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Explanation of Cost Types

Cost Type Definitions and Payment Calculations

There are currently four cost types as described by the General Manual (GM), Title 120, Part 404, Subpart D – Cost Sharing and the Conservation Programs Manual (CPM), Part 512, Subpart D – Cost Sharing and Incentive Payments. Those cost types are as follows: Average Cost (AC), Actual Cost Not To Exceed an Average Cost (AA), Actual Cost Not To Exceed a Maximum (AM) and Flat Rate (FR).

Figures 1. and 2., graphically illustrate the formulation of each cost type.

Average Cost (AC):

Average Costs (AC) are developed from actual cost data as well as other sources, if needed. Average costs are based upon the most common or typical resource settings and/or situations, **NOT** the most **or** least expensive occurrences.

Average costs are used when adequate cost data can be obtained. Although the term *"adequate"* is not defined, the consistency of actual practice costs on a representative number of jobs installed may determine whether or not there is adequate cost data.

AC payments are calculated as follows:

$$\textbf{AC Payment} = \textbf{\$AC Unit Cost} \times \textbf{Cost-Share Rate} \times \textbf{Units Installed}$$

Cost List:

Practice Code	Practice Name	Unit	Qty	Cost Type	% C/S	Cost	Cost-Share Amount
382	Fence	Lin. Ft.	1.0	**AC**	50	**$.95**	$.48

Protracts Calculation:

CIN	Component	Units	Unit Cost	Rate	Type	Amount	Cost-Share
1a	382-Fence, Permanent (interior only)	Lin. Ft.	$ .95	% 50	**AC**	5200	$ 2496.00

The landowner's actual unit cost may be more **or** less than the AC, but the actual payment will be based upon the AC unit cost listed on the cost list. Because the payment calculation is automatically based upon the AC unit cost, a calculation of landowner's actual unit cost is not required.

Actual Cost Not To Exceed an Average Cost (AA):

Actual Cost Not to Exceed an Average Cost (AA) cost type should be used if either of the following circumstances are anticipated:

- The participant can buy materials and services in bulk at discount prices below the stipulated average cost.
- Cost of materials and services is likely to decline by the time installation is complete resulting in a windfall payment.

When an AA cost type is designated, <u>two</u> calculations are required to be able to determine the payment:

AA Payment = <u>Lesser of</u>

($Actual Unit Cost × Cost Share Rate × Units Installed)

OR

($AA Unit Cost × Cost-Share Rate × Units Installed)

Currently, in Florida there are no practices that are assigned an AA cost type, but the following example illustrates an AA payment calculation:

Cost List:

Practice Code	Practice Name	Unit	Qty	Cost Type	% C/S	Cost	Cost-Share Amount
XXX	Best Management Practice	Acre	1.0	AA	50	**$20.00**	$10.00

Protracts calculation for ($Actual Unit Cost × Cost-Share Rate × Units Installed):

CIN	Component	Units	Unit Cost	Rate	Type	Amount	Cost-Share
1a	Best Management Practice	Acre	$ 15.00	% 50	AA	340	$ 2550.00

OR

Protracts calculation for ($AA Unit Cost × Cost-Share Rate × Units Installed):

CIN	Component	Units	Unit Cost	Rate	Type	Amount	Cost-Share
1a	Best Management Practice	Acre	$ 20.00	% 50	AA	340	$ 3400.00

As you can see, when the AA payment calculation is required, the AA needs to be calculated and compared to the landowner's actual unit cost. The landowner's actual unit cost <u>could</u> be more than the AA unit cost. For example, if the landowner's actual unit cost was $25.00 per acre on 340 acres, the payment would be based upon the AA unit cost of $20.00 per acre. Because the AA is a not to exceed cost type, the landowner may incur a higher actual unit cost than the AA

unit cost listed, but the payment will be based upon the AA unit cost, which is less. If the landowner's actual unit cost is less than the AA unit cost, then the payment will be based on the lesser of the two as illustrated in the *"Protracts calculation for ($Actual Unit Cost × Cost-Share Rate × Units Installed)"* example.

The AA cost type requires a review of the landowner's actual unit cost, which may include contractors and/or supply receipts and/or an estimate of the landowner's labor and other costs eligible for cost-share, in order to determine the actual unit cost.

When an average cost can be developed, then both the AC and AA cost type methods are possible, however payment calculation as explained previously, differs for both cost types.

Actual Not To Exceed a Specified Maximum (AM):

The Actual Not to Exceed a Specified Maximum (AM) cost type may be used where there is variability of installation costs **or** insufficient cost data. The AM cost type is usually applied to those practices that involve complex engineering designs or when the resource setting and/or condition varies greatly from one site to the next.

When an AM cost type is designated, two calculations are required to be able to determine the payment:

AM Total Payment = Lesser of

($Actual Unit Cost × Cost-Share Rate × Units Installed)
OR
($AM Unit Cost × Cost-Share Rate × Units Installed)

Cost List:

Practice Code	Practice Name	Unit	Qty	Cost Type	% C/S	Cost	Cost-Share Amount
595	Pest Management						
	Tropical Soda Apple and **all** other non-native, invasive (noxious) plants. (Please refer to the Florida Exotic Pest Plant Council, Category I List of Invasive Species and the Florida Department of Agriculture and Consumer Services, Noxious Weed List.	Acre	1.0	**AM**	50	**$49.00**	$24.50

Protracts calculation for ($Actual Unit Cost × Cost-Share Rate × Units Installed):

CIN	Component	Units	Unit Cost	Rate	Type	Amount	Cost-Share
1c	595-Pest Management / Trop. Soda Apple/Oth.Nox.Pl	Acre	$ 32.80	% 50	AM	40	$ 656.00

<p align="center">**OR**</p>

Protracts calculation for ($AM Unit Cost × Cost-Share Rate × Units Installed):

CIN	Component	Units	Unit Cost	Rate	Type	Amount	Cost-Share
1c	595-Pest Management / Trop. Soda Apple/Oth.Nox.Pl	Acre	$ 49.00	% 50	AM	40	$ 980.00

As you can see, when the AM payment calculation is required, the AM needs to be calculated and compared to the landowner's actual unit cost. The landowner's actual unit cost <u>could</u> be more than the AM unit cost. For example, if the landowner's actual unit cost was $55.00 per acre, the payment would be based upon the AM unit cost of $49.00 per acre. Because the AM is a *not to exceed* cost type, the landowner may incur a higher actual cost than the AM unit cost, but the payment will be based upon the AM unit cost, which is less. If the landowner's actual unit cost is less than the AM unit cost, then the payment will based on the lesser of the two, which is illustrated in the *"Protracts calculation for ($Actual Unit Cost × Cost-Share Rate × Units Installed)"* example.

The AM cost type requires a review of the landowner's actual unit cost, which may include contractors and/or supply receipts and/or an estimate of the landowner's labor and other costs eligible for cost-share, in order to determine the actual unit cost.

Flat Rate (FR):

A Flat Rate (FR) cost type is to be used to encourage the adoption of conservation practices. Flat rates are not necessarily associated with the actual cost of practice installation, but rather a cost that is estimated to entice landowners to adopt a conservation practice in order to recognize the benefits and establish the practice permanently.

Flat rates are usually assigned to management practices including Irrigation Water Management and Nutrient Management.

FR payments are calculated as follows:

<p align="center">**FR Payment = $FR Unit Cost × Units Installed**</p>

Cost List:

Practice Code	Practice Name	Unit	Qty	Cost Type	% C/S	Cost	Cost-Share Amount
590	Nutrient Management (Minimum of 5 acres)	Acre	1.0	FR	–	$10.00	$10.00

Protracts calculation for ($FR Unit Cost × Units Installed):

CIN	Component	Units	Unit Cost	Rate	Type	Amount	Cost-Share
8a	590-Nutrient Management	Acre	$ 10.00	% 100	FR	180	$ 1800.00

The landowner receives the total amount of the cost per unit of a FR cost type, which is essentially 100% cost-share rate.

As you can see when an average cost can be developed, both the AC Method and the AA Method are possible. The AM cost type acts as a "ceiling" or "cap" in which the actual unit cost may not exceed and thus the landowner cannot receive cost-share above the maximum cost listed. The AM unit cost suggests that there may be some cost data to suggest a limit. However, a FR may or may not be based upon actual cost in order to provide the appropriate incentive for the landowner to adopt a conservation practice.
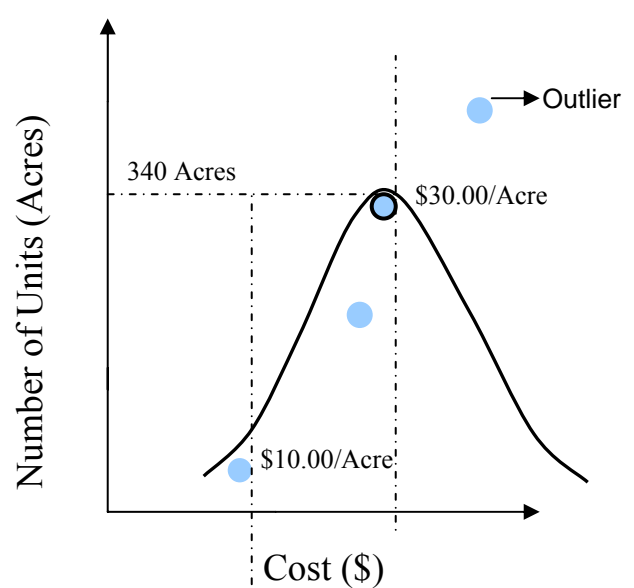
Below in Figures 1. and 2., the cost data that may occur for each cost type is displayed graphically.

Figure 1: AC and AA Formulation **Figure 2: AM Formulation**
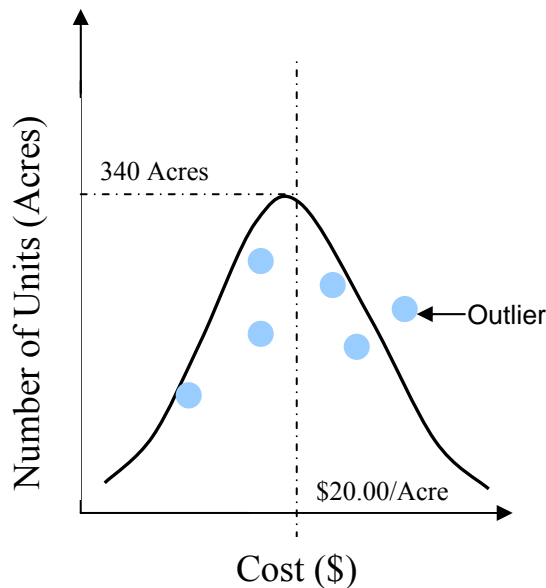
In Figure 1., actual cost data is plotted according to the cost and number of units installed. Though an outlier occurs, there is adequate data remaining to generate an AC or AA. Notice that the cost data that is plotted does not have a tremendous amount of variance, in other words the data is consistent in relation to each other, so an accurate AC can be determined.

In Figure 2., the variability **and** lack of adequate cost data is plotted to illustrate why the AM cost type would be necessary. Notice that the cost data plotted has a tremendous amount of variability including one outlier. Because of this variability, the AM cost type is used so that it is

possible to capture **most** of the resource settings and/or conditions that could occur, but also acts as a "ceiling" or cost cap to retain those situations that seem extreme and perhaps not cost-effective.

Payment Calculation:

If the landowner installs 340 acres of a practice with the cost-share rate of 50% and brings in receipts for $5,500, the payment calculations for each cost type from Figures 1. and 2., would be as follows:

- **AC:** $20.00 × 50% × 340 acres = $3,400 payment.

  The landowner actual unit cost is $5,500 ÷ 340 acres = $16.18 Unit Cost per Acre, but will receive $3,400 payment or $20.00 Unit Cost per Acre.

- **AA:** $20.00 Unit Cost per Acre × 50% × 340 acres = $3,400

  or

  $5,500 × 50% = $2,750, which is $5,500 ÷ 340 acres = $16.18 Unit Cost per Acre
  In this case, the landowner will receive $2,750 payment because his/her actual cost is less than the average cost.

- **AM**: The payment calculation works just like AA except now the not to exceed is in the amount of $30.00 per acre.

  $30.00 × 50% × 340 acres = $5,100 payment.

  $5,500 × 50% = $2,750, which is $5,500 ÷ 340 acres = $16.18 Unit Cost per Acre
  So, the most the landowner can get is 50% of their costs up to $5,100.00 or ($30.00 × 50% × 340 acres).

- **FR**: $10 × 340 acres = $3,040 payment.

REFERENCES

- General Manual (GM), Title 120, Part 404
- Title 440 – Conservation Programs Manual (CPM), Part 512
- Cost and Cost List Workshop Team (Madalene Ransom - Economist, East National Technology Support Center; June Grabemeyer - Economist, Michigan; Flo Swartz – Economist, New York; Jessica Bertine - Economist, Florida); "*Cost Consistency.*"