Benchmark System Summary	State: OHIO	MLRA / CRA: Statewide
		Location Area: Statewide

Land Use:	**Cropland**
Template Label:	**Cropland 8-20% slopes, MWD**
System Name/Phrase:	Cropland, 8-20%, Mod Well Drained

Existing Practices:

0
0
0
0
0

Resouce Concerns	Benchmark Effects
Soil Erosion; Sheet & Rill	Sheet and rill erosion ranges from 8-15 tons/ac/yr using mulch till with 30% cover.
Soil Erosion; Concentrated Flow	Concentrated flow erosion results in gully erosion about 1 ft. deep by 1 ft. wide annually.
Water Quality, Surface Water; Pesticides, Nutrients, Organics, Sediment	The high erosion rates transport sediment, nutrients, and pesticides to surface water.
Soil Condition; Tilth, Crusting, Infiltration, Organic Matter	The intensive cropping and tillage system decreases O.M. and increases soil crusting.
0	
0	
0	
0	
0	
0	
0	

Benchmark System Description

Cropland used for grain (corn-soybeans-wheat) production. Sheet and rill erosion is a major concern as well a concentrated flow (ephemeral) erosion. Slopes range from 8-20%. Mulch tillage is used with about 30% cover after planting all crops. Soil tests are not used to plan fertilizer applicationrates. Nutrients, pesticides, and sediment are surface water quality concerns. The soil crusts in the spring and impacts crop emergence and water infiltration.

Candidate Practices - Physical Effects	State: OHIO	MLRA / CRA: Statewide	Page 1 of 2
		Location Area: Statewide	
Land Use:	Cropland	Benchmark System Description	
Template Label:	Cropland 8-20% slopes, MWD	Cropland used for grain (corn-soybeans-wheat) production. Sheet and rill erosion is a major concern as well a concentrated flow (ephemeral) erosion. Slopes range from 8-20%. Mulch tillage is used with about 30% cover after planting all crops. Soil tests are not used to plan fertilizer applicationrates. Nutrients, pesticides, and sediment are surface water quality concerns. The soil crusts in the spring and impacts crop emergence and water infiltration.	
System Name/Phrase:	Cropland, 8-20%, Mod Well Drained		

Resource Concerns > / Candidate Practices ST=Short Term LT=Long Term		Soil Erosion; Sheet & Rill	Soil Erosion; Concentrated Flow	Water Quality, Surface Water; Pesticides, Nutrients, Organics, Sediment	Soil Condition; Tilth, Crusting, Infiltration, Organic Matter	0	0	0
Conservation Crop Rotation - 328	ST	Sl to Sig Decrease	Situational	Sl to Mod Decrease	Sl Decrease			
	LT	Sl to Sig Decrease	Situational	Mod to Sig Decrease	Sig Decrease			
Cover & Green Manure Crop - 340	ST	Sl to Mod Decrease	Sl Decrease	Mod to Sig Decrease	Sl Decrease			
	LT	Sl to Mod Decrease	Sl Decrease	Mod to Sig Decrease	Mod Decrease			
Contour Buffer Strips - 332	ST	Sl Decrease	Sl Decrease	Mod Decrease	Sl Decrease			
	LT	Sl Decrease	Sl Decrease	Mod Decrease	Sl Decrease			
Filter Strip - 393A	ST	N/A	Insignificant	Sig Decrease	N/A			
	LT	N/A	Insignificant	Sig Decrease	N/A			
Grassed Waterway - 412	ST	N/A	Sig Decrease	Mod Decrease	N/A			
	LT	N/A	Sig Decrease	Mod Decrease	N/A			
Nutrient Management - 590	ST	Facilitating	N/A	Sig Decrease	Facilitating			
	LT	Facilitating	N/A	Sig Decrease	Facilitating			
Pest Management - 595	ST	N/A	N/A	Sig Decrease	N/A			
	LT	N/A	N/A	Sig Decrease	N/A			
Residue Management, No-till & Strip Till - 329A	ST	Sl to Sig Decrease	Sl Decrease	Sig Decrease	Mod to Sig Decrease			
	LT	Sl to Sig Decrease	Sl Decrease	Sig Decrease	Mod to Sig Decrease			
Residue Management, Mulch till - 329B	ST	Sl to Sig Decrease	Sl Decrease	Sig Decrease	Mod to Sig Decrease			
	LT	Sl to Sig Decrease	Sl Decrease	Sig Decrease	Mod to Sig Decrease			
0	ST							
	LT							
0	ST							
	LT							
0	ST							
	LT							
0	ST							
	LT							
0	ST							
	LT							
0	ST							
	LT							

Candidate Practices - Physical Effects	State: OHIO	MLRA / CRA: Statewide	Page 2 of 2
		Location Area: Statewide	
Land Use:	Cropland	Benchmark System Description	
Template Label:	Cropland 8-20% slopes, MWD	Cropland used for grain (corn-soybeans-wheat) production. Sheet and rill erosion is a major concern as well a concentrated flow (ephemeral) erosion. Slopes range from 8-20%. Mulch tillage is used with about 30% cover after planting all crops. Soil tests are not used to plan fertilizer applicationrates. Nutrients, pesticides, and sediment are surface water quality concerns. The soil crusts in the spring and impacts crop emergence and water infiltration.	
System Name/Phrase:	Cropland, 8-20%, Mod Well Drained		

Resource Concerns >		0	0	0	0	0	0	0
Candidate Practices ST=Short Term LT=Long Term								
Conservation Crop Rotation - 328	ST							
	LT							
Cover & Green Manure Crop - 340	ST						#N/A	
	LT						#N/A	
Contour Buffer Strips - 332	ST							
	LT							
Filter Strip - 393A	ST							
	LT							
Grassed Waterway - 412	ST							
	LT							
Nutrient Management - 590	ST							
	LT							
Pest Management - 595	ST							
	LT							
Residue Management, No-till & Strip Till - 329A	ST							
	LT							
Residue Management, Mulch till - 329B	ST							
	LT							
0	ST							
	LT							
0	ST							
	LT							
0	ST							
	LT							
0	ST							
	LT							
0	ST							
	LT							
0	ST							
	LT							

Resource Management System #1	State: OHIO	MLRA / CRA: Statewide	Page 1 of 2
		Location Area: Statewide	

Land Use: Cropland

Template Label: Crop, 8-20%, MWD, Grain

System Name/Phrase RMS #1 High Treatment

Alternative Resource Management System #1 Narrative Description

A rotation of corn-soybeans-wheat with a green manure crop established after wheat harvest is planned combined with no till crop production. The combination of the no till, with high residue management, and rotation will reduce erosion from 8-16 tons down to 2-4 tons/ac/yr and significantly reduce the transport of nutrients, pesticides, and sediment from reaching surface water. Nutrient and pest management will better improve the use of nutrients and pesticides and reduce runoff. The filter strip will further reduce sediment, nutrient, and pesticide transport to surface water. The no till and rotation will also improve the tilth of the soil. The grassed waterways will control the gully erosion.

Resource Concerns >		Soil Erosion; Sheet & Rill	Soil Erosion; Concentrated Flow	Water Quality, Surface Water; Pesticides, Nutrients, Organics, Sediment	Soil Condition; Tilth, Crusting, Infiltration, Organic Matter	0	0	0
Candidate Practices ST=Short Term LT=Long Term								
Conservation Crop Rotation - 328	ST	+1 to +3	+/-	+1 to +2	+1	0	0	0
	LT	+1 to +3	+/-	+2 to +3	+3	0	0	0
Cover & Green Manure Crop - 340	ST	+1 to +2	+1	+2 to +3	+1	0	0	0
	LT	+1 to +2	+1	+2 to +3	+2	0	0	0
Filter Strip - 393A	ST	N/A	0	+3	N/A	0	0	0
	LT	N/A	0	+3	N/A	0	0	0
Grassed Waterway - 412	ST	N/A	+3	+2	N/A	0	0	0
	LT	N/A	+3	+2	N/A	0	0	0
Nutrient Management - 590	ST	+	N/A	+3	+	0	0	0
	LT	+	N/A	+3	+	0	0	0
Pest Management - 595	ST	N/A	N/A	+3	N/A	0	0	0
	LT	N/A	N/A	+3	N/A	0	0	0
Residue Management, No-till & Strip Till - 329A	ST	+1 to +3	+1	+3	+2 to +3	0	0	0
	LT	+1 to +3	+1	+3	+2 to +3	0	0	0
0	ST	0	0	0	0	0	0	0
	LT	0	0	0	0	0	0	0
0	ST	0	0	0	0	0	0	0
	LT	0	0	0	0	0	0	0
0	ST	0	0	0	0	0	0	0
	LT	0	0	0	0	0	0	0
0	ST	0	0	0	0	0	0	0
	LT	0	0	0	0	0	0	0
0	ST	0	0	0	0	0	0	0
	LT	0	0	0	0	0	0	0

Resource Management System #1	State: OHIO	MLRA / CRA: Statewide	Page 2 of 2
		Location Area: Statewide	

Land Use:	Cropland
Template Label:	Crop, 8-20%, MWD, Grain
System Name/Phrase	RMS #1 High Treatment

Alternative Resource Management System #1 Narrative Description

A rotation of corn-soybeans-wheat with a green manure crop established after wheat harvest is planned combined with no till crop production. The combination of the no till, with high residue management, and rotation will reduce erosion from 8-16 tons down to 2-4 tons/ac/yr and significantly reduce the transport of nutrients, pesticides, and sediment from reaching surface water. Nutrient and pest management will better improve the use of nutrients and pesticides and reduce runoff. The filter strip will further reduce sediment, nutrient, and pesticide transport to surface water. The no till and rotation will also improve the tilth of the soil. The grassed waterways will control the gully erosion.

Resource Concerns >		0	0	0	0	0		
Candidate Practices ST=Short Term LT=Long Term								
Conservation Crop Rotation - 328	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Cover & Green Manure Crop - 340	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Filter Strip - 393A	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Grassed Waterway - 412	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Nutrient Management - 590	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Pest Management - 595	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Residue Management, No-till & Strip Till - 329A	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
0	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
0	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
0	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
0	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
0	ST	0	0	0	0	0		
	LT	0	0	0	0	0		

Resource Management System #2	State: OHIO	MLRA / CRA: Statewide	Page 1 of 2
		Location Area: Statewide	

Land Use: Cropland

Template Label: Crop, 8-20%, MWD, Grain

System Name/Phrase RMS #2 Mod. Treatment

Alternative Resource Management System #2 Narrative Description

A rotation of corn-soybeans-wheat with a green manure crop established after wheat harvest is planned combined with no till crop production. The combination of the no till, with high residue management, and rotation will reduce erosion from 8-16 tons down to 2-4 tons/ac/yr and significantly reduce the transport of nutrients, pesticides, and sediment from reaching surface water. Nutrient and pest management will better improve the use of nutrients and pesticides and reduce runoff. The no till and rotation will also improve the tilth of the soil. The grassed waterways will control the gully erosion.

Resource Concerns >		Soil Erosion; Sheet & Rill	Soil Erosion; Concentrated Flow	Water Quality, Surface Water; Pesticides, Nutrients, Organics, Sediment	Soil Condition; Tilth, Crusting, Infiltration, Organic Matter	0	0	0
Candidate Practices ST=Short Term LT=Long Term								
Conservation Crop Rotation - 328	ST	+1 to +3	+/-	+1 to +2	+1	0	0	0
	LT	+1 to +3	+/-	+2 to +3	+3	0	0	0
Cover & Green Manure Crop - 340	ST	+1 to +2	+1	+2 to +3	+1	0	0	0
	LT	+1 to +2	+1	+2 to +3	+2	0	0	0
Grassed Waterway - 412	ST	N/A	+3	+2	N/A	0	0	0
	LT	N/A	+3	+2	N/A	0	0	0
Nutrient Management - 590	ST	+	N/A	+3	+	0	0	0
	LT	+	N/A	+3	+	0	0	0
Pest Management - 595	ST	N/A	N/A	+3	N/A	0	0	0
	LT	N/A	N/A	+3	N/A	0	0	0
Residue Management, No-till & Strip Till - 329A	ST	+1 to +3	+1	+3	+2 to +3	0	0	0
	LT	+1 to +3	+1	+3	+2 to +3	0	0	0
0	ST	0	0	0	0	0	0	0
	LT	0	0	0	0	0	0	0
0	ST	0	0	0	0	0	0	0
	LT	0	0	0	0	0	0	0
0	ST	0	0	0	0	0	0	0
	LT	0	0	0	0	0	0	0
0	ST	0	0	0	0	0	0	0
	LT	0	0	0	0	0	0	0
0	ST	0	0	0	0	0	0	0
	LT	0	0	0	0	0	0	0
0	ST	0	0	0	0	0	0	0
	LT	0	0	0	0	0	0	0

Resource Management System #2	State: OHIO	MLRA / CRA: Statewide	Page 2 of 2
		Location Area: Statewide	

Land Use: Cropland

Template Label: Crop, 8-20%, MWD, Grain

System Name/Phrase: RMS #2 Mod. Treatment

Alternative Resource Management System #2 Narrative Description

A rotation of corn-soybeans-wheat with a green manure crop established after wheat harvest is planned combined with no till crop production. The combination of the no till, with high residue management, and rotation will reduce erosion from 8-16 tons down to 2-4 tons/ac/yr and significantly reduce the transport of nutrients, pesticides, and sediment from reaching surface water. Nutrient and pest management will better improve the use of nutrients and pesticides and reduce runoff. The no till and rotation will also improve the tilth of the soil. The grassed waterways will control the gully erosion.

Resource Concerns >		0	0	0	0	0		
Candidate Practices ST=Short Term LT=Long Term								
Conservation Crop Rotation - 328	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Cover & Green Manure Crop - 340	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Grassed Waterway - 412	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Nutrient Management - 590	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Pest Management - 595	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Residue Management, No-till & Strip Till - 329A	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
0	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
0	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
0	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
0	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
0	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
0	ST	0	0	0	0	0		
	LT	0	0	0	0	0		

Resource Management System #3	State: OHIO	MLRA / CRA: Statewide	Page 1 of 2
		Location Area: Statewide	

Land Use: Cropland

Template Label: Crop, 8-20%, MWD

System Name/Phrase RMS #3 Low Treatment

Alternative Resource Management System #3 Narrative Description

A rotation of corn-soybeans-wheat is planned combined with no till crop production. The combination of the no till, with high residue management, and rotation will reduce erosion from 8-16 tons down to 2-4 tons/ac/yr and significantly reduce the transport of nutrients, pesticides, and sediment from reaching surface water. Nutrient and pest management will better improve the use of nutrients and pesticides and reduce runoff. The no till and rotation will also improve the tilth of the soil. The grassed waterways will control the gully erosion.

Resource Concerns > / Candidate Practices ST=Short Term LT=Long Term		Soil Erosion; Sheet & Rill	Soil Erosion; Concentrated Flow	Water Quality, Surface Water; Pesticides, Nutrients, Organics, Sediment	Soil Condition; Tilth, Crusting, Infiltration, Organic Matter	0	0	0
Conservation Crop Rotation - 328	ST	+1 to +3	+/-	+1 to +2	+1	0	0	0
	LT	+1 to +3	+/-	+2 to +3	+3	0	0	0
Grassed Waterway - 412	ST	N/A	+3	+2	N/A	0	0	0
	LT	N/A	+3	+2	N/A	0	0	0
Nutrient Management - 590	ST	+	N/A	+3	+	0	0	0
	LT	+	N/A	+3	+	0	0	0
Pest Management - 595	ST	N/A	N/A	+3	N/A	0	0	0
	LT	N/A	N/A	+3	N/A	0	0	0
Residue Management, No-till & Strip Till - 329A	ST	+1 to +3	+1	+3	+2 to +3	0	0	0
	LT	+1 to +3	+1	+3	+2 to +3	0	0	0
0	ST	0	0	0	0	0	0	0
	LT	0	0	0	0	0	0	0
0	ST	0	0	0	0	0	0	0
	LT	0	0	0	0	0	0	0
0	ST	0	0	0	0	0	0	0
	LT	0	0	0	0	0	0	0
0	ST	0	0	0	0	0	0	0
	LT	0	0	0	0	0	0	0
0	ST	0	0	0	0	0	0	0
	LT	0	0	0	0	0	0	0
0	ST	0	0	0	0	0	0	0
	LT	0	0	0	0	0	0	0
0	ST	0	0	0	0	0	0	0
	LT	0	0	0	0	0	0	0

Resource Management System #3	State: OHIO	MLRA / CRA: Statewide	Page 2 of 2
		Location Area: Statewide	

Land Use:	Cropland
Template Label:	Crop, 8-20%, MWD
System Name/Phrase	RMS #3 Low Treatment

Alternative Resource Management System #3 Narrative Description

A rotation of corn-soybeans-wheat is planned combined with no till crop production. The combination of the no till, with high residue management, and rotation will reduce erosion from 8-16 tons down to 2-4 tons/ac/yr and significantly reduce the transport of nutrients, pesticides, and sediment from reaching surface water. Nutrient and pest management will better improve the use of nutrients and pesticides and reduce runoff. The no till and rotation will also improve the tilth of the soil. The grassed waterways will control the gully erosion.

Resource Concerns >		0	0	0	0	0		
Candidate Practices ST=Short Term LT=Long Term								
Conservation Crop Rotation - 328	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Grassed Waterway - 412	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Nutrient Management - 590	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Pest Management - 595	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Residue Management, No-till & Strip Till - 329A	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
0	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
0	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
0	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
0	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
0	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
0	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
0	ST	0	0	0	0	0		
	LT	0	0	0	0	0		