

Exhibit Name: Premium Calculation

Exhibit Number: P13-1, Plan 43

Reinsurance Year: 2017

Record Name: Inventory Value

Version: Approved

Record Code: P13

Release Date: 1/31/2017

Insurance Plan Code 43 Aquaculture Dollar

Commodity Code 0116 Cultivated Clams

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
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**Section 1: Liability Calculation**

$\text{Inventory Value Amount} = \text{Reported Clam Count} * \text{Survival Percent} * (\text{Reference Maximum Dollar Amount} * \text{Growth Stage Factor})$	Inventory Value Amount	Internal		999999999	Round to whole number	This will be determined internally for Clams.
	Reported Clam Count	P13	42	99999999	None	
	Survival Percent	ADM		9.999	None	Edit With ADM Price, "A00810".
	Reference Maximum Dollar Amount	ADM		9999.9999	None	If Coverage Type equals Catastrophic, "CAT" then Catastrophic Dollar Amount will be used instead of Reference Maximum Dollar Amount. Edit With ADM Price, "A00810".
	Growth Stage Factor	ADM		9999.9999	None	Edit With ADM Price, "A00810".
<p><b>When Revised Report Code equals, "3":</b></p> $\text{Inventory Value Amount} = \text{Inventory Value Amount}$	Inventory Value Amount	P13	24	999999999	Round to whole number	This will be submitted by AIP for Clams when Revised Report Code equals, "3" (increase value).
$\text{Liability Amount} = \text{Inventory Value Amount} * \text{Coverage Level Percent} * \text{Insured Share Percent}$	Liability Amount	P13	53	9999999999	Round to whole number	
	Coverage Level Percent	P14	34	9.9999	None	
	Insured Share Percent	P13	26	9.9999	None	

**Section 2: Base Premium Rate Calculation**

$\text{Base Premium Rate} = \text{Base Rate} * \text{Rate Differential Factor}$	Base Premium Rate	Internal		999999.99999999	Round to 8 decimals.	
	Base Rate	ADM		999.9999	None	Edit with ADM Base Rate, "A01010".
	Rate Differential Factor	ADM		9.99999999	None	Edit with ADM Coverage Level Differential, "A01040".

**Section 3: Optional Coverage Calculation**

$\text{Additive Optional Rate Adjustment Factor} = \sum \text{Option Rate} * \text{Rate Differential Factor}$ <p><b>When Rate Method Code is Additive, "A":</b></p>	Additive Optional Rate Adjustment Factor	Internal		999999.9999	Round to 4 decimals.	
	Option Rate	ADM		99999.9999	None	Option Rate will be the Sum of all Option Rate with Rate Method Code equal to Additive, "A". Edit with ADM Option Rate, "A01060".
	Rate Differential Factor	ADM		9.99999999	None	Edit with ADM Coverage Level Differential, "A01040".
$\text{Multiplicative Optional Rate Adjustment Factor} = \sum \text{Option Rate1} * \text{Option Rate2} * \text{Option Rate3}...$ <p><b>When Rate Method Code is Multiplicative, "M":</b></p>	Multiplicative Optional Rate Adjustment Factor	Internal		999999.9999	Round to 4 decimals.	
	Option Rate	ADM		9.9999	None	Edit with ADM Option Rate, "A01060".

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**Section 4: Premium Rate Calculation**

The Premium Rate for ALL Unit Structures should be capped at .999 in the event various adjustments to the Base Premium Rate would cause it to exceed 1.0.

Premium Rate = $\frac{\text{Base Premium Rate} * \text{Unit Structure Discount Factor} * \text{Multiplicative Optional Rate Adjustment Factor} + \text{Additive Optional Rate Adjustment Factor}}$	Premium Rate	Internal		999999999.99999999	Round to 8 decimals.	Premium Rate is capped at 0.99900000.
	Unit Structure Discount Factor	ADM		9.999	None	Edit with ADM Unit Discount, "A01090". When Unit Structure Code equals "OU", "UA", or "UD", then Unit Structure Discount Factor equals Optional Unit Discount Factor.  When Unit Structure Code equals "BU", then Unit Structure Discount Factor equals Basic Unit Discount Factor.

**Section 5: Total Premium, Subsidy, and Producer Premium Calculation**

Total Premium Amount = Liability Amount * Premium Rate * Proration Percent	Total Premium Amount	P13	51	999999999	Round to whole number	
	Proration Percent	ADM		9.99	None	Edit with ADM Proration, "A01070".
Subsidy Amount = Total Premium Amount * Subsidy Percent	Subsidy Amount	P13	52	999999999	Round to whole number	If this record qualifies for Beginning Farmer Rancher, see Section 7 for the subsidy calculations.
	Subsidy Percent	ADM		9.999	None	Edit with ADM Subsidy Percent, "A00070".
Producer Premium Amount = Total Premium Amount - Subsidy Amount	Producer Premium Amount	P13	54	999999999	Round to whole number	

**Section 6: Commodity Year Deductible Amount Calculation**

This information will be based on the 'basic unit'.

Commodity Year Deductible Amount = Inventory Value Amount * (1 - Coverage Level Percent)	Commodity Year Deductible Amount	Internal		999999999	Round to whole number	
	Inventory Value Amount	Internal		999999999	Round to whole number	Sum the Inventory Values for the basic unit.
	Coverage Level Percent	P14	34	9.9999	None	

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<b>Section 7: Beginning Farmer and Rancher (BFR) and Conservation Compliance (CC) Subsidy Calculations</b>						
Base Subsidy Amount = Total Premium Amount * Subsidy Percent	Base Subsidy Amount	Internal		9999999999	Round to whole number	Cupped by the standard rule of \$1 if applicable.
	Subsidy Percent	ADM		9.999	None	Edit with ADM Subsidy Percent, "A00070".
BFR Subsidy Amount = Total Premium Amount * 0.10 * (1 - CC Subsidy Reduction Percent)	BFR Subsidy Amount	Internal		9999999999	Round to whole number	Beginning Farmer Rancher Subsidy Amount. If Applicable; else 0. 0.10 (10%).
CC Subsidy Reduction Amount = Base Subsidy Amount * CC Subsidy Reduction Percent	CC Subsidy Reduction Percent	P13	48	9.9999	None	If Applicable; else 0.
	CC Subsidy Reduction Amount	P13	69	9999999999	Round to whole number	CC Subsidy Reduction Amount. If Applicable; else 0.
Subsidy Amount = Base Subsidy Amount + BFR Subsidy Amount - CC Subsidy Reduction Amount	Subsidy Amount	P13	52	9999999999	Round to whole number	Subsidy Amount cannot exceed Total Premium Amount. Subsidy Amount will be cupped at \$0.
Producer Premium Amount = Total Premium Amount - Subsidy Amount	Producer Premium Amount	P13	54	9999999999	Round to whole number	