

Practice: 589C - Cross Wind Trap Strips

Scenario: #7 - Annual Trap Strips Wind Erosion

Scenario Description: This scenario describes the implementation of cross wind trap strips to reduce soil erosion by wind, induce wind-borne sediment deposition or snow accumulation, protecting sensitive crops from wind-borne soil particulate damage, or improve air quality by reducing airborne particulate matter in an 80 acre crop field. In this geographic location cropland fields are unprotected against the erosive forces of wind causing soil loss and poor air quality. Payment is based on the actual acres established.

Before Situation: Typically, cropland fields 80 acres in size and larger, have excessive soil disturbance and unsheltered distances that result in excessive wind erosion damaging soil quality as well as reducing air quality. Off-site damage is also evident as sediment-borne contaminants travel offsite. The crop rotation coupled with an intensive tillage system provide for an environment where wind erosion occurs at rates over tolerable limits. Typically the strips occupy about 7-10 % of the area.

After Situation: Implementation Requirements will be prepared for the site according to the 589C Cross Wind Trap Strips Standard and implemented. Appropriate orientation and width of trap strip will be determined using current WEPS (wind erosion prediction system) technology. The planned trap strip system will stand erect during the design critical period. Strips are perennial or annual species, generally placed across an entire field. Implementation will reduce soil loss to tolerable level. Payment is for implementation of trap strips.

Scenario Feature Measure: acres of trap strips

Scenario Unit: Linear Foot

Scenario Typical Size: 1

Total Scenario Cost: \$755.52

Scenario Cost/Unit: \$755.52

Cost Details

Component Name	Id	Description	Unit	Cost	Qty	Total
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Materials

One Species, Cool Season, Annual Grass or Legume	2311	Cool season annual grass or legume. Includes material and shipping only.	Acre	\$39.29	5.6	\$220.05
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Equipment Installation

Seeding Operation, No Till/Grass Drill	960	No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$21.05	5.6	\$117.87
Site Preparation, Mechanical	944	Aerator, rolling drum chopper, etc. Includes equipment, power unit and labor costs.	Acre	\$69.48	5.6	\$389.12

Labor

General Labor	231	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$23.74	1.2	\$28.48
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Practice: 589C - Cross Wind Trap Strips

Scenario: #8 - sensitive crops

Scenario Description: This scenario describes the implementation of cross wind trap strips to reduce damage to sensitive crops caused by wind-borne soil particles. In this geographic location cropland fields are unprotected against the erosive forces of wind causing soil loss, damage to crop seedlings, and poor air quality.

Before Situation: Typically, cropland fields 80 acres in size and larger, have excessive soil disturbance and unsheltered distances that result in excessive wind erosion that damages crop seedlings often causing replanting expenses and reduced air quality. The crop rotation coupled with an intensive tillage system provide for an environment where wind velocities are left unabated sandblasting or covering up newly planted seedlings. Strips in this scenario generally occupy 10% of the field area.

After Situation: Implementation Requirements will be prepared for the site according to the 589C Cross Wind Trap Strips Standard and implemented. Appropriate orientation and width of trap strip will be determined using current WEPS (wind erosion prediction system) technology. Trap strips will be established directly upwind from sensitive crops. Soil erosion will not exceed those established in the national agronomy manual for sensitive crops for a period of at least four weeks after planting. Strips are perennial or annual species, generally placed across an entire area that sensitive crops are grown. Implementation will reduce soil loss and protect sensitive crops for the design critical period. Payment is for the implementation of trap strips.

Scenario Feature Measure: acres of trap strips

Scenario Unit: Linear Foot

Scenario Typical Size: 13940

Total Scenario Cost: \$1,702.92

Scenario Cost/Unit: \$0.12

Cost Details

Component Name	Id	Description	Unit	Cost	Qty	Total
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Equipment Installation

Seeding Operation, No Till/Grass Drill	960	No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$21.05	8	\$168.39
Site Preparation, Mechanical	944	Aerator, rolling drum chopper, etc. Includes equipment, power unit and labor costs.	Acre	\$69.48	8	\$555.88

Materials

Nitrogen (N), Urea	71	Price per pound of N supplied by Urea. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.60	480	\$288.57
One Species, Cool Season, Introduced Perennial Grass	2313	Introduced, cool season perennial grass. Includes material and shipping only.	Acre	\$32.72	8	\$261.77
Phosphorus, P2O5	73	Price per pound of P2O5 supplied by Superphosphate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.78	320	\$250.93
Potassium, K2O	74	K2O supplied by Muriate Of Potash. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.44	320	\$139.41

Labor

General Labor	231	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$23.74	1.6	\$37.98
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Practice: 589C - Cross Wind Trap Strips

Scenario: #9 - Perennial strips Induce snow and soil deposition

Scenario Description: This scenario describes the implementation of cross wind trap strips to reduce soil erosion by wind, induce wind-borne sediment deposition or snow accumulation, protecting sensitive crops from wind-borne soil particulate damage, or improve air quality by reducing airborne particulate matter. In this geographic location cropland fields are unprotected against the erosive forces of wind causing soil loss and poor air quality.

Before Situation: Typically, cropland fields 80 acres in size and larger, have excessive soil disturbance and unsheltered distances that result in excessive wind erosion and blows snow off of the field where it could be used to add to soil moisture for subsequent crops. The crop rotation coupled with an intensive tillage system provide for an environment where wind velocities are left unabated blowing snow from fields and causing wind erosion over tolerable limits. Typically the strips occupy about 7-10 % of the area

After Situation: Implementation Requirements will be prepared for the site according to the 589C Cross Wind Trap Strips Standard and implemented. Appropriate orientation and width of trap strip will be determined using current WEPS (wind erosion prediction system) technology. The planned trap strip system will stand erect during the design critical period. Strips are perennial or annual species, generally placed across an entire area that will receive snow. Implementation will reduce soil loss and add to soil moisture accumulations for the subsequent crop. Payment is for the implementation of trap strips on a per acre basis.

Scenario Feature Measure: acres of trap strips

Scenario Unit: Linear Foot

Scenario Typical Size: 9757

Total Scenario Cost: \$1,193.94

Scenario Cost/Unit: \$0.12

Cost Details

Component Name	Id	Description	Unit	Cost	Qty	Total
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Materials

Nitrogen (N), Urea	71	Price per pound of N supplied by Urea. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.60	336	\$202.00
One Species, Cool Season, Introduced Perennial Grass	2313	Introduced, cool season perennial grass. Includes material and shipping only.	Acre	\$32.72	5.6	\$183.24
Phosphorus, P2O5	73	Price per pound of P2O5 supplied by Superphosphate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.78	224	\$175.65
Potassium, K2O	74	K2O supplied by Muriate Of Potash. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.44	224	\$97.58

Labor

General Labor	231	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$23.74	1.2	\$28.48
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Equipment Installation

Seeding Operation, No Till/Grass Drill	960	No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$21.05	5.6	\$117.87
Site Preparation, Mechanical	944	Aerator, rolling drum chopper, etc. Includes equipment, power unit and labor costs.	Acre	\$69.48	5.6	\$389.12