Scenario Worksheet

Practice and Scenario Description:	
Information Type	**Data**
Region	National
Discipline Group	Conservation Activity Plans
Practice Code/Name	130-Drainage Water Management Plan
Scenario ID	1
Scenario Name	DWM-Tile Map Available
Scenario Description	Corn, soybeans, wheat, field grain crops. Typical operation is 150 acres are usually rented cropland. Cropland fields are less than 1% slope. The soil is somewhat poorly drained to poorly drained, with a naturally high water table, requiring drainage in order to establish suitable airable root zone to successfully grow a crop. Cropland fields have existing surface and/or patterned subsurface drainage system outletting to a drainage ditch, and a map of the tile system is readily available from the producer.
Before Practice Situation	Producer has no plan for or knowledge for controlling drainage water retention. The producer does not manage the field for the purpose of contolling water retention and therefore crop yields are reduced. Existing ditches and/or tile drains on the cropland field currently result in continuous flow off field to waterways resulting in potential water quality resource concerns related to excesive nitrogen.
After Practice Situation	After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Drainage Water Management" conservation activity plan (CAP). The CAP criteria requires the plan to identify the number and location of water control structures that are needed to implement drainage water management according to Field Office Technical Guide design standards. The CAP plan will also provide additional detail to allow design of water control structures, and for proper management of the water control structures to achieve desired resource outcomes. Plan includes guidance to enable the producer to know when and how much to adjust the water level. The CAP plan allows for continuous flow of subsurface drainage water to off-site locations, but timing, flow and amounts are managed to minimize potential water quality impacts.
Scenario Feature Measure	Each
Scenario Unit	Each
Scenario Typical Size	1

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	$0.00	$0.00
Equipment/Installation	$0.00	$0.00
Labor	$2,022.04	$2,022.04
Mobilization	$0.00	$0.00
Acquisition of Technical Knowledge	$0.00	$0.00
Foregone Income	$0.00	$0.00
Total	$2,022.04	$2,022.04

Cost Details:

Cost Category

Labor

Name of Item (Data Source Number)	Unit	Cost/Unit	Number	Item Cost
Basic Cost Data (Data Source Number)	Unit	Cost/Unit		
CAP Labor, manager	hour	$44.02		
CAP Labor, skilled	hour	$33.61		
CAP Labor, small surveying crew	8 hour day	$780.00		
CAP Labor, small surveying crew	hour	$97.50		
Planning Activities				
Interview client, define objectives, collect tile map	hour	$44.02	1	$44.02
Map showing drained area	hour	$44.02	4	$176.08
Topographic survey, crew & equipment	hour	$97.50	8	$780.00
Topographic map	hour	$33.61	8	$268.88
Overlay map => CAP Criteria (item B.8)	hour	$33.61	4	$134.44
Management plan / schedule	hours	$44.02	5	$220.10
Mileage Costs for Site Visits				
Visits, round trip	number		3	
Roundtrip Miles per Visit	miles		80	
Total Travel Miles per plan	miles		240	
Travel Hours per Visit	hours		2	
Total Travel Hours for the Plan	hours		6	

Vehicle Travel Cost (4) Transportation	per mile	$0.56		
Total Vehicle Travel Cost / Plan				$134.40
Planner Travel Time	hours	$44.02	6	$264.12

Scenario Worksheet

Practice and Scenario Description:	
Information Type	**Data**
Region	National
Discipline Group	Conservation Activity Plans
Practice Code/Name	130-Drainage Water Management Plan
Scenario ID	2
Scenario Name	DWM CAP (P.E.) Tile Map Available
Scenario Description	Corn, soybeans, wheat, field grain crops. Typical operation is 150 acres are usually rented cropland. Cropland fields are less than 1% slope. The soil is somewhat poorly drained to poorly drained, with a naturally high water table, requiring drainage in order to establish suitable airable root zone to successfully grow a crop. Cropland fields have existing surface and/or patterned subsurface drainage system outletting to a drainage ditch, and a map of the tile system is readily available from the producer. The Engineering Licensing Board in the state has defined creation of the DWM Conservation Activity Plan as the practice of engineering; the DWM-CAP must be certified by a Professional Engineer licensed in the state where the land is located.
Before Practice Situation	Producer has no plan for or knowledge for controlling drainage water retention. The producer does not manage the field for the purpose of contolling water retention and therefore crop yields are reduced. Existing ditches and/or tile drains on the cropland field currently result in continuous flow off field to waterways resulting in potential water quality resource concerns related to excesive nitrogen.
After Practice Situation	After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Drainage Water Management" conservation activity plan (CAP). The CAP criteria requires the plan to identify the number and location of water control structures that are needed to implement drainage water management according to Field Office Technical Guide design standards. The CAP plan will also provide additional detail to allow design of water control structures, and for proper management of the water control structures to achieve desired resource outcomes. Plan includes guidance to enable the producer to know when and how much to adjust the water level. The CAP plan allows for continuous flow of subsurface drainage water to off-site locations, but timing, flow and amounts are managed to minimize potential water quality impacts.
Scenario Feature Measure	Each
Scenario Unit	Each
Scenario Typical Size	1

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	$0.00	$0.00
Equipment/Installation	$0.00	$0.00
Labor	$2,176.76	$2,176.76
Mobilization	$0.00	$0.00
Acquisition of Technical Knowledge	$0.00	$0.00
Foregone Income	$0.00	$0.00
Total	$2,176.76	$2,176.76

Cost Details:

Cost Category

Labor

Name of Item (Data Source Number)	Unit	Cost/Unit	Number	Item Cost
Basic Cost Data (Data Source Number)	Unit	Cost/Unit		
CAP Labor, manager	hour	$44.02		
CAP Labor, skilled	hour	$33.61		
CAP Labor, small surveying crew	8 hour day	$780.00		
CAP Labor, small Surveying Crew	hour	$97.50		
CAP Labor, professional engineer	hour	$77.36		
Planning Activities				
Interview client, define objectives, collect tile map	hour	$44.02	1	$44.02
Map showing drained area	hour	$44.02	4	$176.08
Topographic survey, crew & equipment	hour	$97.50	8	$780.00
Topographic map	hour	$33.61	8	$268.88
Overlay map => CAP Criteria (item B.8)	hour	$33.61	4	$134.44
Management plan / schedule	hours	$44.02	5	$220.10
Mileage Costs for Site Visits				
Visits, round trip	number		3	
Roundtrip Miles per Visit	miles		80	
Total Travel Miles per plan	miles		240	

Travel Hours per Visit	hours		2	
Total Travel Hours for the Plan	hours		6	
Vehicle Travel Cost (4) Transportation	per mile	$0.56		
Total Vehicle Travel Cost / Plan				$134.40

Scenario Worksheet

Practice and Scenario Description:	
Information Type	**Data**
Region	National
Discipline Group	Conservation Activity Plans
Practice Code/Name	130-Drainage Water Management Plan
Scenario ID	3
Scenario Name	DWM-Tile Map Creation
Scenario Description	Corn, soybeans, wheat, field grain crops. Typical operation is 150 acres are usually rented cropland. Cropland fields are less than 1% slope. The soil is somewhat poorly drained to poorly drained, with a naturally high water table, requiring drainage in order to establish suitable airable root zone to successfully grow a crop. Cropland fields have existing surface and/or patterned subsurface drainage system outletting to a drainage ditch, and a map of the tile system is readily available from the producer. The Engineering Licensing Board in the state has defined creation of the DWM Conservation Activity Plan as the practice of engineering; the DWM-CAP must be certified by a Professional Engineer licensed in the state where the land is located.
Before Practice Situation	Producer has no plan for or knowledge for controlling drainage water retention. The producer does not manage the field for the purpose of contolling water retention and therefore crop yields are reduced. Existing ditches and/or tile drains on the cropland field currently result in continuous flow off field to waterways resulting in potential water quality resource concerns related to excesive nitrogen.
After Practice Situation	After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Drainage Water Management" conservation activity plan (CAP). The CAP criteria requires the plan to identify the number and location of water control structures that are needed to implement drainage water management according to Field Office Technical Guide design standards. The CAP plan will also provide additional detail to allow design of water control structures, and for proper management of the water control structures to achieve desired resource outcomes. Plan includes guidance to enable the producer to know when and how much to adjust the water level. The CAP plan allows for continuous flow of subsurface drainage water to off-site locations, but timing, flow and amounts are managed to minimize potential water quality impacts.
Scenario Feature Measure	Each
Scenario Unit	Each
Scenario Typical Size	1

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	$0.00	$0.00
Equipment/Installation	$0.00	$0.00
Labor	$2,290.84	$2,290.84
Mobilization	$0.00	$0.00
Acquisition of Technical Knowledge	$0.00	$0.00
Foregone Income	$0.00	$0.00
Total	$2,290.84	$2,290.84

Cost Details:

Cost Category

Labor

Name of Item (Data Source Number)	Unit	Cost/Unit	Number	Item Cost
Basic Cost Data (Data Source Number)	Unit	Cost/Unit		
CAP Labor, manager	hour	$44.02		
CAP Labor, skilled	hour	$33.61		
CAP Labor, small surveying crew	8 hour day	$780.00		
Topographic survey crew	hour	$97.50		
Planning Activities				
Interview client, define objectives, collect tile map	hour	44.02	1	$44.02
Map showing drained area	hour	44.02	4	$176.08
Probe & identify tile lines	hour	33.60	8	$268.80
Topographic survey, crew & equipment	hour	97.50	8	$780.00
Topographic map	hour	33.61	8	$268.88
Overlay map => CAP Criteria (item B.8)	hour	33.61	4	$134.44
Management plan / schedule	hours	44.02	5	$220.10
Mileage Costs for Site Visits				
Visits, round trip	number		3	
Roundtrip Miles per Visit	miles		80	
Total Travel Miles per plan	miles		240	
Travel Hours per Visit	hours		2	

Total Travel Hours for the Plan	hours		6	
Vehicle Travel Cost (4) Transportation	per mile	$0.56		
Total Vehicle Travel Cost / Plan				$134.40
Planner Travel Time	hours	$44.02	6	$264.12

Scenario Worksheet

Practice and Scenario Description:	
Information Type	**Data**
Region	National
Discipline Group	Conservation Activity Plans
Practice Code/Name	130-Drainage Water Management Plan
Scenario ID	4
Scenario Name	DWM CAP (P.E.) Tile Map Creation
Scenario Description	Corn, soybeans, wheat, field grain crops. Typical operation is 150 acres are usually rented cropland. Cropland fields are less than 1% slope. The soil is somewhat poorly drained to poorly drained, with a naturally high water table, requiring drainage in order to establish suitable airable root zone to successfully grow a crop. Cropland fields have existing surface and/or patterned subsurface drainage system outletting to a drainage ditch, and a map of the tile system is NOT available from the producer. The Engineering Licensing Board in the state has defined creation of the DWM Conservation Activity Plan as the practice of engineering; the DWM-CAP must be certified by a Professional Engineer licensed in the state where the land is located.
Before Practice Situation	Producer has no plan for or knowledge for controlling drainage water retention. The producer does not manage the field for the purpose of contolling water retention and therefore crop yields are reduced. Existing ditches and/or tile drains on the cropland field currently result in continuous flow off field to waterways resulting in potential water quality resource concerns related to excesive nitrogen.
After Practice Situation	After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Drainage Water Management" conservation activity plan (CAP). The CAP criteria requires the plan to identify the number and location of water control structures that are needed to implement drainage water management according to Field Office Technical Guide design standards. The CAP plan will also provide additional detail to allow design of water control structures, and for proper management of the water control structures to achieve desired resource outcomes. Plan includes guidance to enable the producer to know when and how much to adjust the water level. The CAP plan allows for continuous flow of subsurface drainage water to off-site locations, but timing, flow and amounts are managed to minimize potential water quality impacts.
Scenario Feature Measure	Each
Scenario Unit	Each
Scenario Typical Size	1

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	$0.00	$0.00
Equipment/Installation	$0.00	$0.00
Labor	$2,290.84	$2,290.84
Mobilization	$0.00	$0.00
Acquisition of Technical Knowledge	$0.00	$0.00
Foregone Income	$0.00	$0.00
Total	$2,290.84	$2,290.84

Cost Details:

Cost Category

Labor

Name of Item (Data Source Number)	Unit	Cost/Unit	Number	Item Cost

Basic Cost Data (Data Source Number)	Unit	Cost/Unit
CAP Labor, manager	hour	$44.02
CAP Labor, skilled	hour	$33.61
CAP Labor, small surveying crew	8 hour day	$780.00
CAP Labor, smal surveying crew	hour	$97.50
CAP Labor, professional engineer	hour	$77.36

Planning Activities				
Interview client, define objectives, collect tile map	hour	44.02	1	$44.02
Map showing drained area	hour	44.02	4	$176.08
Probe & identify tile lines	hour	33.61	8	$268.88
Topographic survey, crew & equipment	hour	97.50	8	$780.00
Topographic map	hour	33.61	8	$268.88
Overlay map => CAP Criteria (item B.8)	hour	33.61	4	$134.44
Management plan / schedule	hours	44.02	**5**	220.1
Mileage Costs for Site Visits				
Visits, round trip	number		3	
Roundtrip Miles per Visit	miles		80	
Total Travel Miles per plan	miles		240	

Travel Hours per Visit	hours		2	
Total Travel Hours for the Plan	hours		6	
Vehicle Travel Cost (4) Transportation	per mile	$0.56		
Total Vehicle Travel Cost / Plan				$134.40