Exhibit Name: Premium Calculation			
Exhibit Number: P19-1 Plan 76		**Reinsurance Year:** 2021	
Record Name: WFRP Farm Reports		**Version:** Approved	
Record Code: P19		**Release Date:** 1/21/2021	

Insurance Plan Code	76 Whole Farm Revenue Protection (WFRP)
Commodity Code	0076 Whole Farm Revenue Protection (WFRP)

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
Section 1: Liability Calculation						**If Native Sod (NS) applies to any commodity under WFRP, see Section 9 for Liability calculations.**
Liability Amount = Approved Revenue Amount * Coverage Level Percent	Liability Amount	P19	73	9999999999	Round to whole number.	Liability Amount is 'Insured Revenue'. Liability Amount Cap, cannot exceed $8.5 million for WFRP. Liability Amount must be set to $1.00 when less than $1.00.
	Approved Revenue Amount	P19	71	9999999999	None	
	Coverage Level Percent	P14	34	9.999	None	
MAX MPCI = Liability Amount / 2	MAX MPCI	Internal		9999999999	Round to whole number.	
Premium Liability Amount = Liability Amount - lesser of: (MPCI Liability Amount or MAX MPCI)	Premium Liability Amount	Internal		9999999999	Round to whole number.	Premium Liability must be set to $1.00 when less than $1.00.
	MPCI Liability Amount	P19	32	9999999999	None	
Section 2: Total Weighted Farm Rate Calculation						
Percent of Revenue = Expected Revenue Amount / Total Expected Revenue Amount	Percent of Revenue	Internal		9.999	Round to 3 decimals.	
	Expected Revenue Amount	P19A	15 or 23	9999999999	None	Summed per commodity if more then one Expected Revenue Amount for a commodity code due to Native Sod.
	Total Expected Revenue Amount	P19	70	9999999999	None	
If Insurance Option Code List contains "RC", "RS", or "RX":						
Effective Coverage Level Percent = Coverage Level Percent * (Approved Revenue Amount / lesser of: MAX(Average Revenue Amount, Indexed Average Revenue Amount, Expanded Operation Average Revenue Amount) or Total Expected Revenue Amount)	Effective Coverage Level Percent	Internal		9.9999	Round to 4 decimals	
	Coverage Level Percent	P14	34	9.9999	None	
	Approved Revenue Amount	P19	71	9999999999	None	
	Average Revenue Amount	P19	82	9999999999	None	
	Indexed Average Revenue Amount	P19	84	9999999999	None	
	Expanded Operation Average Revenue Amount	P19	85	9999999999	None	
	Total Expected Revenue Amount	P19	70	9999999999	None	

If Effective Coverage Level Percent equals Coverage Level Percent "or" Insurance Option Code List does not contain "RC", "RS", or "RX":

Weighted Commodity Rate = Commodity Rate * Percent of Revenue	Weighted Commodity Rate	Internal		99.999	Round to 3 decimals.	
	Commodity Rate	Internal		999999.9999	None	Edit with ADM AGR Rate, "A01000" base rate.

If Effective Coverage Level Percent does not equal Coverage Level Percent "and" Insurance Option Code List contains "RC", "RS", or "RX":

Lower Coverage Level Percent = MIN(0.800,ROUND(FLOOR(Effective Coverage Level Percent / 0.05, 1) x 0.05, 2))	Lower Coverage Level Percent	Internal		9.99	Round to 2 decimals	
Upper Coverage Level Percent = Lower Coverage Level Percent + 0.05	Upper Coverage Level Percent	Internal		9.99	Round to 2 decimals	
Lower Weighted Commodity rate = Commodity Rate * Percent of Revenue	Lower Weighted Commodity Rate	Internal		99.999	Round to 3 decimals.	Edit Commodity Rate with ADM AGR Rate, "A01000" base rate for Lower Coverage Level Percent.
Upper Weighted Commodity rate = Commodity Rate * Percent of Revenue	Upper Weighted Commodity Rate	Internal		99.999	Round to 3 decimals.	Edit Commodity Rate with ADM AGR Rate, "A01000" base rate for Upper Coverage Level Percent.

If Effective Coverage Level Percent equals Coverage Level Percent "or" Insurance Option Code List does not contain "RC", "RS", or "RX":

Total Weighted Farm Rate = sum of Weighted Commodity Rate	Total Weighted Farm Rate	P19	87	99.999	Round to 3 decimals.	

If Effective Coverage Level Percent is less than or equal to 0.8500 "and" Insurance Option Code List contains "RC", "RS", or "RX" and Effective Coverage Level Percent does not equal Coverage Level Percent:

Lower Total Weighted Farm Rate = sum of Lower Weighted Commodity Rate	Lower Total Weighted Farm Rate	P19	119	99.999	Round to 3 decimals.	
Upper Total Weighted Farm Rate = sum of Upper Weighted Commodity Rate	Upper Total Weighted Farm Rate	P19	120	99.999	Round to 3 decimals.	
Total Weighted Farm Rate = Lower Total Weighted Farm Rate + ((Upper Total Weighted Farm Rate - Lower Total Weighted Farm Rate) / (Upper Coverage Level Percent - Lower Coverage Level Percent)) x (Effective Coverage Level Percent - Lower Coveage Level Percent))	Total Weighted Farm Rate	P19	87	99.999	Round to 3 decimals.	

If Effective Coverage Level Percent is greater than 0.8500 "and" Insurance Option Code List contains "RC", "RS", or "RX":

Lower Total Weighted Farm Rate = sum of Lower Weighted Commodity Rate	Lower Total Weighted Farm Rate	P19	119	99.999	Round to 3 decimals.	
Upper Total Weighted Farm Rate = sum of Upper Weighted Commodity Rate	Upper Total Weighted Farm Rate	P19	120	99.999	Round to 3 decimals.	
Total Weighted Farm Rate = (Upper Total Weighted Farm Rate + (((Upper Total Weighted Farm Rate - Lower Total Weighted Farm Rate) / (Upper Coverage Level Percent - Lower Coverage Level Percent)) x (Effective Coverage Level Percent - Upper Coverage Level Percent))) x (1 + MIN(0.05, (0.05 x ((Effective Coverage Level Percent - 0.8500) / 0.15)^3)))	Total Weighted Farm Rate	P19	87	99.999	Round to 3 decimals.	

Exhibit Name:	Premium Calculation					
Exhibit Number:	P19-1 Plan 76		**Reinsurance Year:**	2021		
Record Name:	WFRP Farm Reports		**Version:**	Approved		
Record Code:	P19		**Release Date:**	1/21/2021		

Section 3: Diversty Factor (DF) Calculation

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
Commodity Factor = 1.00 / Qualifying Commodity Count	Commodity Factor	Internal		9.999	Round to 3 decimals.	
	Qualifying Commodity Count	P19	91	999	None	Combined total of eligible commodity count and grouped commodity count and other combined direct marketing commodity count unless Qualifying Commodity Count Cup Flag is set to "Y" then will equal the greater of Eligible Commodity Count plus Grouped Commodity Count plus Other Combined Direct Marketing Commodity Count, or the Qualifying Commodity Count when Premium Based Code equaled "I". See Exhibit P14-7.
For each Eligible Commodity (not grouped): Commodity Deviation "Absolute Value" = Round(ABS((Expected Revenue Amount/Total Expected Revenue Amount) - Commodity Factor),3)	Commodity Deviation	Internal		9.999	Round to 3 decimals.	

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
If Grouped Commodity Count > 0:	Commodity Deviation	Internal		9.999	Round to 3 decimals.	
Commodity Deviation "Absolute Value" = Round(ABS((MQA/Total Expected Revenue Amount) - Commodity Factor),3) * Grouped Commodity Count	MQA	Internal		9999999999	None	See Exhibit P14-7.
	Grouped Commodity Count	P19	90	999	None	See Exhibit P14-7.
Sum of Commodity Deviation (DEV) Factors = sum of all Commodity Deviations	Sum of Commodity Deviation Factors	Internal		9.999	Round to 3 decimals.	"DEV" will be used in determination of Diversity Factor (DF).

QUALIFYING COMMODITY COUNT	FORMULA
1 Commodity	DF = 1.000
2 Commodities	DF = 0.668 + (0.0179999 * DEV) + (0.3142858 * DEV^2)
3 Commodities	DF = 0.523 + (0.0607623 * DEV) + (0.2229000 * DEV^2)
4 Commodities	DF = 0.474 + (0.0248208 * DEV) + (0.2184720 * DEV^2)
5 Commodities	DF = 0.437 + (0.0710358 * DEV) + (0.1760129 * DEV^2)
6 Commodities	DF = 0.412 + (0.0325131 * DEV) + (0.1945816 * DEV^2)
7 Commodities or more	DF = 0.410

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
Diversity Factor (DF) = See above	Diversity Factor	P19	92	9.999	Round to 3 decimals.	

Exhibit Name: Premium Calculation						
Exhibit Number: P19-1 Plan 76				**Reinsurance Year:** 2021		
Record Name: WFRP Farm Reports				**Version:** Approved		
Record Code: P19				**Release Date:** 1/21/2021		

Section 4: Optional Coverage Calculation

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
Additive Optional Rate Adjustment Factor = **When Rate Method Code is Additive, "A":** $\sum$ Option Rate * Rate Differential Factor	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".
Multiplicative Optional Rate Adjustment Factor = **When Rate Method Code is Multiplicative, "M":** $\sum$ Option Rate1 * Option Rate2 * Option Rate3...	Multiplicative Optional Rate Adjustment Factor	Internal		999999.9999	Round to 4 decimals.	
	Option Rate	ADM		9.9999	None	Edit with ADM Option Rate, "A01060".

Section 5: Premium Rate Calculation

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
Premium Rate = Diversity Factor * Total Weighted Farm Rate * Multiplicative Optional Rate Adjustment Factor + Additive Optional Rate Adjustment Factor	Premium Rate	P19	93	.999	Round to 3 decimals.	Premium Rate is capped at 0.999.

Section 6: Total Premium, Subsidy, and Producer Premium Calculation — **If Beginning Farmer and Rancher (BFR) applies see Section 8. If Native Sod (NS) applies see Section 10. If both BFR and NS applies see Section 10.**

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
Preliminary Total Premium Amount = Premium Liability Amount * Premium Rate	Preliminary Total Premium Amount	Internal		9999999999	Round to whole number	
Total Premium Amount = Preliminary Total Premium Amount	Total Premium Amount	P19	74	9999999999	Round to whole number	Total Premium Amount must be set to $1.00 when less than $1.00.
Calculations	**Field Name**	**Record Number**	**Field Number**	**Field Format**	**Field Rounding**	**Rules**
Subsidy Amount = Total Premium Amount * Subsidy Percent	Subsidy Amount	P19	75	9999999999	Round to whole number	Subsidy Amount must be set to $1.00 when less than $1.00.
	Subsidy Percent	ADM		9.999	None	Edit with ADM Subsidy Percent, "A00070". Subsidy Percent will be based on Coverage Level Percent and Qualifying Commodity Count.
Producer Premium Amount = Total Premium Amount - Subsidy Amount	Producer Premium Amount	P19	76	9999999999	Round to whole number	

Section 7: A&O Expense Subsidy Calculation

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
A&O Expense Subsidy Amount = Total Premium Amount * A&O Expense Subsidy Percent	A&O Expense Subsidy Amount	P19	79	9999999999.99		
	A&O Expense Subsidy Percent	Internal			None	

Exhibit Name:	Premium Calculation		
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Section 8: Beginning Farmer and Rancher (BFR)/Veteran Farmer Rancher (VFR), and Conservation Compliance (CC) Subsidy and Producer Premium Calculation						If Native Sod (NS) applies along with BFR or VFR see Section 10.
Preliminary Total Premium Amount = Premium Liability Amount * Premium Rate	Preliminary Total Premium Amount	Internal		9999999999	Round to whole number	
Total Premium Amount = Preliminary Total Premium Amount	Total Premium Amount	P19	74	9999999999	Round to whole number	Total Premium Amount must be set to $1.00 when less than $1.00.
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". Subsidy Percent will be based on Coverage Level Percent and Qualifying Commodity Count.
BFR/VFR Subsidy Amount = Total Premium Amount * 0.10 * (1 - CC Subsidy Reduction Amount	BFR/VFR Subsidy Amount	P19	101	9999999999	Round to whole number	Beginning Farmer Rancher/Veteran 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	P19	53	9.9999	None	If Applicable; else 0.
	CC Subsidy Reduction Amount	P19	105	9999999999	Round to whole number	CC Subsidy Reduction Amount. If Applicable; else 0.
Subsidy Amount = Base Subsidy Amount + BFR/VFR Subsidy Amount - CC Subsidy Reduction Amount	Subsidy Amount	P19	75	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	P19	76	9999999999	Round to whole number	
Section 9: Native Sod (NS) Liability Calculation						
Insured Revenue Amount = Approved Revenue Amount * Coverage Level Percent	Insured Revenue Amount	Internal		9999999999	Round to whole number.	Insured Revenue cannot exceed $8.5 million for WFRP.
	Approved Revenue Amount	P19	71	9999999999	None	
	Coverage Level Percent	P14	34	9.999	None	

	Exhibit Name:	Premium Calculation				
	Exhibit Number:	P19-1 Plan 76		Reinsurance Year:	2021	
	Record Name:	WFRP Farm Reports		Version:	Approved	
	Record Code:	P19		Release Date:	1/21/2021	

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
Native Sod Percent of Revenue = Expected Revenue Amount (Native Sod) / Total Expected Revenue Amount	Native Sod Percent of Revenue	P19	94	9.999	Round to 3 decimals.	
	Expected Revenue Amount	P19A	15 or 23	9999999999	None	Only the Expected Revenue Amount for Native Sod. Summed P19A Expected Revenue Amount if more then one commodity with Native Sod.
	Total Expected Revenue Amount	P19	70	9999999999	None	
Native Sod Liability Amount = Insured Revenue Amount * Native Sod Percent of Revenue * 0.65	Native Sod Liability Amount	P19	95	9999999999	Round to whole number.	
Non Native Sod Liability Amount = Insured Revenue Amount * (1.000 - Native Sod Percent of Revenue)	Non Native Sod Liability Amount	P19	96	9999999999	Round to whole number.	
Liability Amount = Native Sod Liability Amount + Non Native Sod Liability Amount	Liability Amount	P19	73	9999999999	Round to whole number.	Liability Amount Cap, cannot exceed $8.5 million for WFRP. If Native Sod does not apply then Liability Amount will equal Insured Revenue Amount. Liability Amount must be set to $1.00 when less than $1.00.
MAX MPCI = Liability Amount / 2	MAX MPCI	Internal		9999999999	Round to whole number.	
Base Premium Liability Amount = Liability Amount - lesser of: (MPCI Liability Amount or MAX MPCI)	Base Premium Liability Amount	Internal		9999999999	Round to whole number	Base Premium Liability Amount must be set to $1.00 when less than $1.00.
	MPCI Liability Amount	P19	32	9999999999	None	
Native Sod Premium Liability Amount = Round(Native Sod Liability Amount / Liability Amount, 3) * Base Premium Liability Amount	Native Sod Premium Liability Amount	P19	97	9999999999	Round to whole number	
Non Native Sod Premium Liability Amount = Base Premium Liability Amount - Native Sod Premium Liability Amount	Non Native Sod Premium Liability Amount	P19	98	9999999999	Round to whole number	
Section 10: Native Sod (NS) Total Premium, Subsidy, and Producer Premium Calculation						**If Beginning Farmer and Rancher (BFR) or Veteran Farmer Rancher (VFR) applies along with Native Sod (NS) this calculation will be used. See Section 8 if only BFR or VFR.**
Native Sod Preliminary Total Premium Amount = Native Sod Premium Liability Amount * Premium Rate	Native Sod Preliminary Total Premium Amount	P19	99	9999999999	Round to whole number	
Non Native Sod Preliminary Total Premium Amount = Non Native Sod Premium Liability Amount * Premium Rate	Non Native Sod Preliminary Total Premium Amount	P19	100	9999999999	Round to whole number	
Total Premium Amount = Native Sod Preliminary Total Premium Amount + Non Native Sod Preliminary Total Premium Amount	Total Premium Amount	P19	74	9999999999	Round to whole number	Total Premium Amount must be set to $1.00 when less than $1.00.
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". Subsidy Percent will be based on Coverage Level Percent and Qualifying Commodity Count.

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
BFR/VFR Subsidy Amount = Total Premium Amount * 0.10	BFR/VFR Subsidy Amount	P19	101	9999999999	Round to whole number	Beginning Farmer Rancher/Veteran Farmer Rancher Subsidy Amount. If Applicable; else 0. 0.10 (10%).
Native Sod Subsidy Amount = Native Sod Preliminary Total Premium Amount * 0.50	Native Sod Subsidy Amount	P19	102	9999999999	Round to whole number	Native Sod Subsidy Amount. If Applicable; else, 0. 0.50 (50%).
Subsidy Amount = Base Subsidy Amount + BFR/VFR Subsidy Amount - Native Sod Subsidy Amount	Subsidy Amount	P19	75	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	P19	76	9999999999	Round to whole number	