

# MARKETING SERVICE

B U L L E T I N

## What is a Federal Milk Marketing Order, and ... What Does it Mean to Me ?

### -- Part III : Marketwide Pooling --



it also provides a means to equitably distribute the revenue generated to dairy farmers\*.

Providing a framework that makes buying and selling milk a more orderly process for producers and processors is an important objective of the Federal milk marketing order program. Integral to this framework is a process known as marketwide pooling. *Marketwide pooling* is a feature of the milk order program that promotes a "level playing field" for all regulated handlers in terms of raw milk costs, and

**What is marketwide pooling?** Federal orders employ a pricing system that assigns minimum prices that handlers pay for milk based on its end use. The current system defines four usage categories, known as classes, and each dairy product is assigned into one of these classes. The summation of the values for milk used in each class for a handler is known as the handler's *classified use value*.

Under marketwide pooling, the total classified value of producer milk received by every handler regulated under a milk order is combined, or "pooled", each month. This total value is known as the *marketwide pool*, and it is the revenue distributed to producers with marketings on the order.



Proceeds from the marketwide pool are distributed to producers in a uniform manner depending on the pricing system employed under the order. Four milk orders employ a system that prices two milk components - skim and butterfat. Producers under these orders are paid on a *per pound* basis for butterfat in their milk marketings, and they receive payment on a *per hundredweight* basis for skim pounds marketed. These orders compute a minimum *Uniform Skim Price* by combining skim milk values for all regulated handlers and dividing this amount by the total pounds of skim in the marketwide pool. The minimum *Uniform Butterfat Price* is computed in a similar manner for these markets.

Six orders use a *multiple component pricing system* that assigns values for protein, butterfat, and other solids. Producers are paid the Class III value for these components on a *per pound* basis. In these multiple component orders, a

\* An overview of the Federal Milk Marketing Order program can be found in the June 2009 issue of this bulletin, while the July 2009 issue contains a detailed explanation of classified pricing. These bulletins can be accessed on our website ([www.fmmacentral.com](http://www.fmmacentral.com)) under Publications.

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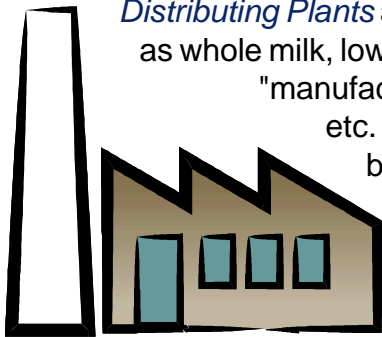
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per hundredweight uniform price is also paid to producers. This per hundredweight payment is calculated by dividing the dollar amount remaining in the marketwide pool after deducting producer component payments, by the total pounds in the pool. This payment is known as the *Producer Price Differential (PPD)*, and it can be either positive or negative. The PPD's amount and sign is determined by the revenue surplus or shortage in the marketwide pool after producer protein, butterfat, and other solids payments have been deducted.



Adjustments are made to the PPD (multiple component orders) and Uniform Prices (two-component orders) paid to each producer to reflect the applicable Class I differential for the handler location where milk is first received. *Regulated handlers* under the milk order program include Distributing Plants, Supply Plants, and Cooperatives Acting as Handlers.



*Distributing Plants* are processors that bottle and sell products in fluid milk form, such as whole milk, lowfat milk, flavored milk, buttermilk, etc. Often these plants also process milk into "manufactured" dairy products like cottage cheese, ice cream, yogurt, fluid cream products, etc. *Supply Plants* are handlers that assimilate raw milk from producers and ship it in bulk form to distributing plants. In many instances these plants also process some of the milk received into manufactured products. A handler can also be any cooperative association with respect to milk that it receives for its account and delivers to pool plants or diverts to nonpool plants, according to the provisions of the order. These cooperative handlers are referred to as *Cooperatives Acting as Handlers*.

**How does the pooling process work?** An example of the marketwide pooling process based on provisions of the Central Order is illustrated in the remainder of this bulletin. The class and component prices used in the *handler use value calculations* are averages for the Central Order for the period January 2000 through November 2009. Likewise, the *producer component prices* and the *somatic cell adjustment rate* reflect Central Order averages for this time frame.



The simulated pool that follows is a simplified version of the monthly pooling process. Although the producer and utilization data for each handler in this simulated pool are fictitious, they illustrate actual utilizations that can occur for each type of handler. The marketwide utilization percentages and the resultant Producer Price Differential (PPD) are not meant to be representative of actual utilizations or PPD's applicable to the Central Order.

The simulated pool in this bulletin includes four handlers: two Distributing Plants, one Supply Plant, and one Cooperative Acting as Handler. Handlers #1 and #2 are Distributing Plants with approximate Class I utilizations of 80% and 60%, respectively. Handler #1 manufactures a relatively small amount of Class II products, with the remaining milk and/or cream utilized in Class IV. Handler #2's utilization reflects a significant amount of Class II usage, with remaining milk and cream utilized in Classes III and IV. Handler #3 is a Supply Plant shipping over 40% of its total producer milk to distributing plants in Class I. This handler's remaining usage is in Classes II and III. The utilization for Handler #4, a Cooperative Acting as Handler, is in Classes II, III, and IV.

Central order provisions incorporate a classified pricing system that prices components in the following manner: skim and butterfat in Class I; nonfat solids and butterfat in Class II; protein, other solids, and butterfat in Class III; and, nonfat solids and butterfat in Class IV. The *use value calculations* for each handler included in the pool reflects this pricing system and are depicted on pages 4 and 5. Central Order 2008 component percentage averages were applied to producer milk for all handlers in this simulated pool.



*Marketwide pool calculations* are depicted on page 6. *Classified use values* for handlers in our simulated pool are combined, and this total is adjusted for items such as: Class II, III, and IV handler somatic cell values; overage adjustments; inventory reclassifications; and, other (usually minor) adjustments specified by order provisions. The dollar amount remaining after these adjustments to the total classified value is known as the *net value of producer milk*, and in our simulated pool it totals just under \$12 million. The value for the components paid to producers - protein, other solids, and butterfat - are deducted from this net value, along with the value of the producer somatic cell adjustment. The remaining revenue in our example is slightly under \$1 million. This amount "left over" is paid to producers in the form of the PPD, and it computes to \$1.22 per hundredweight. Thus, each producer in our simulated pool receives the Class III per pound price for protein, other solids and butterfat marketings, and a PPD payment of \$1.22 per hundredweight for all milk marketed.



Each handler's "*obligation to pool*" is calculated and depicted on page 7. A handler's obligation to the marketwide pool is determined by subtracting all "credits" from the handler's use value of producer milk. These credits encompass all the minimum values due producers, and include the following: the value of the handler's producer receipts at the PPD; the component values for producer protein, other solids, and butterfat; and the somatic cell adjustment applicable to producer receipts.

If a handler's use value of producer milk is greater than the minimum producer payment values, the handler has a *financial obligation to the pool*. This is typically the situation for handlers with relatively high Class I usage. In our simulated pool, both distributing plants have a use value that exceeds the producer component value, and thus pay into the marketwide pool.

The minimum producer payment values for the remaining two handlers in our pool are greater than their respective handler use values. Since the classified use value of their milk does not generate enough revenue to pay the minimum order component and PPD prices, these two handlers each draw revenue from the pool. This "*pool draw*" enables these handlers to pay order minimum prices to producers.

*In summary ...* Data and calculations in this bulletin demonstrate how *classified pricing and marketwide pooling* translate into *handler costs and producer revenues*. As demonstrated, all handlers similarly located pay identical Federal order minimum prices for producer milk based on how that milk is utilized. The marketwide pooling process enables all pool handlers to pay required minimum producer prices, regardless of the handler's individual utilization. Due to this feature, the marketwide pool is sometimes referred to as an "*equalization fund*".



This "level playing field" feature is a key function of the Federal milk order program. Without it, handlers that perform the function of *market balancing* would be at a competitive disadvantage regarding producer payments, since their classified use value typically results in lower revenue generation compared with high Class I use handlers. The inherent instability in fluid milk markets\* makes market balancing an important, necessary function, and the process of marketwide pooling assists handlers performing this task. Similarly, marketwide pooling and distribution of the resultant funds allows all producers providing milk to the market to equitably share in the revenue generated.



\* A detailed description of the inherent instability in milk markets can be found in the June 2009 issue of this bulletin. This bulletin can be accessed on our website ([www.fmmcentral.com](http://www.fmmcentral.com)) under Publications.

# **-- HANDLER USE VALUE CALCULATIONS --**

## **Handler #1 : ABC Distributing Plant**

		<b>Pounds</b>	<b>Value</b>		<b>Rate</b>
<b>Class I :</b>	Class I Skim Value	20,100,000	\$2,178,840.00	@	\$10.84 per cwt.
	Class I Butterfat Value	257,500	<u>\$386,327.25</u>	@	\$1.5003 per lb.
	<b>Total Class I Value</b>		<b>\$2,565,167.25</b>		
<b>Class II :</b>	Class II Nonfat Solids Value	307,650	\$290,206.25	@	\$0.9433 per lb.
	Class II Butterfat Value	241,500	<u>\$360,994.20</u>	@	\$1.4948 per lb.
	<b>Total Class II Value</b>		<b>\$651,200.45</b>		
<b>Class III :</b>	Class III Protein Value	0	\$0.00	@	\$2.4738 per lb.
	Class III Other Solids Value	0	\$0.00	@	\$0.1162 per lb.
	Class III Butterfat Value	0	<u>\$0.00</u>	@	\$1.4878 per lb.
	<b>Total Class III Value</b>		<b>\$0.00</b>		
<b>Class IV :</b>	Class IV Nonfat Solids Value	67,000	\$57,988.50	@	\$0.8655 per lb.
	Class IV Butterfat Value	413,500	<u>\$615,205.30</u>	@	\$1.4878 per lb.
	<b>Total Class IV Value</b>		<b>\$673,193.80</b>		
	<b>Classified Value of Producer Milk</b>	<b>25,000,000</b>	<b>\$3,889,561.50</b>		
	<b>Somatic Cell Adjustment on Classes II, III, IV</b>		<b>\$1,857.00</b>		
	<b>Handler Use Value of Producer Milk</b>		<b>\$3,891,418.50</b>	@	<b>\$15.57 per cwt.</b>

## **Handler #2 : XYZ Distributing Plant**

		<b>Pounds</b>	<b>Value</b>		<b>Rate</b>
<b>Class I :</b>	Class I Skim Value	17,720,000	\$1,920,848.00	@	\$10.84 per cwt.
	Class I Butterfat Value	350,000	<u>\$525,105.00</u>	@	\$1.5003 per lb.
	<b>Total Class I Value</b>		<b>\$2,445,953.00</b>		
<b>Class II :</b>	Class II Nonfat Solids Value	949,050	\$895,238.87	@	\$0.9433 per lb.
	Class II Butterfat Value	622,250	<u>\$930,139.30</u>	@	\$1.4948 per lb.
	<b>Total Class II Value</b>		<b>\$1,825,378.17</b>		
<b>Class III :</b>	Class III Protein Value	1,850	\$4,576.53	@	\$2.4738 per lb.
	Class III Other Solids Value	3,450	\$400.89	@	\$0.1162 per lb.
	Class III Butterfat Value	38,250	<u>\$56,908.35</u>	@	\$1.4878 per lb.
	<b>Total Class III Value</b>		<b>\$61,885.77</b>		
<b>Class IV :</b>	Class IV Nonfat Solids Value	66,450	\$57,512.48	@	\$0.8655 per lb.
	Class IV Butterfat Value	84,500	<u>\$125,719.10</u>	@	\$1.4878 per lb.
	<b>Total Class IV Value</b>		<b>\$183,231.58</b>		
	<b>Classified Value of Producer Milk</b>	<b>30,000,000</b>	<b>\$4,516,448.52</b>		
	<b>Somatic Cell Adjustment on Classes II, III, IV</b>		<b>\$4,772.00</b>		
	<b>Handler Use Value of Producer Milk</b>		<b>\$4,521,220.52</b>	@	<b>\$15.07 per cwt.</b>

# -- HANDLER USE VALUE CALCULATIONS --

## Handler #3 : 123 Supply Plant

		Pounds	Value		Rate
<b>Class I :</b>	Class I Skim Value	6,289,700	\$681,803.48	@	\$10.84 per cwt.
	Class I Butterfat Value	240,250	<u>\$360,447.08</u>	@	\$1.5003 per lb.
	Total Class I Value		\$1,042,250.56		
<b>Class II :</b>	Class II Nonfat Solids Value	6,600	\$6,225.78	@	\$0.9433 per lb.
	Class II Butterfat Value	2,750	<u>\$4,110.70</u>	@	\$1.4948 per lb.
	Total Class II Value		\$10,336.48		
<b>Class III :</b>	Class III Protein Value	257,800	\$637,745.64	@	\$2.4738 per lb.
	Class III Other Solids Value	480,300	\$55,810.86	@	\$0.1162 per lb.
	Class III Butterfat Value	304,500	<u>\$453,035.10</u>	@	\$1.4878 per lb.
	Total Class III Value		\$1,146,591.60		
<b>Class IV :</b>	Class IV Nonfat Solids Value	0	\$0.00	@	\$0.8655 per lb.
	Class IV Butterfat Value	0	<u>\$0.00</u>	@	\$1.4878 per lb.
	Total Class IV Value		\$0.00		
	<b>Classified Value of Producer Milk</b>	15,000,000	\$2,199,178.64		
	<b>Somatic Cell Adjustment on Classes II, III, IV</b>		\$3,388.02		
	<b>Handler Use Value of Producer Milk</b>		<b>\$2,202,566.66</b>	@	<b>\$14.68 per cwt.</b>

## Handler #4 : ACME Cooperative As Handler

		Pounds	Value		Rate
<b>Class I :</b>	Class I Skim Value	0	\$0.00	@	\$10.84 per cwt.
	Class I Butterfat Value	0	<u>\$0.00</u>	@	\$1.5003 per lb.
	Total Class I Value		\$0.00		
<b>Class II :</b>	Class II Nonfat Solids Value	232,000	\$218,845.60	@	\$0.9433 per lb.
	Class II Butterfat Value	77,700	<u>\$116,145.96</u>	@	\$1.4948 per lb.
	Total Class II Value		\$334,991.56		
<b>Class III :</b>	Class III Protein Value	90,300	\$223,384.14	@	\$2.4738 per lb.
	Class III Other Solids Value	168,300	\$19,556.46	@	\$0.1162 per lb.
	Class III Butterfat Value	113,400	<u>\$168,716.52</u>	@	\$1.4878 per lb.
	Total Class III Value		\$411,657.12		
<b>Class IV :</b>	Class IV Nonfat Solids Value	388,400	\$336,160.20	@	\$0.8655 per lb.
	Class IV Butterfat Value	173,900	<u>\$258,728.42</u>	@	\$1.4878 per lb.
	Total Class IV Value		\$594,888.62		
	<b>Classified Value of Producer Milk</b>	10,000,000	\$1,341,537.30		
	<b>Somatic Cell Adjustment on Classes II, III, IV</b>		\$4,000.00		
	<b>Handler Use Value of Producer Milk</b>		<b>\$1,345,537.30</b>	@	<b>\$13.46 per cwt.</b>

# --- MARKETWIDE POOL CALCULATIONS ---

## Producer Price Differential\*

		Pounds	Value		Rate
<b>Class I Value and Product Pounds</b>	56.20%	44,957,450			
Class I Skim Value		44,109,700	\$4,781,491.48	@	\$10.84 per cwt.
Class I Butterfat Value		847,750	<u>\$1,271,879.33</u>	@	\$1.5003 per lb.
Total Class I Value			\$6,053,370.81		
<b>Class II Value and Product Pounds</b>	21.67%	17,331,408			
Class II Nonfat Solids Value		1,495,300	\$1,410,516.50	@	\$0.9433 per lb.
Class II Butterfat Value		944,200	<u>\$1,411,390.16</u>	@	\$1.4948 per lb.
Total Class II Value			\$2,821,906.66		
<b>Class III Value and Product Pounds</b>	14.29%	11,435,526			
Class III Protein Value		349,950	\$865,706.31	@	\$2.4738 per lb.
Class III Other Solids Value		652,050	\$75,768.21	@	\$0.1162 per lb.
Class III Butterfat Value		456,150	<u>\$678,659.97</u>	@	\$1.4878 per lb.
Total Class III Value			\$1,620,134.49		
<b>Class IV Value and Product Pounds</b>	7.84%	6,275,616			
Class IV Nonfat Solids Value		521,850	\$451,661.18	@	\$0.8655 per lb.
Class IV Butterfat Value		671,900	<u>\$999,652.82</u>	@	\$1.4878 per lb.
Total Class IV Value			\$1,451,314.00		
<b>Classified Value of Producer Milk</b>		80,000,000	<b>\$11,946,725.96</b>		
Somatic Cell Adjustment on Classes II, III, IV			\$14,017.02		
Overage Adjustment			\$0.00		
Inventory Reclassification			\$0.00		
Other Adjustments			\$0.00		
<b>Net Value of Producer Milk</b>			<b>\$11,960,742.98</b>		
<u>Less:</u>					
Value of Protein in Producer Milk	3.07%	2,456,000	\$6,075,652.80		
Value of Other Solids in Producer Milk	5.72%	4,576,000	\$531,731.20		
Value of Butterfat in Producer Milk	3.65%	2,920,000	\$4,344,376.00		
Adjustment for Reported Somatic Cell Value	300		\$32,000.00	@	\$0.00072 per 1,000
<b>Producer Price Differential</b>			<b>\$976,982.98</b>		<b>\$1.22 per cwt.</b>
<b>Statistical Uniform Price</b>	( Class III Price plus the PPD : \$13.27 + 1.22 = \$14.49 )				<b>\$14.49 per cwt.</b>

\* Calculations assume all handlers are located in the \$2.00 per hundredweight differential zone in the Central Order; thus, there are no location adjustments applicable to Class I utilization or the PPD. Also, the above example does not include adjustments for the Producer Settlement Fund Balance or the Producer Settlement Fund Reserve. (The inclusion of these adjustments would have a very small affect on the PPD and the Statistical Uniform Price.)

# -- HANDLER OBLIGATIONS TO POOL --

## Handler #1 : ABC Distributing Plant (81% Class I Utilization)

	Pounds	Value	Rate
<b>Handler Use Value of Producer Milk</b>		<b>\$3,891,418.50</b>	<b>@ \$15.57 per cwt.</b>
<b>Credits to Handler Use Value :</b>			
Producer Receipts at PPD	25,000,000	\$305,000.00	@ \$1.22 per cwt.
Value of Protein in Producer Milk	3.07% 767,500	\$1,898,641.50	@ \$2.4738 per lb.
Value of Other Solids in Producer Milk	5.72% 1,430,000	\$166,166.00	@ \$0.1162 per lb.
Value of Butterfat in Producer Milk	3.65% 912,500	\$1,357,617.50	@ \$1.4878 per lb.
Adjustment for Reported Somatic Cell Value		10,000.00	
<b>Total Credits to Handler Use Value</b>		<b>\$3,737,425.00</b>	
<b>Handler Obligation to Producer Settlement Fund .....</b>		<b>\$153,993.50</b>	( Due from Handler to PSF )

## Handler #2 : XYZ Distributing Plant (60% Class I Utilization)

	Pounds	Value	Rate
<b>Handler Use Value of Producer Milk</b>		<b>\$4,521,220.52</b>	<b>@ \$15.07 per cwt.</b>
<b>Credits to Handler Use Value :</b>			
Producer Receipts at PPD	30,000,000	\$366,000.00	@ \$1.22 per cwt.
Value of Protein in Producer Milk	3.07% 921,000	\$2,278,369.80	@ \$2.4738 per lb.
Value of Other Solids in Producer Milk	5.72% 1,716,000	\$199,399.20	@ \$0.1162 per lb.
Value of Butterfat in Producer Milk	3.65% 1,095,000	\$1,629,141.00	@ \$1.4878 per lb.
Adjustment for Reported Somatic Cell Value		12,000.00	
<b>Total Credits to Handler Use Value</b>		<b>\$4,484,910.00</b>	
<b>Handler Obligation to Producer Settlement Fund .....</b>		<b>\$36,310.52</b>	( Due from Handler to PSF )

## Handler #3 : 123 Supply Plant (44% Class I Utilization)

	Pounds	Value	Rate
<b>Handler Use Value of Producer Milk</b>		<b>\$2,202,566.66</b>	<b>@ \$14.68 per cwt.</b>
<b>Credits to Handler Use Value :</b>			
Producer Receipts at PPD	15,000,000	\$183,000.00	@ \$1.22 per cwt.
Value of Protein in Producer Milk	3.07% 460,500	\$1,139,184.90	@ \$2.4738 per lb.
Value of Other Solids in Producer Milk	5.72% 858,000	\$99,699.60	@ \$0.1162 per lb.
Value of Butterfat in Producer Milk	3.65% 547,500	\$814,570.50	@ \$1.4878 per lb.
Adjustment for Reported Somatic Cell Value		6,000.00	
<b>Total Credits to Handler Use Value</b>		<b>\$2,242,455.00</b>	
<b>Handler Obligation to Producer Settlement Fund .....</b>		<b>\$- 39,888.34</b>	( Due to Handler from PSF )

## Handler #4 : ACME Cooperative As Handler (0% Class I Utilization)

	Pounds	Value	Rate
<b>Handler Use Value of Producer Milk</b>		<b>\$1,345,537.30</b>	<b>@ \$13.46 per cwt.</b>
<b>Credits to Handler Use Value :</b>			
Producer Receipts at PPD	10,000,000	\$122,000.00	@ \$1.22 per cwt.
Value of Protein in Producer Milk	3.07% 307,000	\$759,456.60	@ \$2.4738 per lb.
Value of Other Solids in Producer Milk	5.72% 572,000	\$66,466.40	@ \$0.1162 per lb.
Value of Butterfat in Producer Milk	3.65% 365,000	\$543,047.00	@ \$1.4878 per lb.
Adjustment for Reported Somatic Cell Value		4,000.00	
<b>Total Credits to Handler Use Value</b>		<b>\$1,494,970.00</b>	
<b>Handler Obligation to Producer Settlement Fund .....</b>		<b>\$- 149,432.70</b>	( Due to Handler from PSF )

	Statistical Uniform Price		Producer Price Differential		Class I Utilization	
	Nov '09	Oct '09	Nov '09	Oct '09	Nov '09	Oct '09
Northeast	15.02	14.06	0.94	1.24	46.29	48.92
Appalachian	15.89	15.05	-----	-----	71.22	73.52
Florida	17.80	17.23	-----	-----	84.93	88.41
Southeast	16.28	15.55	-----	-----	70.33	74.01
Upper Midwest	14.12	12.94	0.04	0.12	15.03	14.24
<b>Central</b>	<b>13.86</b>	<b>12.79</b>	<b>-0.22</b>	<b>-0.03</b>	<b>37.26</b>	<b>40.16</b>
Mideast	14.11	13.14	0.03	0.32	44.01	46.26
Pacific Northwest	13.92	12.86	-0.16	0.04	29.80	30.89
Southwest	15.03	14.05	0.95	1.23	72.13	43.78
Arizona	14.38	13.38	-----	-----	38.58	40.26

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