Area Planting (ac)	342	04/18	ECS	10
Dam (no)	402	10/11	ENG	15
Dam, Diversion (no)	348	05/21	ENG	15
Deep Tillage (ac)	324	02/15	ECS	1
Denitrifying Bioreactor (no)	605	05/21	ENG	10
Dike (ft)	356	03/08	ENG	20
Diversion (ft)	362	03/18	ENG	10
Drainage Water Management (ac)	554		ENG	1

## Financial Assistance Programs

- Environmental Quality Assistance Program (EQIP)
- Agricultural Management Assistance Program (AMA)
- Conservation Stewardship program (CSP)
- Conservation Innovation Grants (CIG)
- Agricultural Conservation Easement Program (ACEP)



## NRCS Program Eligibility

- Applicant Eligibility
- Land Eligibility
- Practice Eligibility
  - At least one natural resource concern must be identified and addressed with an eligible conservation practice or activity.



- Participants must comply with Highly Erodible Land & Wetland Compliance provisions
- Participants must be an entity with an interest in agriculture or forestry
- Participants must have control of the land involved for the term of the agreement

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# EQIP, AMA, CSP Program Timing



NRCS  
ACCEPTS  
APPLICATIONS  
YEAR ROUND

APPLICATIONS  
ARE BATCHED  
IN THE FALL &  
WINTER THEN  
RANKED \*



CONTRACTS  
ARE OBLIGATED  
IN THE SPRING  
& LATE  
SUMMER \*

\*Often a second batch of funding is announced for some programs resulting in late summer contracts

NOW IS A GOOD TIME TO CONTACT FSA AND NRCS TO BEGIN THE PROCESS!

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**USDA** United States  
Department of  
Agriculture

**Natural Resources Conservation Service**

# 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.

<https://www.farmers.gov/>

Local Service Center

<https://www.farmers.gov/working-with-us/service-center-locator>

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