Appendix I:

Conservation Practice Network Effects Diagram
NRCS CONSERVATION PRACTICE EFFECTS- NETWORK DIAGRAM

Conservation Cover (327)

1. Permanent vegetative cover established

D.1 (-) Wind erosion
D.3 (+) Soil organic matter
D.4 (-) Water erosion
D.5 (-) Volume of water runoff
D.6 (-) Acres of cropland production
D.7 (+) Cost of establishment and maintenance
D.8 (+) Wildlife food and cover
D.9 (+/-) Income and income stability (individual and community)
D.10 (+/-) Net returns
D.11 (+) Wildlife habitat
D.12 (+) Upland wildlife populations
D.13 (-) Habitat fragmentation

C.1 (+) Air quality
C.2 (+) Soil health
C.3 (+) Fishable, swimmable, and drinkable waters
C.4 (+) Quality of receiving waters
C.5 (+/-) Income and income stability (individual and community)
C.6 (+) Recreational opportunities
C.7 (+) Biodiversity
C.8 (+) Uptake of residual nutrients (by permanent vegetation)
C.9 (+) Volume of water runoff
C.10 (+) Acres of cropland production
C.11 (+) Upland wildlife populations
C.12 (+) Fishable, swimmable, and drinkable waters
C.13 (+) Income and income stability (individual and community)

I.1 (-) Particulate matter
I.2 (-) Greenhouse gases
I.3 (+) Carbon Storage
I.4 (+) Quality of runoff water
I.5 (-) Sedimentation
I.6 (+) Aquatic habitats
I.7 (+) Uptake of residual nutrients (by permanent vegetation)
I.8 (-) Contaminates, animal waste, commercial fertilizer
I.9 (-) Potential income
I.10 (+/-) Net returns
I.11 (+) Wildlife habitat
I.12 (+) Upland wildlife populations
I.13 (-) Habitat fragmentation

LEGEND
Mitigating practice
Associated practice
# Created by practice
D Direct effect
I Indirect effect
C Cumulative effect
Pathway

Notes:
Effects are qualified with a plus (+) or minus (-). These symbols indicate only an increase (+) or a decrease (-) in the effect upon the resource, not whether the effect is beneficial or adverse.

Initial setting: Land requiring natural resource protection that does not have vegetative cover
Filter Strip (393)

1. Area of permanent vegetation that intercepts sheet flow
   - D.1 (+) Filtration
   - D.2 (+) Adsorption and transformation of pollutants
   - D.3 (-) Velocity of runoff water
   - D.4 (+) Infiltration
   - I.1 (-) Sediment and particulate contaminants (including pathogens) to sensitive areas
   - I.2 (-) Maintenance of drainage ditches and other structures
   - I.3 (-) Dissolved contaminants (including nutrients) to sensitive areas

2. Cropland removed from production
   - D.6 (+) Wildlife food and cover
   - D.7 (-) Airborne particulate matter, (-) Chemical drift
   - D.8 (-) Crop production

D.5 (+) Forage production

C.1 (+) Preservation of infrastructure; reduced community maintenance costs

C.2 (+) Quality of receiving waters

C.3 (+) Fishable and swimmable waters; reduced health and safety issues for humans, domestic and wild animals

C.4 (+) Air quality of the airshed

C.5 (+/-) Income and income stability (individuals and community)

C.6 (+) Habitat suitability, health to humans, domestic and wild animals

C.7 (+) Fishable and swimmable waters; health to humans, domestic and wild animals

C.8 (+) Water quantity and quality

C.9 (+) Air quality

C.10 (+) Water quality

C.11 (+) Air quality

C.12 (+) Water quality

I.1 (-) Sediment and particulate contaminants (including pathogens) to sensitive areas

I.2 (-) Maintenance of drainage ditches and other structures

I.3 (-) Dissolved contaminants (including nutrients) to sensitive areas

I.4 (+) Soil quality

I.5 (+) Crop production

I.6 (-) Dissolved contaminants (including nutrients) to sensitive areas

I.7 (+) Crop biomass/carbon sequestration

I.8 (+) Nutrient absorption by organisms

I.9 (+) Quality of terrestrial and aquatic wildlife habitat

I.10 (+) Beneficial insects

I.11 (-) Pesticide use

I.12 (+/-) Net return to farmer

I.13 (+) Biodiversity

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LEGEND
- Mitigating practice
- Associated practice
- #. Created by practice
- D. Direct effect
- I. Indirect effect
- C. Cumulative effect
- Pathway

Initial setting: Cropland, forestland, grazing land or other land containing contaminated runoff to sensitive areas

Start
NRCS CONSERVATION PRACTICE EFFECTS - NETWORK DIAGRAM

Grade Stabilization Structure (410)

1. Structure stabilizes grade and controls erosion
   - I.1 (+) Channel stability
   - I.2 (-) Head cutting and channel erosion
   - I.3 (+) Upstream sediment deposition
   - I.4 (+) Crop production
   - I.5 (+) Aquatic and animal habitat
   - C.1 (+/-) Income and income stability (individuals and community)

2. Decreased slope above structure
   - D.1 (-) Water velocity

3. Sedimentation above structure
   - I.6 (-) Overland and gully erosion
   - I.7 (+) Ponding behind structure

4. Downstream deposition
   - I.8 (-) Downstream deposition
   - I.9 (+) Surface water quality
   - C.2 (+) Fishable and swimmable waters; reduced health and safety issues for humans, domestic, and wild animals.

5. Sedimentation below structure
   - I.10 (-) Tillage
   - I.11 (-) Fossil fuel use
   - I.12 (-) Greenhouse gas emissions

6. Increased slope below structure
   - I.13 (+) Potential for high flows within gully or channel

Initial setting: Natural or artificial channel downcutting or creating gullies

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LEGEND
Mitigating practice
Associated practice
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D Direct effect
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NRCS CONSERVATION PRACTICE EFFECTS - NETWORK DIAGRAM

Grassed Waterway (412)

Initial setting: Cropland, nonirrigated, subject to water erosion and/or runoff

Start

1. Vegetative cover

D.1 (+) Wildlife food and cover

D.2 (+) Livestock feed

D.3 (+) Land removed from cropping

D.4 (+) Infiltration

D.5 (+) Filtration

D.6 (-) Runoff velocity

D.7 (+) Conveyance of runoff water

D.8 (+) Carbon sequestration, (-) Greenhouse gas emissions

I.1 (+) Upland wildlife

I.2 (+/-) Net return to farmer

I.3 (+/-) Crop production

I.4 (-) Soluble contaminants to receiving waters

I.5 (+) Soil quality

I.6 (-) Gully erosion (ephemeral and classic)

I.7 (-) Sediments and sediment-borne contaminants to receiving waters

I.8 (-) Maintenance of drainage ditches and other structures

C.1 (+) Health for humans, domestic and wild animals

C.2 (+) Fishable and swimmable waters; reduced health and safety issues for humans, domestic, and wild animals.

C.3 (+) Quality of receiving waters

C.4 (+/-) Income and income stability (individuals and community)

C.5 (+) Preservation of infrastructure; reduced community maintenance costs

C.6 (+) Air quality of the airshed

C.7 (+) Quality of the airshed

C.8 (+) Air quality of the airshed

Notes:
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