Subpart A - Introduction

613.0 Purpose

- A. The purpose of this document is to provide guidance to Natural Resources Conservation Service (NRCS) economists and other supporting NRCS personnel in developing cost data, payment rates, and payment schedules. These cost-related data products are to be used in carrying out NRCS conservation planning activities and financial assistance program contracting activities. The handbook also provides guidance on updating and maintaining cost data and developing payment schedules.
- B. Payment schedule data documentation may include sensitive information; therefore, it shall not be shared outside the Agency without proper authorization. The final payment schedules and cost data, when approved by the Agency for public use, will be posted in each State's Field Office Technical Guide (FOTG).
- C. The instructions contained in this section are to be used in conjunction with national policy as contained in Conservation Programs Manual (CPM), Title 440, Part 512, and in other sections of the General Manual and additional handbooks, as applicable.

613.1 Scope

This handbook addresses the methodology for documenting the costs of conservation practices/activities useful in all conservation planning activities, technical and financial assistance programs.

613.2 Relationships in the Payment Schedule Process

- A. Cost Data Cost data are important for making informed resource management and funding decisions. Cost data are reviewed annually and updated when needed by NRCS economists and used by land owners to make conservation practice/activity decisions.
- B. Payment Rate The payment for conservation practices/activities to contract holders for conservation practices/activities participating in NRCS financial assistance programs. This rate is based on the payment percentage approved by statute or regulation.
- C. Payment Schedule A list of payment rates for approved conservation practices/activities for financial assistance programs for each fiscal year. The payment schedule is utilized in the conservation planning and contracting software.
- Figure 1-1 shows the how program-neutral cost data are used to support NRCS technical and financial assistance programs. The objective of the payment schedule process is to facilitate increased efficiency and accountability within conservation program planning and contracting. In addition, payment schedules must hold up to scrutiny by oversight agencies, financial audits and reviews, World Trade Organization (WTO) requirements, and provide for public transparency.

Click here for a copy of Figure 1-1 – The Relationship between the Payment Schedule Process, Technical Assistance & Conservation Planning and Financial Assistance Contracting.

NOTE: See also Section 613.3 and Figure 1-2 for explanation of each of the "Boxes" shown in this diagram.

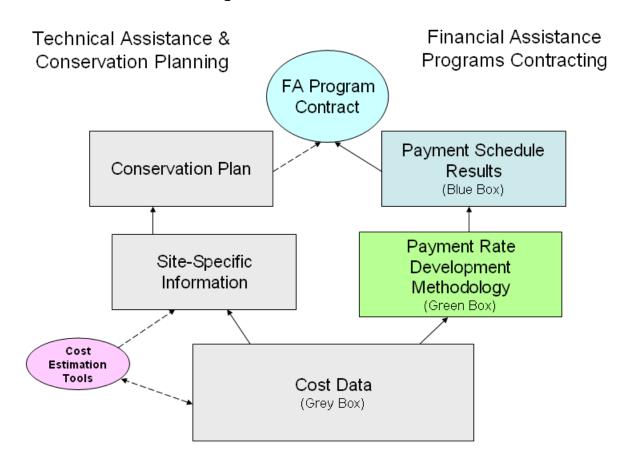
613.3 Payment Schedule Worksheet Format

- A. Payment schedules will be documented in spreadsheet-based worksheets as displayed in Figure 1-2. Each worksheet will contain standard data categories and equations. The worksheet format and calculations presented in this handbook are approved Agency-wide, and payment schedule worksheets must meet the requirements outlined in this handbook. The worksheet format and style shall not be modified, with the exception of adding rows or columns as needed to adequately document cost data and the payment schedule process.
- B. Once a State has developed payment schedule worksheets that contain calculations or formulas that link data between the "Grey," "Green," and "Blue" boxes, the calculations or formulas in the worksheets shall not be modified. Maintaining these links will provide data integrity and ensure that data can be tracked through the payment schedule development process.
- C. The standard naming convention for payment schedule workbooks is as follows: PPracticeCodeStateAbbreviation. The practice name may also be added to the file name if States choose to do so. The fiscal year can also be added. For example, practice code 590, nutrient management, from Montana would be named: P590MT, P590MTNutrientManagement, or P590MTNutrientManagementFY09.
- D. Only one file will be developed for each practice or activity. However, each file may have multiple worksheets (tabs) for each practice/activity scenario. The top of each worksheet must also contain the State name and the practice or activity code, name, and type for print identification purposes.

Click here for a copy of Figure 1-2 – Approved Payment Schedule Worksheet Format

Subpart A - Introduction

Figure 1-1 The Relationship Between the Payment Schedule Process, Technical Assistance & Conservation Planning and Financial Assistance Contracting



Subpart A – Introduction

Figure 1-2 Approved Payment Schedule Worksheet Format

State	Code	Practice/Activity Name	Practice/Activity Type				
Payment Sche	dule Results						
Practice Code	Cost Share <u>Program</u>	Practice/Activity Name	Practice/Activity Type	Unit Type	Payment Rate From "Green		Geographic <u>Area</u>
Code	From "Green Box"	Practice/Activity Name	Practice/Activity Type	From "Grey Box"	Box" From "Green		
Code	From "Green Box"	Practice/Activity Name	Practice/Activity Type	From "Grey Box"	Box"		From "Grey Box" Optional
Payment Scher	dule Development Metho	odology				_	.,
- aymont cono	auto por oto pinone mount	Judiogy		Enter FA Program			
			Enter FA Program A	В	E4 D	E4 Day 200 D	
			Program Pavment	Program Pavment	FA Program A Pavment	FA Program B Payment	
Cost Category		Cost/Unit	Percentage	Percentage	Rate	Rate	
Materials		<u> </u>	" ercentage	%	\$	\$	
Equipment/Ins	tallation	Š			Š	\$	
Labor		\$		%	Š	\$	
Mobilization		From "Grey Box"	Entered by FA Progr	ram Manager	Calculated with	in "Green Box"	
Operation & Ma	aintenance (Annual)	\$	%	%	\$	\$	
Acquisition of	Technical						
Knowledge		\$	%	%	\$	\$	
Foregone Inco	me (Annual)	\$	%	%	\$	\$	
Risk		\$	%	%	\$	\$	
	& Permit Costs	\$	%	<u> </u>	\$	\$	
Total:		Sum of 9-Cost Categories			Sum of 9-Cos	st Categories	

Additional rows and text may be added below the "Green Box" describing the Payment Rate assumptions and policy implications (i.e. payment/acreage caps, etc).

Cost Data					
Typical Implementation Scenari	<u>o</u>				
Enter Scenario Description, incl	luding practice name and code.				
Geographic Area:	Enter Area				
Unit for Cost Estimate:	Enter Unit				
Practice Life (Years):	Enter Life				
Discount Rate (%/Year):	Enter Rate				Cost/Unit
Matariala					Enter Sum of Materials
Materials Enter description of Material cost	sts	<u>-</u>			Cost
This data should include an item	nized list of all cost items, units and unit costs.				
Enter as many rows and column	ns, within each cost category, as necessary to docur				
	creative as necessary, working with technical special loped as a "stand alone" tool for planners and clients				
Cost data methodology is descr	ribed in the Economics Handbook, data may come fr	om receipts, published cost data	or predictive models.	wity costs.	
Data Source: Identify where the	data came from (vendor, location, date).				
					Enter Sum of
Equipment/Installation					Equipment/Installation Cost
Enter cost description and data					Enter Sum of Labor
Labor					Cost
Enter cost description and data					Enter Sum of
<u>Mobilization</u>					Mobilization Cost
Enter cost description and data					Enter Sum of O&M
Operation & Maintenance (Annu Enter cost description and data	<u>ıal)</u>				Cost
•					Enter Sum of Tech
Acquisition of Technical Knowle Enter cost description and data					Knowledge Cost
					Enter Sum of Foregone
Foregone Income (Annual) Enter cost description and data					Income Cost
Risk Enter cost description and data					Enter Sum of Risk Cos
•					Enter Sum of
Administration & Permit Costs Enter cost description and data					Admin/Permit Cost
·					Sum of all 9-Cost
Total Cost Estimate:					Categories

Additional rows and text may be added below the "Grey Box" describing cost data assumptions, identifying practices commonly implemented along with this practice or other text. Additional Worksheet Tabs may be used to document cost data that will not fit into the "Grey Box" or is used in multiple scenarios of the same practice/activity.

Subpart B - Cost Data

613.10 Introduction

- A. The cost data portion of the payment schedule worksheet contains information documenting the typical costs of implementing a practice or activity. This information describes a typical practice or activity scenario, which includes sufficient description of the resource concerns and setting so as to identify where the scenario applies the geographic area covered by the scenario, the scenario unit type, the life span of the practice or activity, the discount rate (if used for additional analysis), and the costs associated with implementing the practice or activity. States are encouraged to use a multi-disciplinary approach with technical specialists to help develop scenarios and cost data.
- B. The cost data in the payment schedule worksheet represent the actual costs to a land user to install or implement a practice or activity based on the typical scenario. The cost data are "program neutral," and are not adjusted for costs that are approved for program payments or to encourage participation in financial assistance programs.
- C. The total cost at the bottom of the "Grey Box" does not represent the total costs of a practice or activity over its life; it represents the total cost to install the practice or activity, and the cost to operate and maintain the practice or activity for the first year. In actuality, some costs occur only one time and other costs can occur over several years of the practice life. Only the first year of operation and maintenance, foregone income, and risk will be included in the total implementation cost.
- D. Total Implementation Cost = (Materials + Equipment/Installation + Mobilization + Acquisition of Technical Knowledge + Administration/Permit) + (First year of: Operation/Maintenance + Foregone Income + Risk).

613.11 Cost Data

A. Typical Implementation Scenario

Each State will develop cost data for a typical scenario. The typical scenario describes the most commonly used inputs and costs associated with practice or activity installation in a typical setting for a geographic area. The typical scenario is the basis for cost data development. More than one scenario may be described for a practice or activity to reflect different conditions such as size, alternative materials, significant equipment or labor costs that exist within the area covered by the payment schedule. It is recommended that States limit the number of scenarios for a particular practice/activity to reduce workload and increase program efficiency. A scenario must have sufficient information about where the treatment is applicable. This is especially important to distinguish between multiple practice activities. The scenario shall include:

- (i) Brief description of the location and site setting;
- (ii) Typical installation size (number of acres, sq ft, cu ft, lin ft, etc);
- (iii) Broadly identified resource concern(s) to be addressed; and
- (iv) Commonly associated or facilitating practices.

B. Geographic Area

The geographic area is the area covered by the scenario. Where possible, the geographic area should be applicable Statewide except where compelling geographic cost differences exist.

C. Unit for Cost Estimate

The unit for cost estimate is used for a specified conservation practice or activity scenario. Different scenarios within the same practice/activity may have different units. Units are not required to be the same as the national practice standard units and may vary from payment units and from reporting units. Units should be the most logical to achieve the practice purpose and in the simplest unit for cost estimating. Examples include acres, animal units, feet, number, or cubic yards.

D. Practice Life (Years)

A practice or activity's "useful" life is based on how long the materials or activity is expected to last or when they are expected to be replaced by newer technology. For contracting purposes, the practice lifespan is the number of years following the implementation of a practice or activity during which a contract holder is obligated to maintain that conservation practice. A practice lifespan may or may not be equal to the practice life.

E. Discount Rate (Percent/Year)

Rate of return is used to evaluate the benefits and costs over time of conservation practices or activities. The discount rate is the rate by which monetary benefits and costs that accrue in the future are adjusted so that they can be compared with current values. The discount rate is not typically used in developing payment schedules, but is useful in performing economic analysis of proposed conservation projects.

F. Cost Data Categories

- (1) Cost data are grouped into nine categories. For each practice or activity, the typical cost of implementation will be documented. For cost data that cannot be itemized or do not clearly fall into one of the defined categories, the most similar category will be used.
- (2) The cost data may be obtained from various data sources including contract receipts, contractors, vendors, agricultural suppliers, conservation partners, external cost databases, Internet data sources, published catalogs, agricultural statistics, cost estimating models or tools, contract payment records, discipline experts, and other reliable sources.
- (3) Cost data documentation should include the date, the source of information, and how the cost was determined. If there are no costs in a category, include a statement that there are no costs and place a \$0 in the unit cost column. Examples of the cost data categories are found in Exhibit A-1. The cost data categories are defined as follows:

(i) Materials

Materials are inputs used to make, develop, or implement a practice or activity. Examples of materials may include items such as sand, gravel, grass seed, soil amendments, plants, piping, and concrete.

(ii) Equipment

Equipment is defined as tools, machinery, or similar items needed to implement a practice or activity. Equipment may stay on-site, be used annually, or only used during practice instillation. The land user is not required to purchase equipment to implement a practice or activity. Equipment can be purchased, leased, custom

hired, or bartered with a neighbor to perform work. Purchasing cost or equipment rental rate may be used to estimate the cost of equipment. The costs of the other methods may also be used. If equipment is used for an annual practice or activity, the purchase price of the equipment is amortized to estimate its yearly cost.

(iii) Labor

Labor is the time and wage rate for hiring individuals or self labor needed to implement the practice or activity. Labor can be described in terms of cost/hour or as a fixed contract price for completion of a particular task. Labor cost is occasionally included in materials or equipment cost. This does not include labor costs associated with operation or maintenance of a practice.

(iv) Mobilization

Mobilization is the cost of moving equipment, materials, and labor to and from the installed practice/activity site. It may also include site access costs such as a temporary road, bridge, or trail.

(v) Operation and Maintenance (O&M)

- Operation includes the administration, management, and performance of non-maintenance actions needed to keep the completed practice/activity safe and functioning as intended. Maintenance includes work to prevent deterioration of the practice/activity, repairing damage, or replacement of the practice/activity to its original condition if one or more components fail. This cost category includes work performed by the participant to keep the applied conservation practice or activity functioning for the intended purpose and life of the practice.
- O&M costs, as utilized in payment schedules, are annual costs. O&M costs are assumed to be constant throughout the life of the practice or activity. In some cases, O&M is higher the first year (such as brush management and spot treatment of missed plants). In other cases, it is a cost every several years (such as cleaning out a sediment basin every three years). And in some other cases, O&M may not be a significant cost until the last few years of the practice life (such as pumping plant). For the purposes of payment schedules, O&M is assumed to be a constant, annual cost.

(vi) Acquisition of Technical Knowledge

Cost category that includes cash expenditures to obtain direct technical assistance, over and above what NRCS (or similar agency) would typically provide. It is the cost to the land manager of acquiring technical knowledge, through personal study or educational course, to operate or manage a practice or activity that is "new" to the land user. It can include time and other expenditures related to learning how to plan, oversee, and record new farm activities, or related to training on how to properly operate or maintain a practice or enhancement activity (practice/activity) that is "new" to the land user. Also, may include the cost of hiring a private consultant or specialist to assist in implementing the practice.

(vii) Foregone Income

Cost category that includes the annual net income lost from a change in land use, or land taken out of production, or the opportunity cost of accepting less farm

income in exchange for improved resource conditions due to the practice. Foregone income may be a one-time cost during the installation year, or may be an annual cost occurring after the installation year, such as taking land out of production.

(viii) Risk

Risk is the probability of loss of income including the cost of uncertainty or the probability of financial loss associated with implementing a practice or activity. If a land user believes their risk is adequately accounted for when calculating the cost of a new practice or activity, they will be more inclined to adopt a new practice or activity.

(ix) Administration and Permit Costs

Administration includes the costs of completing paperwork, attending meetings, and regulatory management costs of implementing a practice or activity. Permit cost is the cost of obtaining all necessary legal documents to implement the practice or activity.

613.12 Additional Considerations for Developing Cost Data

A. Contingency Costs

Contingency costs are often included in "on the ground" cost estimates. Contingency costs are defined as: "An amount added to a cost estimate to allow for items, conditions, or events for which the occurrence or effect is uncertain and that experience shows will likely result in additional costs." Contingency costs include planning and estimation errors and omissions, minor price fluctuations, inflation, minor design changes within the project, and variations in market and environmental conditions. However, because contingency costs are "site specific," extremely variable, and a "good faith" effort was made to obtain and document the best most accurate cost data, they will not be included in payment schedules. The planner should recognize that contingency costs may exist when presenting the cost data to the client, but contingency costs are not included in the cost data and, depending upon the Agency program, may not be included in the payment schedule.

B. Supplementary Notes

As needed, additional blank lines may be added to document contracting decisions or other cost information. Add any needed "rows" between the "Blue," "Green," and "Grey" boxes for supplemental notes to clarify decisions or add explanation.

C. Economies of Scale

The unit costs may vary depending on the total units purchased for a project or activity. If materials are purchased in bulk, the vendor may likely reduce the cost per unit. For example, 5,000 feet of pipe may cost \$5.00 per foot. But, if only 100 feet of pipe is purchased, pipe may cost \$8.00 per foot. The cost data developer must make an educated decision on the most common units purchased for a practice or activity, and use the relevant per unit cost in the payment schedule worksheet. Subject matter specialists and program managers may also need to be consulted to arrive at the most reasonable type of unit to associate with a practice for a typical scenario description.

D. Guidance for Limited Use of Components

- (1) States must develop payment schedules with well-defined scenarios. However, for a very limited number of complex practices or activities, it may be helpful to use components to avoid having to create an excessive number of scenarios for a practice. When components are used, they must be described by a scenario and the component must meet an FOTG conservation practice standard. Use components only when it will reduce the number of scenarios and make contracting and contract administration more efficient.
- (2) Components may be developed considering the following:
 - (i) Relatively high cost items whose inclusion or exclusion will significantly alter the cost of implementing the practice.
 - (ii) Stand-alone items that can be added or taken away from a practice without affecting other costs for the practice.
 - (iii) Will be handled in the same manner as a typical scenario for a practice or activity.

E. Multi-State and Coordination Considerations

Cost data and payment schedules should be reasonably consistent across State lines. States should coordinate the development of cost data and payment schedules for practices and activities offered across State boundaries. Opportunities should be provided for public and stakeholder input for payment schedule development, including State Technical Committees, local work groups, and other conservation partners.

F. Use of Amortization

Cost data shall not be amortized, with the exception of items procured that last beyond the practice or activity life. For example, a residue management practice has a 1-year life, but requires the acquisition of a no-till drill that has a 10-year life. The no-till drill may be rented, custom-hired, or purchased. If the drill is purchased, the 10-year life of the drill may be amortized to estimate a 1-year cost that is included in the cost data.

613.13 Cost Data Source Documentation

- A. Cost data sources used in the payment schedule workbooks must be referenced to facilitate updating cost data the next year and defend the cost estimates. At a minimum, the data references must include the data source, the location, and date. A data source is needed for each cost identified in the nine cost categories.
- B. Data sources may include contract receipts, vendors estimates, agricultural supplier information, conservation partners estimates, Internet data sources, published catalogs, agricultural statistics, cost estimating models or tools, privately developed cost databases, contract payment records, and other reliable sources. The data location may include the business address, Web site, or phone number where the data provider can be contacted to update cost information in the proceeding years. The date is required documentation.
- C. There are three options for storing cost data source documentation.
 - (1) Include the documentation directly in the cost data ("Grey Box").
 - (2) Provide the documentation n a separate worksheet "tab" in the payment schedule workbook.
 - (3) Provide the documentation in a separate workbook, electronic file, and/or hard-copy file in the State office.
- D. Care should be taken to select the appropriate documentation method to facilitate the removal of data references before posting data to the FOTG or sharing information with the

Title 200 – National Resources Economics Handbook

public. Examples of cost data source references are found in Subpart G, Exhibits, Section 613.60.

Subpart C – Payment Rates

613.20 Introduction

Payment rates established and documented in payment schedules apply to financial assistance programs administered through the Agency's contracting software system. All costs associated with a practice or activity should have previously been recorded in the cost data ("Grey Box") section of each payment schedule worksheet. Only those costs or income foregone that are eligible for payment for the financial assistance program may be included in the final payment rates. Eligible practices, maximum program payment percentages, and other information for each program are established annually by program policy or as found in 440-Conservation Programs Manual, Part 512. Consult with programs staff, reference programs manuals, and practice standards as needed to clarify eligibility of practices and costs for financial assistance payments.

613.21 Payment Rates

A. Each eligible practice/activity will have a payment rate, which will be the unit rate of compensation for program participants. As recorded in the payment schedule development methodology ("Green Box") of each payment schedule worksheet, the payment rate is the sum of all eligible cost data categories for the practice or activity multiplied by the allowable program payment percentage. The program payment percentage is established within specific program limits by the State Conservationist (STC) with input from the State Technical Committee. Maximum program payment percentage limits are established by program regulation and policy, and documented in 440-Conservation Programs Manual, Part 512. National financial assistance program managers are responsible for defining the approved cost categories allowed for use for each program and payment schedule worksheet that will be used to document payment rates. Figure 3-1 displays an example of approved cost categories by programs, which are used in setting payment rates.

Click here for a copy of Figure 3-1 - Example Cost Category and Program Matrix for applicable program payment rates (See 440-CPM, Part 512 and National Program Managers for most current payment percentages and maximum rates).

- B. The next step in the development of payment rates is to multiply each of the cost categories by the program payment percentage. This calculation takes place in the Payment Schedule Development Methodology ("Green Box") section of the payment schedule worksheet. The cost per unit in the "Green Box" will come from the cost data ("Grey Box"). Whether or not this cost per unit is allowed to be used in the payment rate is determined by the STC and program policy.
- C. Figure 3-2 contains an example of the Payment Schedule Development Methodology ("Green Box"), program payment percentages, and payment rate for a practice. In this example, the financial assistance program allows for a maximum cost-share payment of 50 percent of the estimated incurred costs and may include income foregone, as approved by the STC. The approved cost categories used for the payment rate were materials, equipment/installation, labor, and mobilization. Foregone income is only approved for the Environmental Quality Incentives Program (EQIP) in this example.

Title 200 – National Resources Economics Handbook

Click here for a copy of Figure 3-2 – Example Payment Rate Development Methodology ("Green Box").

D. The program payment rates from the Payment Rate Development Methodology ("Green Box") will become the final payment schedule and be uploaded into the Agency's planning and contracting software.

Subpart C - Payment Rates

Figure 3-1 An Example of a Cost Category and Program Matrix for Applicable Program Payment Rates (See 440-CPM, Part 512 and National Program Managers for most current payment percentages and maximum rates)

COST CATEGORY AND PROGRAM MATRIX FOR PAYMENT SCHEDULE WORKSHEETS

Maximum Applicable Payment Percentage Rates by Program and Cost Category

	EC	QIP	W	/HIP	А	MA
Cost Category	Regular Maximum	Historically Underserved	Regular Maximum	Historically Underserved	Regular Maximum	Historically Underserved
Materials	75 percent	90 percent	75 percent	75 percent	75 percent	75 percent
Equipment Installation	75 percent	90 percent	75 percent	75 percent	75 percent	75 percent
Labor	75 percent	90 percent	75 percent	75 percent	75 percent	75 percent
Mobilization	75 percent	90 percent	75 percent	75 percent	75 percent	75 percent
Operation & Maintenance	N/A	N/A	N/A	N/A	N/A	N/A
Acquisition of Technical Knowledge	75 percent	90 percent	N/A	N/A	N/A	N/A
Foregone Income	100 percent	100 percent	N/A	N/A	N/A	N/A
Risk	N/A	N/A	N/A	N/A	N/A	N/A
Administration & Permit Costs	N/A	N/A	N/A	N/A	N/A	N/A

Subpart C – Payment Rates

Figure 3-2 An Example of a Payment Rate Development Methodology ("Green Box")

Cost Category	Cost Per Unit	EQIP Program Payment Percentage	EQIP-HU Program Payment Percentage	WHIP Program Payment Percentage	WHIP-HU Program Payment Percentage	EQIP Payment Rate	EQIP-HU Payment Rate	WHIP Payment Rate	WHIP- HU Payment Rate
Materials	\$1.50	50 percent	85 percent	65 percent	65 percent	\$0.75	\$1.13	\$0.98	\$0.98
Equipment Installation	\$2.50	50 percent	85 percent	65 percent	65 percent	\$1.25	\$2.13	\$1.63	\$1.63
Labor	\$18.00	50 percent	85 percent	65 percent	65 percent	\$9.00	\$15.30	\$11.70	\$11.70
Mobilization	\$0.50	50 percent	85 percent	65 percent	65 percent	\$0.25	\$0.43	\$0.33	\$0.33
Operation & Maintenance	\$0.60	0 percent	0 percent	0 percent	0 percent	\$0.00	\$0.00	\$0.00	\$0.00
Acquisition of Technical Knowledge	\$0.00	50 percent	85 percent	0 percent	0 percent	\$0.00	\$0.00	\$0.00	\$0.00
Foregone Income	\$2.75	100 percent	100 percent	0 percent	0 percent	\$2.75	\$2.75	\$0.00	\$0.00
Risk	\$0.00	0 percent	0 percent	0 percent	0 percent	\$0.00	\$0.00	\$0.00	\$0.00
Administration & Permit Costs	\$200.00	0 percent	0 percent	0 percent	0 percent	\$0.00	\$0.00	\$0.00	\$0.00
Total:	\$225.85					\$14.00	\$21.74	\$14.64	\$14.64

Subpart D - Payment Schedules

613.30 Introduction

The payment schedule is a listing of all eligible practice and/or activity payment rates for the defined geographical area. There should be only one payment schedule per State for each program, except where compelling economic differences among regions within a State justify the development of separate payment schedules. States shall also coordinate across State boundaries in order to ensure "reasonably consistent" cost data and payment rates within similar geographic areas. Payment schedules will be approved by the STC, posted to the State Web site and FOTG, and uploaded to the Agency planning and contracting software at the beginning of each fiscal year.

613.31 Payment Schedule

A. The program payment rate totals from the last line of the Payment Rate Development Methodology ("Green Box") will be transferred to the Payment Schedule Results ("Blue Box") as displayed in Figure 4-1. The "Blue Box" summarizes the payment rates (developed in the "Green Box") that are authorized for program payments, for each practice or activity type.

Figure 4-1 An Example of a Payment Schedule Results ("Blue Box") Section of a Payment Schedule

Practice Code	Cost Share Program	Practice/Activity Name	Practice/Activity Type	Unit Type	Payment Rate
382	EQIP	Fence (Ft.)	Barbed Wire	Foot	\$1.32
382	EQIP	Fence (Ft.)	Barbed Wire-HU	Foot	\$1.97
382	WHIP	Fence (Ft.)	Barbed Wire	Foot	\$1.32

B. Practice or Activity Code

The practice code is inputted and must match the code defined in the conservation practice standard. The activity code is defined by programs and as approved for use in the Conservation Practice Standards (CPS) online database.

C. Cost-Share Program

The cost-share program abbreviated name is transferred from the "Green Box," is designated by the Financial Assistance Programs Division (FAPD), and must match the planning and contracting software.

D. Practice/Activity Name

The practice name must match the code in the conservation practice standard or activity name defined by programs and as approved for use in the CPS online database.

E. Practice/Activity Type

The practice or activity type is inputted and should briefly describe the practice or activity scenario in the "Grey Box."

F. Unit Type

The unit type is transferred from the "Grey Box."

G. Payment Rate

The payment rate is transferred from the "Green Box."

- H. Once the payment schedule results ("Blue Boxes") are developed for all the payment schedule worksheets, the "Blue Box" data will be used to prepare final payment schedules for each program.* Final payment schedules will be created in the Agency-approved spreadsheet format as displayed in Figure 4-2 (or as designated by FAPD) and used in the NRCS planning and contracting software.
- * The contents of each of the "Blue Boxes" will be copied to a blank worksheet; however, each "Blue Box" includes cell formulas that may not function when transferred to a new worksheet. This problem can be avoided through any of several data processing techniques, including cutting and pasting worksheet lines from the "Blue Box" into a separate spreadsheet using the "Edit," "Paste Special," and "Values" EXCEL® functions. It may also be avoided by copying text to a new spreadsheet and then re-entering the numeric values into cells where formulas must be replaced.

Figure 4-2 Payment Schedule in Planning/Contracting Software Format

Click here for a copy of Figure 4-2 – EQIP Payment Schedule.

I. Financial assistance programs (where approved) allow the rounding of payment rates and setting payment caps. Do not round payment rates in the "Blue Box." If rounding is desired, it is done in the payment schedule that is uploaded into the planning and contracting software. Payment caps are also not set in the "Blue Box," but for reference purposes additional blank lines may be added between the "Blue Box" and the "Green Box" to document approved caps for contracting (practice payment "caps" are established in contracting software).

613.32 Rounding

- A. After the payment schedule has been developed, it may be desirable to "round" the payment rate to provide clarity and efficiency in planning and contracting. Rounding is optional and is done in the payment schedule prior to uploading into the planning or contracting software. Rounding to the nearest base-ten even number will help to avoid contracts with "odd numbers" like \$250.03 or \$1.38. Examples of rounding are displayed in Figure 4-3.
- B. Before rounding, consider how many dollars are invested in the practice in your State, and consider the tradeoff between efficiency gains and the overall impact of accuracy in payments. For example, payment rates for practices that are paid in small dollar amounts per unit but that are typically implemented in very large quantities per year (as well as practices for which NRCS typically pays a very large total dollar amount per year within the State), should be rounded with care—if they are rounded at all—to ensure optimal expenditure of tax dollars.

Figure 4-3 Rounding Examples

Under \$5: Round to the nearest \$.10 \$5-\$9.99: Round to nearest \$.50

Title 200 – National Resources Economics Handbook

\$10-\$49.99: Round to nearest \$1.00 \$50-\$99.99: Round to nearest \$5.00 \$100-\$999.99: Round to nearest \$10.00 \$1,000 and up: Round to the nearest \$100

Subpart D – Payment Schedules

Figure 4-2 Payment Schedule in Planning/Contracting Software Format

	А	В	С	D	E	F	G	Н
1	EQIP PAYMENT SCHEDULE							
	Practice	Cost_Share						
2	_Code	_Program	Practice_Name	Component				Share_Rate
3	313	EQIP	Waste Storage Facility	Reinforced Concrete Structure	CY	257.50	PR	100
4	313	EQIP	Waste Storage Facility	Storage Pond < 4000 CY	CY	4.12	PR	100
5	313	EQIP	Waste Storage Facility	Storage Pond > 4000 CY	CY	3.10	PR	100
6	314	EQIP	Brush Management	Biological - Goats	AC	100.00	PR	100
7	314	EQIP	Brush Management	Biological - Insects OR Mechanical - Dozing Trees	AC	50.00	PR	100
8	314	EQIP	Brush Management	Chaining - Double Pass	AC	45.00	PR	100
9	314	EQIP	Brush Management	Chaining - Single Pass	AC	22.50	PR	100
10	314	EQIP	Brush Management	Chemical - Fixed Wing	AC	15.00	PR	100
11	314	EQIP	Brush Management	Chemical - Helicoptor OR Mechanical - Standard	AC	20.00	PR	100
12	316	EQIP	Animal Mortality Facility	Earthwork < 4000 CY	CY	4.12	PR	100
13	316	EQIP	Animal Mortality Facility	Earthwork > 4000 CY	CY	3.10	PR	100
14	316	EQIP	Animal Mortality Facility	Reinforced Concrete - Slabs	CY	175.00	PR	100
15	316	EQIP	Animal Mortality Facility	Reinforced Concrete Structure	CY	257.50	PR	100
16	317	EQIP	Composting Facility	Asphalt Paving	SQFT	1.10	PR	100
17	317	EQIP	Composting Facility	Earthwork < 4000 CY	CY	4.12	PR	100
18	317	EQIP	Composting Facility	Earthwork > 4000 CY	CY	3.10	PR	100
19	317	EQIP	Composting Facility	Non-Reinforced Concrete - Slabs	CY	150.00	PR	100
20	317	EQIP	Composting Facility	Reinforced Concrete - Slabs	CY	175.00	PR	100
21	317	EQIP	Composting Facility	Reinforced Concrete Structure	CY	257.50	PR	100
22	320	EQIP	Irrigation Canal or Lateral	Earthwork < 4000 CY	CY	4.12	PR	100
23	320	EQIP	Irrigation Canal or Lateral	Earthwork > 4000 CY	CY	3.10	PR	100

Subpart E – Maintenance of Cost Data and Payment Schedules

613.40 Introduction

- A. The purpose of this section is to provide States with guidance on the general process for the annual review and maintenance requirements for the payment schedules. As mentioned in an earlier chapter, payment schedules will be reviewed and updated, as needed, annually and will be maintained at the State level. This chapter provides guidance on collecting, updating, and maintaining cost data, annual reviewing data, and other issues that must be addressed prior to the annual fiscal year upload of payment schedules.
- B. Changes to payment schedules generally should not be made unless individual payment rates have increased or decreased by 10 percent or more. Once payment schedules have been publically announced for each program (posted to FOTG and State Web site), and uploaded to contracting software, no modifications may be made and associated payment rates cannot be changed. A payment schedule will be maintained for each approved conservation program. States are encouraged to maintain consistency in payment schedules across programs.

613.41 Payment Schedule Annual Plan of Work - Example

- A. Certain activities are required annually to prepare payment schedules for the upcoming fiscal year. There are four primary sources of information that are likely to influence the specific work that must be done each year to prepare for fiscal year roll-out. These are national policy, national conservation practice standards, State policy, and practice and activity costs. Payment schedules developers must take into consideration these influences and incorporate appropriate changes into payment schedule data.
- B. Updates to payment schedule worksheets begin immediately after the payment schedules are approved at the beginning of each fiscal year. The following is an example of a payment schedule annual plan of work:

Click here for a copy of the Payment Schedule Plan of Work - Example.

613.42 Cost Data Quality Assurance

States must develop a quality assurance plan for cost data and payment schedules. This plan shall include a timeline for an annual review process, the items and issues that must be reviewed, and the review methodology. The plan shall also identify personnel to participate in the review process and provide enough time for corrective actions to be carried out. Quality assurance plans may be modified or changed from fiscal year to fiscal year, depending on the previous year's findings. The General Manual contains guidance on developing quality assurance plans.

- (1) **Cost Data Updates** Cost data collection shall take place throughout the year. As data become available, payment schedule planners and developers should document the data for use in developing upcoming fiscal year payment schedules.
- (2) **Review Methodology** All payment schedules being utilized in the State shall be reviewed for appropriate scenario descriptions, data documentation, mathematical errors, and general acceptability. Suggested methodology for this review is to

- establish a multi-discipline review team to provide assurance that cost data and payment rates meet handbook guidelines and program policy.
- (3) **Quality Control Checklist** Subpart G, Exhibits, Section 613.61 is a sample checklist that States may use to conduct quality assurance reviews. The checklist may also be used by developers as a guide for completing payment schedules.

613.43 Payment Schedule Library Web site

Payment schedules will be posted to the payment schedule library Web site for: quality assurance reviews, as information sources for Agency technical specialists, as examples for other States, and to archive approved payment schedules for financial assistance programs. Access to this site will be restricted to Agency personnel due to the sensitive nature of the documentation. The public will have access to the cost data and approved payment schedules uploaded to the State FOTG, but will not have access to in the agency internal payment schedule library Web site. To locate the current payment schedule library Web site, refer to the NRCS Economics homepage.

613.44 FOTG Cost Data

- A. Two sets of data from the payment schedule process will be included in each State's FOTG: 1) The payment schedules used in financial assistance programs, and 2) the cost data ("Grey Box") from each practice or activity payment schedule workbook. Both sets of data will be filed in Section I, under Cost Data, making them available to the public.
- B. Final payment schedules for financial assistance programs will be posted to the FOTG (without modification) each fiscal year. The payment schedule workbooks and worksheets will be posted without any financial assistance program information, personal identifiable information, or other sensitive data. The "Blue Box" and the "Green Box" will be removed from each worksheet. Only the "Grey Box" cost data will remain in each worksheet. In the "Grey Box," all personal identifiable information or references to private businesses, contractors, vendors, or other sensitive data references must be removed from the cost data. NRCS must also avoid any public endorsement or bias toward specific suppliers or trade names, and must refrain from publishing any data source or information that would imply endorsement.

Subpart E – Maintenance of Cost Data and Payment Schedules

State	Fiscal Year	
<u>Date</u>	Activity	Persons Involved
November	Request State Technical Advisory Committee input for next fiscal year.	State Conservationist (STC)
January	Obtain a list of new or updated practices from Conservation Practice Standards (CPS) for the upcoming fiscal year.	State Resource Conservationist and State Engineer
February	Obtain a list of approved practices for the upcoming fiscal year.	State Financial Assistance (FA) Program Managers
February	Identify practices or activities needing to be developed (or eliminated).	State Resource Conservationist and State Program Managers
Feb-June	Develop or update practice or activity scenarios.	State Technical Specialists
Jan-June	Develop or update practice or activity costs.	State Economist
	Collect cost receipts from field offices.	
	Contact vendors/contractors for updated information.	
	Obtain updated commercial cost data/software.	
	Query Internet for cost data	
Feb-June	Organize and work with interdisciplinary teams to develop/update payment schedule worksheets.	State Economist, State Resource Conservationist, and State Engineer
May	Review program regulations and statutes for changes from the previous year.	State FA Program Managers, State Economist
July	Upload payment schedule workbooks to SharePoint site for Cost Data Quality Assurance Review.	State Economist
July	Work with adjoining States to ensure that cost data and payment rates are "reasonably consistent" across State lines.	State Economist, Adjoining State Contact
August	Provide payment schedules to State Technical Advisory Committee for review.	STC
September	STC will approve payment schedules.	STC
October	Submit updated final payment schedule workbooks to SharePoint site.	State Economist
October	Create final payment schedule from payment schedule workbooks (Data from "Blue Box" into Agency-approved spreadsheet file.)	State Program Managers
October	Upload payment schedules to ToolKit and ProTracts.	State Program Managers
November	Prepare and post payment schedule information to the FOTG.	State Program Managers

Subpart F - Glossary

613.50 General Terms and Definitions

This glossary provides explanation for terms associated with the development and use of payment schedules. Additional definitions and explanation of terms may be found in other Agency policy manuals, handbooks, and documents found in the eDirectives System.

- (1) Acquisition of Technical Knowledge (Cost Category) Cost category that includes cash expenditures to obtain direct technical assistance, over and above what NRCS (or similar agency) would typically provide. It is the cost to the land manager of acquiring technical knowledge, through personal study or educational course, to operate or manage a practice or enhancement activity that is "new" to the land user. Includes time and other expenditures related to learning how to plan, oversee, and record new farm activities, or related to training on how to operate or manage a practice or enhancement activity (/activity) that is "new" to the land user. Also may include the cost of hiring a private consultant or specialist to assist in implementing the practice. See Subpart B, Cost Data, Section 613.11, F (vi).
- (2) **Actual Cost Data** Data pertaining to the actual market cost of implementing a conservation practice/activity. This data can be obtained through a variety of means or sources, including completed contracts, vendor information, cost databases, and other cost estimating software or tools, conservation partners, discipline experts, etc.
- (3) **Actual Cost, Not to Exceed a Specified Maximum (AM)** Cost method in which a contract payment for a practice is equal to the actual cost of carrying out the practice, but which payment cannot exceed a specified maximum payment, or payment cap. This method is only authorized for contract items (900 series) providing funding for Technical Service Providers.
- (4) Administration and Permit Costs (Cost Category) Cost category that includes the costs of completing paperwork and attending meetings, and the regulatory management costs of implementing a practice or activity. This cost category also includes the cost of obtaining all necessary permits. Permit cost is the cost of obtaining all necessary legal documents to implement the practice or activity. See Subpart B, Cost Data, Section 613.11, F (ix).
- (5) **Amortize** To spread the cost of implementing a conservation practice/activity over the practice life for that practice/activity using an appropriate or approved amortization rate or discount rate.
- (6) **Annual Cost** A practice or activity implementation cost that is incurred on an annual, recurring basis, usually over the period of the practice life. Examples include operation and maintenance costs (O&M) and some types of foregone income costs.
- (7) **Applicable Area** The geographic area to which a payment schedule applies.
- (8) **Component** A part, input, or activity necessary to implementing a conservation practice. See Subpart B, Cost Data, Section 613.12 for guidance on the use of components in payment schedule development.
- (9) **Conservation Practice** A specified treatment, such as a structural or land management measure, which is planned and applied according to NRCS standards and specifications.

- (10) **Cost** The amount of money and/or time expended and/or opportunity costs incurred by a participant to implement a conservation practice or enhancement activity.
- (11) **Cost Categories** Designated subdivisions of the costs of implementing conservation practice/activities. The cost categories approved for use in developing cost data are: Materials, Equipment, Labor, Mobilization, Operation and Maintenance, Acquisition of Technical Knowledge, Foregone Income, Risk, and Administration and Permit Costs. National program managers define the approved cost categories used to develop payment rates for programs.
- (12) **Cost Data** A dataset containing cost estimates and supporting documentation for conservation practices and activities.
- (13) **Cost Data Worksheet** A specified section of a worksheet containing cost data for a single practice/activity type. It is the "Grey Box" within each practice/activity type worksheet.
- (14) **Cost Estimate** An estimate of the costs of implementing and maintaining a conservation practice/activity. Cost estimates can apply to either actual costs for a specific producer project, or costs of a practice/activity type within a specific implementation scenario.
- (15) **Cost List** Used prior to October 1, 2007. A list of conservation practices (with applicable components) which identifies unit costs or payment rates by cost-share method for a geographic area.
- (16) **Cost-Share Payment** Used prior to October 1, 2007. Payment made by the Federal Government to a participant to partially offset the cost of implementing a practice/activity under a cost-share, financial assistance program.
- (17) **Cost-Share Rate** The percentage of cost paid by the Agency for the implementation of a practice/activity. Within the payment schedule process, this is called the payment percentage.
- (18) **Cost Variability** The degree to which the cost of implementing a conservation practice/activity varies, either across time, geographic boundaries, or between scenarios.
- (19) **Discount Rate (Percent/Year)** Rate of return used to evaluate the benefits and costs over time of conservation practices. The discount rate is the rate by which benefits that accrues in some future time period must be adjusted so that they can be compared with values in the present. Not typically used in developing payment schedules but useful in performing economic analysis of proposed conservation projects. Set by national policy found in General Manual, Title 200, Part 400, Subpart C and in Office of Management and Budget (OMB) Circular A-94.
- (20) **Economist** Either an official NRCS economist or an individual designated to fulfill the role of economist for the purposes of developing cost data and payment schedules within a given State.
- (21) **Enhancement Activity** Actions other than conservation practices that are included as a part of a conservation stewardship contract, such as a measure, incremental movement on a conservation index or scale, or an on-farm demonstration, pilot, or assessment.
- (22) **Equipment/Installation (Cost Category)** Cost category that includes the cost of equipment (owned, rented, or hired) used to implement a practice/activity. See Subpart B, Cost Data, Section 613.11 F (ii).
- (23) **Financial Assistance** Federal dollars paid to producers to support the implementation of a conservation practice/activity.
- (24) **Financial Assistance Program** NRCS programs such as Agricultural Management Assistance (AMA), Conservation Stewardship Program (CSP),

- Environmental Quality Incentives Program (EQIP), Wildlife Habitat Incentives Program (WHIP), etc., that include financial assistance payments to producers as distinguished from programs that include technical assistance only, such as Conservation Technical Assistance (CTA).
- (25) Foregone Income (Cost Category) Cost category that includes lost net income from a change in land use or land taken out of production, or the opportunity cost of accepting less farm income in exchange for improved resource conditions. Foregone net income may be a one-time cost, such as Deferred Grazing (lost forage value) during range or pasture establishment. Foregone net income may also be an ongoing cost, such as an annual net loss from a conservation buffer. See Subpart B, Cost Data, Section 613.11 F (vii).
- (26) **Front-Loaded Practice Payments** Payments made at the outset of the period of time covered by a financial assistance programs contract. Front-loaded practice payments are made prior to implementation of conservation practices.
- (27) **Geographic Area** The area covered by a payment schedule (Statewide, watershed, county, other).
- (28) **Implementation** Carrying out a planned and/or contracted conservation practice/activity.
- (29) **Implementation Cost** Total Implementation Cost = (Materials + Equipment/Installation + Mobilization + Acquisition of Technical Knowledge + Administration/Permit) + (First year of: Operation/Maintenance + Foregone Income + Risk). Also known as "Total Cost" within the payment schedule process.
- (30) **Installation** Commitment of real resources in the implementation of a conservation practice or enhancement activity. Installation commences when the first irreversible use of real resources occurs. For example, the purchase of supplies for installation of a pipeline does not constitute installation. When pipeline excavation commences, installation has begun. Installation is finished when a conservation practice has been completed and certified.
- (31) **Labor** (**Cost Category**) Cost category that includes expenditures for the labor (own or hired) required to implement a practice/activity. Labor may, on occasion, be included in other cost categories for calculation purposes or when available cost data already include labor as an embedded cost within another cost (such as Equipment/Installation cost). See Subpart B, Cost Data, Section 613.11 F (iii).
- (32) Land Management Practice See Management Practice.
- (33) **Life Span** See Practice Lifespan.
- (34) Management Practice Conservation practices that primarily require site-specific management techniques and methods to conserve, protect from degradation, or improve soil, water, or related natural resources in the most cost-effective manner. Management practices include, but are not limited to, nutrient management, manure management, integrated pest management, strip-cropping, contour farming, grazing management, and wildlife habitat management. Management practices have a lifespan of one year.
- (35) **Materials** (**Cost Category**) Cost category that includes inputs (typical materials) purchased to install or implement, operate and maintain a practice/activity. See Subpart B, Cost Data, Section 613.11 F (i).
- (36) **Mobilization (Cost Category)** Cost category that includes direct cash expenditures required to move equipment and materials to and from the installed practice/activity site. May include access costs such as costs associated with a temporary road, bridge, or trail. See Subpart B, Cost Data, Section 613.11 F (iv).
- (37) **One-Time Costs** Costs that are incurred only once in carrying out a conservation practice/activity.

- (38) **Operation and Maintenance (Cost Category)** Cost category that includes work performed by the participant to keep the applied conservation practice/activity functioning for the intended purposed for its practice life. Operation includes the administration, management, and performance of non-maintenance actions needed to keep the completed practice/activity safe and functioning as intended. Maintenance includes work to prevent deterioration of the practice/activity, repairing damage, or replacement of the practice/activity to its original condition if one or more components fail. See Subpart B, Cost Data, Section 613.11 F (v).
- (39) **Opportunity Cost** The value of the best alternative forgone in order to implement and maintain a conservation practice/activity. Includes both explicit and implicit costs. A cost incurred to purchase material inputs is an explicit opportunity cost. Foregone income, such as the net revenue from crops removed for the purpose of installing a conservation buffer, is an implicit opportunity cost.
- (40) **Payment Percentage** The percentage of the sum of all eligible cost categories to implement a conservation practice, activity, or enhancement within a typical implementation scenario that will be paid to a program participant.
- (41) **Payment Rate** The payment method used for all Financial Assistance payments (except payments for TSPs) for eligible practices/activities in contracts written beginning October 1, 2007. It is the sum of all eligible cost categories, multiplied by the approved program payment percentage, for a typical implementation scenario to implement a conservation practice/activity.
- (42) **Payment Schedule** A list of the payment rates for all approved practices/activities for a specific financial assistance program for a defined geographic area (used in Agency planning and contracting software).
- (43) **Payment Schedule Workbook** A payment schedule workbook is a computer file for a single conservation practice/activity which contains a separate worksheet for each practice/activity type.
- (44) **Payment Schedule Worksheet** A worksheet containing cost data to a single practice/activity type for a conservation practice code or enhancement activity. It is one "tab" within a cost data workbook. Worksheets can contain all types of cost data, including hyperlinks to data sources contained outside of the worksheet or workbook. Worksheets contain the "Blue," "Green," and "Grey" boxes.
- (45) **Payment Unit** The unit of payment for a practice/activity. Can differ from practice reporting units.
- (46) **Permitting** The process of obtaining approval and/or permission from any applicable official entities for carrying out a conservation practice. Usually associated with structural practices but may apply to non-structural practices as well.
- (47) **Practice** A specified treatment, such as a structural or land management measure, which is planned and applied according to NRCS standards and specifications.
- (48) **Practice Average Annual Cost** The one-year, amortized cost of implementing a conservation practice/activity plus one year of estimated operation and maintenance costs. Annual cost calculations will be completed using the Federal projects discount rate. Does not apply to management practices with one-year lifespan.
- (49) **Practice Code** The identifying number designated within the NRCS national practice standard database as being associated with a specific conservation practice and its practice name.
- (50) **Practice Life (Years)** Practice life based on how long the materials or activity will last or when they are expected to be replaced by newer technology.
- (51) **Practice Name** The identifying name designated within the NRCS national practice standard database as being associated with a specific conservation practice and its practice code.

- (52) **Practice Standard** NRCS standards and specifications under which a conservation practice must be implemented in order to be certified. Certification of contracted conservation practices is required before the payment terms of a financial assistance contract are considered to have been fulfilled.
- (53) **Practice/Activity Type** A specified version of the application of a conservation practice/activity within a defined, typical implementation scenario. There may be several practice types associated with a single practice code or enhancement activity. For example, under Fence (382), practice types may include barbed wire, electric wire, woven wire, etc.
- (54) **Program Payment Percentage** The percent of eligible costs that the Agency is willing to pay for implementing a conservation practice or activity. Equivalent to cost-share rate but applied during payment rate development. In contrast, cost-share rates were used in cost lists and applied during the contracting process.
- (55) **Reporting Unit** Unit of measure used for reporting conservation progress within NRCS' Progress Reporting System (PRS). Can vary from payment units.
- (56) **Risk** (**Cost Category**) Cost category that includes uncertain costs. This can be expressed in terms of the probability of financial loss associated with implementing a conservation practice/activity and the value of the loss should it occur. For example, the probability that there will be a financial loss due to a decline in crop or livestock yields or that there will be an unforeseen increase in production or management expenses. See Subpart B, Cost Data, Section 613.11 F (viii).
- (57) **Section I Cost List** A cost list provided via Section I of the eFOTG to NRCS personnel and to the public for purposes of conservation planning activities. This cost consists of program-neutral cost data. Section I cost lists are not equivalent to a payment schedule. The cost data is not to be used in lieu of formal cost estimation when planning complex structural conservation practices.
- (58) **Structural Practice** A conservation practice that primarily involves the establishment, construction, or installation of a site-specific measure to conserve, protect from degradation, or improve soil, water, or related natural resources in the most cost-effective manner. Examples include, but are not limited to, facilities installed to handle animal waste, terraces, grassed waterways, livestock and wildlife water developments, capping of abandoned wells, etc.
- (59) **Total Cost** The sum of the nine cost categories for a single practice/activity type. The total practice cost constitutes the NRCS estimate of how much it will cost a producer to implement a conservation practice/activity. Also known as "Implementation Cost." Total Implementation Cost = (Materials + Equipment/Installation + Mobilization + Acquisition of Technical Knowledge + Administration/Permit) + (First year of: Operation/Maintenance + Foregone Income + Risk).
- (60) **Typical Implementation Scenario** A scenario which describes the resource setting within which a practice/activity type is typically implemented. A typical implementation scenario describes the most common application of the practice, including how the practice is implemented and typical quantities and units, materials and other inputs used, and methods of implementation, on the most common landscape setting. One or more typical implementation scenarios may be developed for each practice/activity, based on the practice complexity, to account for variability in implementation and variations in economies of scale, i.e., large, medium, small animal waste storage structure, or high, moderate, low levels of pest management. Each separate implementation scenario for a practice/activity will correspond to a "practice/activity type."

- (61) **Unit Cost** The cost of implementing a single payment unit of a specified practice/activity type.
- (62) **Unit for Cost Estimate** The unit type used for preparing a cost estimate for a practice/activity for a typical scenario (not required to be the same unit as the national "conservation practice standard" unit(s)). Different scenarios within the same practice/activity may have different units. The unit may vary from payment units and from reporting units.
- (63) **Unit Type** The unit of cost or payment used for a specified conservation practice/activity. Examples include acres (AC), animal units (AU), feet (FT), number (NO), etc.
- (64) **Vegetative Practice** A conservation practice that primarily involves the establishment or planting of a site-specific vegetative measure to conserve, protect from degradation, or improve soil, water, or related natural resources in the most cost-effective manner. Examples include, but are not limited to, vegetative buffer strips, plantings for the protection of vulnerable or heavily-impacted areas, revegetation of riparian zones, etc. Vegetative practices have a lifespan of more than one year.

Subpart G - Exhibits

613.60 Cost Data Examples

Materials

Critical Area Planting:

Perennial Grass/Clover Seed Mix:

Pounds per Acre: 18 Cost per Pound: \$6.00

(White Clover, Annual Rye, Oats)

Fertilizer (placed with seed) \$30.00

16-16-16-0, 100lbs/Ac, \$.30/Lb

Total Cost: \$138.00/Acre

Nutrient Management:

Soil Test	\$10.00Acre
Tissue Testing	\$5.00/Acre
Nutrient Budget	\$2.00/Acre
Record Keeping	\$3.00/Acre
Precision Agricultural	\$10.00/Acre
Tillage of Green Manure	\$.50/Acre
Manure Nutrient Testing	\$.25/Acre
Use of Overlap Reduction Technologies	\$5.00/Acre

Dike

Dike Length (Ft):	500
Unit:	CuYd
Units/LnFt Dike:	2.75
Total Units:	1,375
Total Cost of Materials/CuYd:	\$10.00

Equipment

Sediment Basin (\$/Cubic Yard):

Excavation/Fill (bulk earth moving with dozer)
Units Moved per hour: 50
Units: CuYd
Equipment Cost w/o Operator (\$/Hr): \$90.00
Total Excavation Cost/Unit: \$1.80

Pasture Planting:

Seedbed Preparation and Seeding = \$65.00/Acre (Data Source: Extension Service Crop Budgets, 2008)

Labor

Fence:

65 percent of Materials & Equipment Costs

Grassed Waterway:

Unskilled Labor = \$10.00/hr * 2 hrs/acre = \$20.00/acre Skilled Labor = \$15.00/hr * 1 hrs/acre = \$15.00/acre

Conservation Cover:

Seedbed Preparation and Seeding: .50 Hours/Acre * \$16.00/Hour = \$8.00/Acre (Data Source: Extension Service Crop Budgets, 2008)

Mobilization

Pond:

3 percent of Materials, Equipment & Labor Costs

Spring Development:

75 percent of Materials, Equipment & Labor Costs

Operation and Maintenance

Sediment Basin:

Five percent of materials, equipment/installation and labor costs. Maintenance Plan Needed: Inspect embankments and pipe inlets, repair damages, remove debris, mow, fertilize, control noxious weeds and burrowing animals, re-seed, and clean out basin.

Fence:

Two percent of materials, equipment/Installation and labor costs. Inspect, repair, check tension, clear brush and fallen limbs.

Acquisition of Technical Knowledge

Prescribed Grazing:

Grazing management software and training \$500.00/(150AU*12months) = \$.28/AUM

Feed Management:

Hire a dairy feed nutritionist/consultant = \$.05/AU/Day

Pest Management:

Hire Professional with Certified Pesticide Application License = \$2.00/Acre

Conservation Tillage:

Thirty hours land user time (conduct personal research, plan with NRCS) * \$20.00/hour = \$600.00.

Foregone Income

Field Border:

One acre taken out of row crop production. Row crop net income minus hay net income (from occasional hay harvest from field border). Net Income = \$200.00/Acre/Year

Use Exclusion:

One acre grazing land taken out of production, two AUMs/Acre/Year at \$15.00/AUM = \$30.00/Acre/Year

Grass Waterway:

Installed using 0.5 acres of corn field.

Corn Revenue = \$5.00/bu*100 bu/ac*0.5 acre = \$250.00 on 0.5 acres.

(200-VI-NREH, Amend. 2, March 2009)

Corn Production Costs=\$2.00/bu*100 bu/ac*0.5 acre = \$100.00 on 0.5 acres. Foregone Net Income for 0.5 acres of Corn = \$150.00 (\$250.00 - \$100.00). If Payment Unit is "acre," then Foregone Income = \$300.00/acre.

Risk

Residue Management:

Increased risk with change in tillage system, 10 percent chance of 20% reduction in grain production

60 Bushels/Acre * \$2.50/Bu * 10 percent * 20 percent = \$4.80/Acre/Year (first 3-4 years in grain)

Expected Value Equation

Expected value can be used to estimate the Risk cost category. Expected Value= [Probability of an event happening] * [Value of the event when it happens]. For example, the expected value of a cover crop failing = [Probability of a cover crop failure] * [Cost of replanting after the cover crop fails]. If probability = 3 percent, and replanting cost = \$30.00/acre, then the expected value = [0.03] * [\$30.00/acre] = \$0.90/acre.

Administration & Permit Costs

Animal Waste Storage Structure:

Paperwork required to design and meetings with engineers = \$500/165,000CuFt Storage = \$.003/CuFt

Building permit required \$1,000/165,000CuFt Storage = \$.006/CuFt

Cost Data Source References

Coastline Construction Company, Incorporated, Tillamook, Any State 503-555-1234, July 2008

Mid-West Grain Growers, Any State, April 2007

American Society of Agricultural Engineers Standards 2003, Standards Engineering Practices Data

Engineering News Record, www.enr.com, April 2007

EQIP Contract #12345, Animal Waste Storage Structure, Middleton County, Any State, September 2008

Any State Department of Forestry, Personnel Communication with Regional Forester, 2007.

613.61 Payment Schedule Quality Review Worksheet

Practio	ce/Activity Name:	State/Location:				
Code	Number:	Contact Person:				
File N	fame:	Phone:				
Paym	ent Schedule Workbook File Requ	irements:				
	 Posted to Payment Schedule SharePoint Web site. Workbook file conforms to required naming convention. One file per practice or activity offered by the State. 					
Paym	ent Schedule Worksheet Requiren	ents:				
	Worksheet conforms to required for Adherence to methodology in the E					
Paym	ent Schedule Results (Blue Box)					
	Data transferred correctly from the Worksheet links and calculations ar One row per practice type, per Final Practice Code Cost-Share program Practice/Activity Name Practice/Activity Type Unit Type Payment Rate	e correct.				
Paym	ent Schedule Development Method	lology (Green Box)				
	Data transferred correctly from the Worksheet links, calculations are concerned to the nine of the nine of the Program Payment Percentage for program. Program payment percentage follows One "total" payment rate for each so	orrect. cost categories. cor each of the nine cost categories, per FA vs national FA program policy.				
Cost 1	Data (Grey Box)					
	Worksheet links, calculations are contact Each practice is supported by a comunic of Scenario description and cost ited. Scenario can be realistically impured Scenario identifies common fact Geographic area is clearly defined a	prehensive scenario. ems meet the practice standards. plemented and meets practice standards. ilitating practices.				
	Cost estimate "Unit" is simplest uni Practice "Life Span" identified. Discount rate meets criteria in Econ Cost data identified in nine cost cate	omic Handbook. egories (some may have a \$0 cost).				
	Cost data source, location and date a	-				

Title 200 – National Resources Economics Handbook

 □ Cost data and methodology are adequate. □ Materials □ Equipment/installation □ Labor □ Mobilization □ Operation and Maintenance* □ Acquisition of Technical Knowledge □ Foregone Income* □ Risk* □ Administration and Permit Costs * Identified and estimated as "annual" costs. □ Meets financial assistance programmatic considerations (see current FA programs policy). 					
Comme	nts:				
Actions	Actions Required:				
Overall	Review Res	ults:			
N ()	Does not	0 1/4 5/4 1 1			
Meets	Meet	Quality Standard			
		Adherence to cost data and payment schedule methodology			
		Use of practices consistent with practice standards			
Reviewe	er(s):				
Date:					