

**Background Material specific to Milk Movement Incentives
for August 4, 2004 Hearing with corrections and additions
resulting from the July 20, 2004 Pre-Hearing Workshop**

Figure 1: [Federal] Class I Price Structure

Table 1: Summary of Changes in Area Differentials and Transportation Credits

Table 2: Summary of Changes in Transportation Allowances

Figure 2: Weekly Diesel Fuel Prices: 1996 to 2004 – **Data Corrected**

Figure 3: Regression Analysis of Plant-to-Plant Hauling Costs: 1983, 1990 2003,
and 2004

Figure 4 and Table 3: Transportation Allowance Costs, August 2002 to May 2004

Tables 4 and 5: Comparison of Efficiency of Ranch-to-Plant and Plant-to-Plant
Milk Movement

Figure 5: Condensed Skim Eligible for Transportation Credits, July 2002 to May
2004 - **NEW**

Figure 6: Condensed Skim Utilized in Class 1 Products, July 2002 to May 2004 -
NEW

Figures 7-9: Product Eligible for both Transportation Allowances and Credits,
June 2003 to May 2004

Figure 7: Bulk Milk - **NEW**

Figure 8: Condensed Skim - **NEW**

Figure 9: Bulk Milk and Condensed Skim - **NEW**

Figure 1 – Federal Class 1 Price Structure.

In federal Milk Marketing Orders, every county in the contiguous 48 states is assigned a Class I price differential. These differentials range from a low of \$1.60 to a high of \$4.30 per hundredweight.

These differentials are used for two different functions. First, for any Class I processor in a federal order, their pool obligation is the base Class I price plus the Class I differential applicable to county where their plant is located. Thus for example only, if California were part of a federal order, the pool obligation for a Class I plant in Los Angeles county would be \$0.50 per hundredweight more than for a Class 1 plant located in Tulare county (\$0.50 equals \$2.10 less \$1.60).

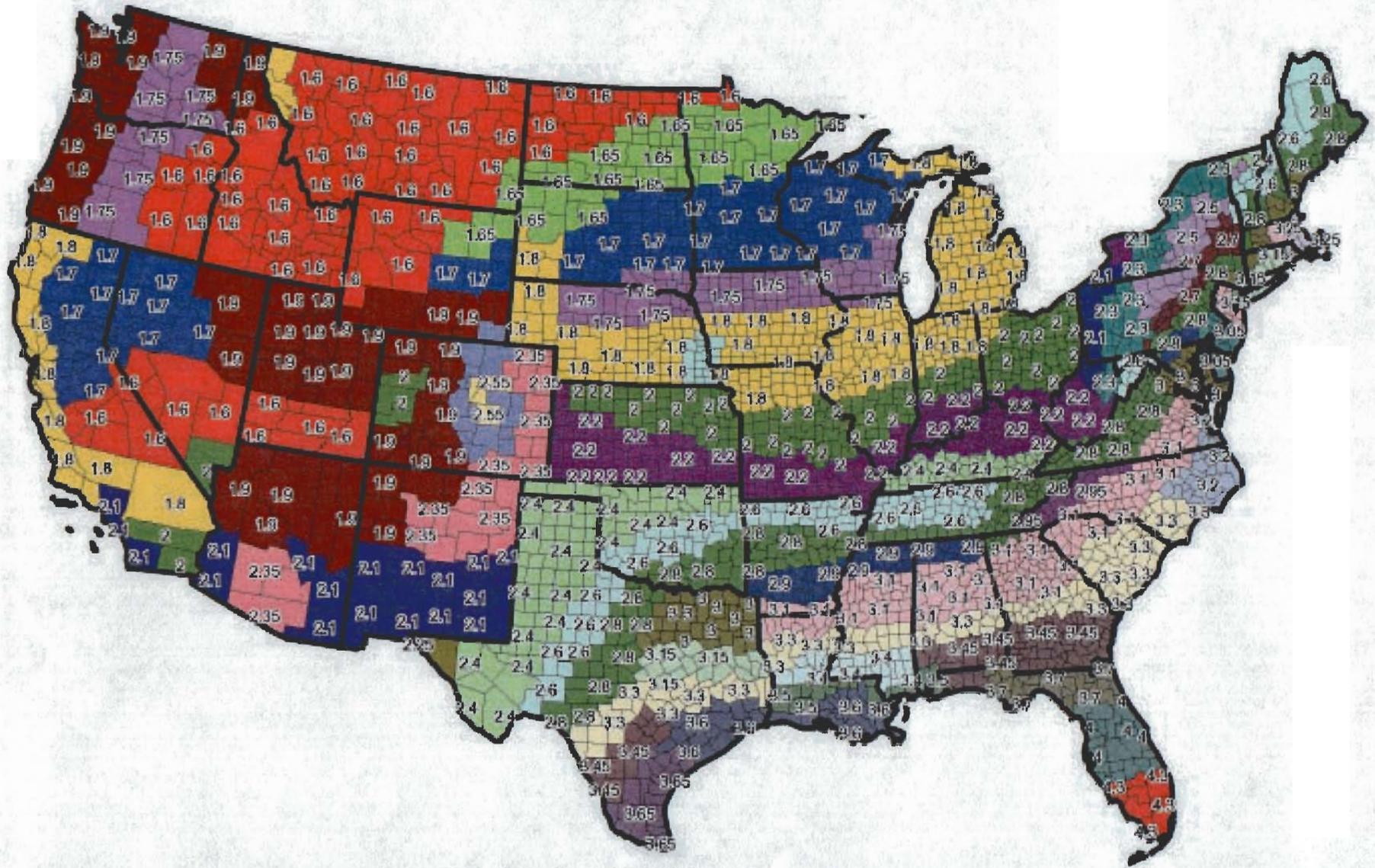
For the purposes of a California hearing on milk movement incentives, the second function of the Class I differentials is more relevant, in terms of both ranch-to-plant milk movement and plant-to-plant milk movement.

The relative Class I differentials affect the pool price a producer receives. Again for example only, if California were part of a federal order, a producer shipping to a pool plant in Los Angeles county would receive \$0.50 more than a producer shipping to a pool plant in Tulare county. (The plants do not have to be Class I plants; they only have to be associated with the pool.) This \$0.50 incentive to help cover hauling costs is comparable to the \$0.43 to \$0.58 transportation allowances California sets for milk moving from the Southern San Joaquin Valley into Los Angeles.

The relative Class I differentials also affect a plant's ability to ship milk to another plant. Again for example only, if California were part of a federal order, a pool plant in Tulare county shipping to a pool plant in Los Angeles county would have a \$0.50 raw product advantage to help cover hauling costs. This \$0.50 incentive is compared to the \$0.87 to \$0.90 transportation credits plus price differential California sets for milk moving from the South Valley into Los Angeles. (Recall however that if the receiving plant does not have 100% fluid utilization, the effective incentive is prorated down from these figures).

Figure 1

Class I Price Structure



January 2000

Table 1 – Summary of Changes in Areas Differentials and Transportation Credits

The incentive to move milk for Class 1 usage on a plant-to-plant basis is the sum of any transportation credit and any area differential (*i.e.*, any difference in the Class 1 pool obligation between the two plants). For various supply counties and deficit counties, the table shows the area differentials from the 1950's to 2003. The table also shows the transportation credits from their inception in 1981 up to 2003.

Table 2 – Summary of Changes in Transportation Allowances

With a statewide pool, the incentives to move milk to Class 1 plants on a ranch-to-plant basis are the transportation allowances. For various receiving areas (deficit counties), the table shows the transportation allowances from their inception in 1982 up to 2003. The allowances vary based on the mileage from the ranch to the plant.

Figure 2 – Diesel Fuel Prices: 1996 through 2004 – **Data Corrected**

Every Monday, the federal Department of Energy (DOE) collects information on diesel (and gasoline) prices across the county. This figure shows diesel prices per gallon for "California Retail On-Highway".

The corrections involve the date for March to July 2004. The date present at the workshop was from the wrong series. The corrected figure shows both the correct series and the wrong series for that 5-month time period.

Table 1 - SUMMARY OF CHANGES IN AREA DIFFERENTIALS AND TRANSPORTATION CREDITS: Plant-to-Plant

		MAXIMUM DEDUCTION PER HUNDREDWEIGHT																	
SUPPLY COUNTIES	DEFICIT COUNTIES	HEARING DATE ORDER DATE HEARING NUMBER	c1950	c1960	c1970	c1980	AUG. 1981	MAR. 1982	JUNE 1982	APR. 1983	OCT. 1984	MAY 1985	OCT. 1989	APR. 1991	JULY 1994	OCT. 1996	J-J 2001	Jun 2003	
			19				OCT. 1981 19	APR. 1982 21	AUG. 1982 23	JUNE 1983 26	DEC. 1984 31	JULY 1985 38	DEC. 1989 44	JUNE 1991 47	SEP. 1994 56	DEC. 1996 4	SEP. 2001	Aug 2003	
Los Angeles	Orange, Riverside, San Diego and Ventura ¹¹	Differential	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
		Credit																0.24	0.34
Total			\$0.00	\$0.00													\$0.24	\$0.34	
Tulare	Los Angeles, Orange, and Ventura ¹¹	Differential	0.60	0.28	0.38	0.55	0.55	0.55	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.27	0.27	0.27
		Credit					0.06	0.06	0.22	0.20	0.22	0.24	0.26	0.27	0.33	0.50	0.50	0.50	0.60
Total			\$0.60	\$0.28	\$0.38	\$0.55	\$0.61	\$0.61	\$0.62	\$0.60	\$0.62	\$0.64	\$0.66	\$0.67	\$0.73	\$0.77	\$0.77	\$0.77	\$0.87
	Riverside, and San Diego	Differential	0.60	0.28	0.38	0.55	0.55	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.27	0.27	0.27
		Credit					0.06	0.06	0.22	0.20	0.22	0.24	0.26	0.27	0.33	0.50	0.50	0.50	0.68
Total			\$0.60	\$0.28	\$0.38	\$0.55	\$0.61	\$0.61	\$0.62	\$0.60	\$0.62	\$0.64	\$0.66	\$0.67	\$0.73	\$0.77	\$0.77	\$0.77	\$0.95
Kings and Fresno	Los Angeles, Orange, and Ventura ¹¹	Differential	0.52	0.28	0.38	0.55	0.55	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.27	0.27	0.27
		Credit					0.09	0.09	0.25	0.23	0.25	0.27	0.29	0.30	0.30	0.53	0.53	0.53	0.63
Total			\$0.52	\$0.28	\$0.38	\$0.55	\$0.64	\$0.64	\$0.65	\$0.63	\$0.65	\$0.67	\$0.69	\$0.70	\$0.76	\$0.80	\$0.80	\$0.80	\$0.90
	Riverside, and San Diego	Differential	0.52	0.28	0.38	0.55	0.55	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.27	0.27	0.27
		Credit					0.09	0.09	0.25	0.23	0.25	0.27	0.29	0.30	0.38	0.53	0.53	0.53	0.71
Total			\$0.52	\$0.28	\$0.38	\$0.55	\$0.64	\$0.64	\$0.65	\$0.63	\$0.65	\$0.67	\$0.69	\$0.70	\$0.76	\$0.80	\$0.80	\$0.80	\$0.98
Sonoma	Alameda, San Francisco and Santa Clara	Differential	0.16	0.09	0.18	0.14	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Credit					0.16	0.26	0.26	0.26	0.26	0.26	0.26	0.27	0.27	0.27	0.27	0.27	0.27
Total			\$0.16	\$0.09	\$0.18	\$0.14	\$0.16	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.27	\$0.27	\$0.27	\$0.27	\$0.27	\$0.27
Merced and Stanislaus (part) ²²	Alameda, San Francisco and Santa Clara	Differential	0.33	0.35	0.28				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Credit					0.16	0.16	0.16	0.32	0.32	0.37	0.37	0.38	0.38	0.38	0.38	0.38	0.38
Total			\$0.33	\$0.35	\$0.28	\$0.00	\$0.16	\$0.16	\$0.16	\$0.32	\$0.32	\$0.37	\$0.37	\$0.38	\$0.38	\$0.38	\$0.38	\$0.38	\$0.38

¹¹ Ventura County added effective December 1989.

²² Part of Stanislaus County added effective April 1982, the part of Stanislaus County included modified effective July 1988.

²³ South Valley - Southern California Class 1 price differential reduced \$0.16 per hundredweight

²⁴ South Valley - Southern California Class 1 price differential reduced \$0.17 per hundredweight

Table 2 - SUMMARY OF CHANGES IN TRANSPORTATION ALLOWANCES: Ranch-to-Plant

HEARING DATE ORDER DATE HEARING NUMBER	CONSTRUCTIVE MILES		DOLLARS PER HUNDREDWEIGHT					CONSTRUCTIVE MILES		DOLLARS PER HUNDREDWEIGHT		CONSTRUCTIVE MILES		DOLLARS PER HUNDREDWEIGHT	
			SEP. 82	OCT. 83	OCT. 1984	MAY 1988	OCT. 1989			APR. 1991	JULY 1994			J-J 2001	June 2003
			DEC. 82	NOV. 83	DEC. 1984	JULY 1988	DEC. 1989			JUNE 1991	SEP. 1994			SEPT 2001	AUG 2003
			24	27	31	38	44			47	56				
Bay Area Receiving Area 1/	0 TO 44		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0 TO 99		\$0.20	\$0.20			\$0.24	\$0.24
	44 + TO 74		0.17	0.17	0.17	0.17	0.17	99 + TO 199		0.24	0.24			0.28	0.28
	74 + TO 100		0.20	0.20	0.20	0.20	0.20	199 +		0.30	0.30			0.30	0.30
	100 +		0.21	0.21	0.21	0.21	0.21								
Solano Receiving Area 2/	0 TO 9		0.00	0.00	0.00	0.00	0.00	0 TO 44		0.11	0.11			0.15	0.15
	9 + TO 75		0.06	0.06	0.06	0.06	0.06	44 + TO 99		0.16	0.16			0.20	0.20
	75 +		0.09	0.09	0.09	0.09	0.09	99 +		0.21	0.21			0.25	0.25
Sacramento Receiving Area 2/	See above Solano Receiving Area 2/							0 TO 59		0.09	0.09			0.09	0.09
								59 +		0.12	0.12			0.12	0.12
Shasta Receiving Area 3/	0 TO 19		0.00	0.00	0.00	0.00	0.00	0 TO 29		0.13	0.13			0.13	0.13
	19 + TO 30		0.13	0.13	0.13	0.13	0.13	29 + TO 49		0.16	0.16			0.16	0.16
	30 + TO 50		0.16	0.16	0.16	0.16	0.16	49 +		0.19	0.19			0.19	0.19
	50 +		0.19	0.19	0.19	0.19	0.19								
Southern California Receiving Area 4/ San Diego Receiving Area	See below Southern California Receiving Area										0 TO 89		0.00	0.09	
														0.43	0.43
														0.58	0.58
Southern California Receiving Area 5/ From Southern California 6/	0 +		0.00	0.00	0.00	0.00	0.00	0 +		0.00	0.00				
From South Valley 7/	0 TO 75	See below	0.00	0.00	0.00	0.00	0.00	0 TO 74		0.00	0.00			See above Southern California Receiving Area	
	75 +	"All Other" 7/	0.34	0.36	0.38	0.49		74 + TO 149		0.31	0.32				
								149 +		0.56	0.58				
From All Other 8/	0 TO 75		0.00	0.00	0.00	0.00	0.00	0 + TO 74		0.00	0.00				
	75 +		0.21	0.21	0.21	0.23	0.23	74 +		0.30	0.30				

1/ Alameda, Contra Costa, San Francisco, San Mateo, Santa Clara, and Santa Cruz Counties.

2/ Prior To June 1991, Sacramento and Solano Counties had been a single combined Receiving Area.

3/ Transportation Allowances for the Shasta Receiving Area have not been used since mid 1996.

4/ Los Angeles, Orange and Ventura Counties. Effective August 2003 Riverside County added.

5/ Los Angeles and Orange Counties. Effective December 1989 Ventura County added.

6/ Imperial, Inyo, Los Angeles, Mono, Orange, Riverside, San Bernardino, and San Diego Counties.

7/ Part of "All Other" from December 1982 to November 1983. Created November 1983 to include Fresno, Kings and Tulare Counties. Effective June 1991 Kern County added.

8/ Effective June 1991, Kern County was moved from "All Other" to "South Valley"

9

Figure 2 - DIESEL PRICES

DOE Calif. Retail On-Highway, Weekly, Monday Jan. 6, 1996 to Monday Jul. 19, 2004
[Corrections and additions resulting from the July 20th workshop:
specifically beginning in March 2004, the wrong DOE data series had been used.]

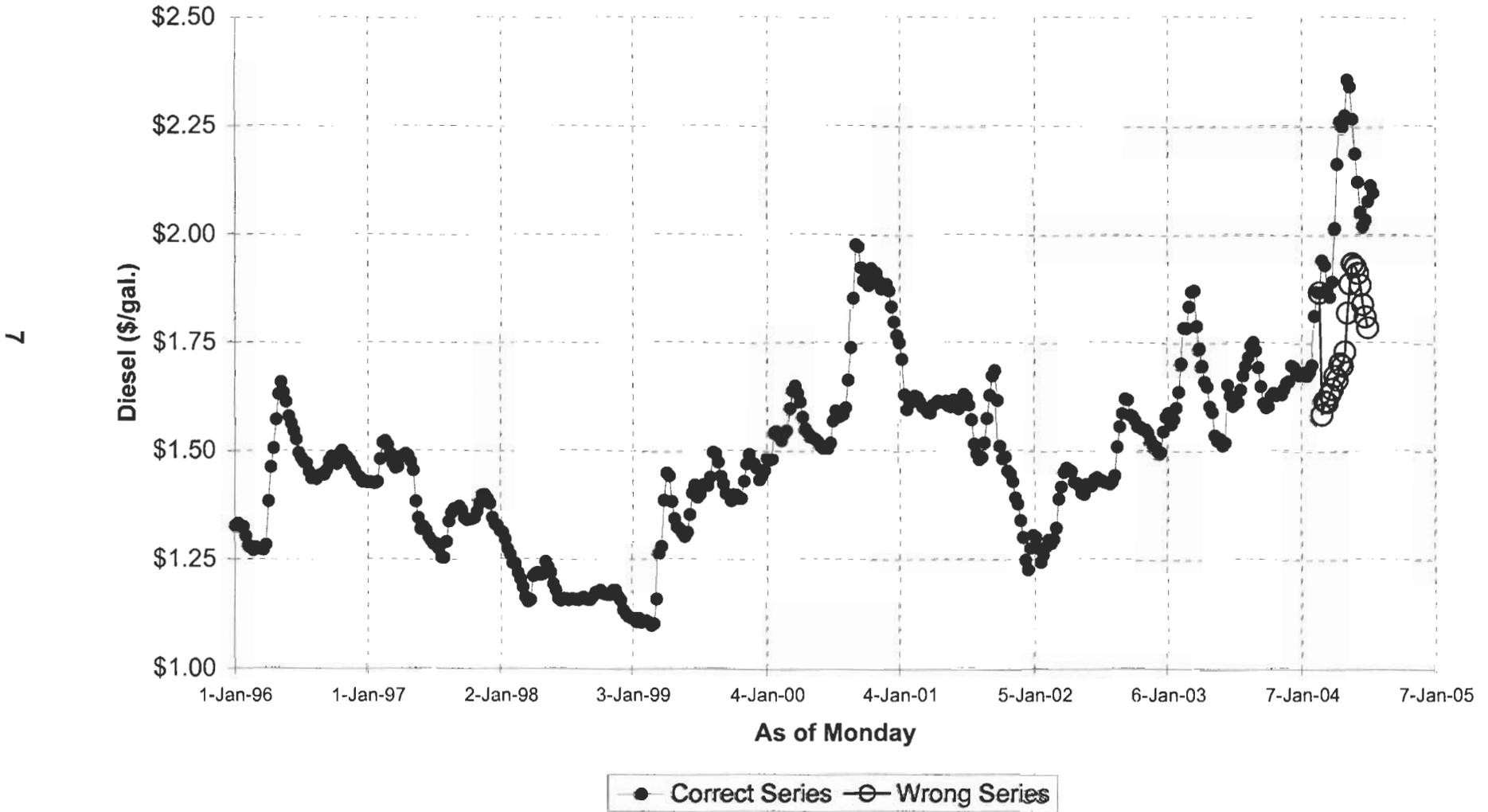


Figure 3 – Weighted Regression Analysis of Plant-to-Plant Hauling Costs, selected years

The distance between processing plants can be easily determined. Thus, it is possible to plot the hauling costs of plant-to-plant product movement (dependent variable on the Y-axis) against the distance of the haul (independent variable on the X-axis). Currently, both the transportation allowances and credits are discrete, discontinuance sets of numbers. It might be possible to use the information from the weighted regression analysis shown as the basis for developing transportation allowances and credits that are continuous functions of distance.

However for the purposes of this hearing, this weighted regression analysis is presented as a way to summarize a large quantity of data. In March 2003 before the last hearing on milk movement incentives, the fixed cost of hauling product plant-to-plant was about 22.7¢ per hundredweight of product, while the variable cost was about 33.8¢ per hundred miles per hundredweight of product. It is assumed that the fixed costs would reflect such things as the cost of loading, unloading and washing, as well as insurance, taxes and depreciation. The variable costs would reflect fuels costs and wage rates.

In April 2004, the weighted regression analysis suggested that the fixed cost were now 21.8¢ (down 0.9¢) and the variable costs were 37.3¢ (up 3.5¢). In terms of actually hauling costs, these changes imply that it now costs about 2.6¢ more to move milk from the Northern San Joaquin Valley to the Bay Area, and about 6.1¢ more to move milk from the Southern San Joaquin Valley to the Los Angeles.

Figure 4 and Table 3 – Transportation Allowance Costs

Affective August 2003, the Department made changes to the transportation allowance system. Both the figure and the table compare the total cost of transportation allowances for the twelve months prior to the change and for the first ten months since the change. *Figure 4* and *5* are similar in showing a before and after picture for the August 2003 changes to allowances and credits. The two figures differ in that *Figure 4* **measures the cost** of transportation allowances, while *Figure 5* **measures the volume** of product eligible.

Figure 3 - Weighted Regression Analysis of Plant-to-Plant Hauling Costs Selected Years

6

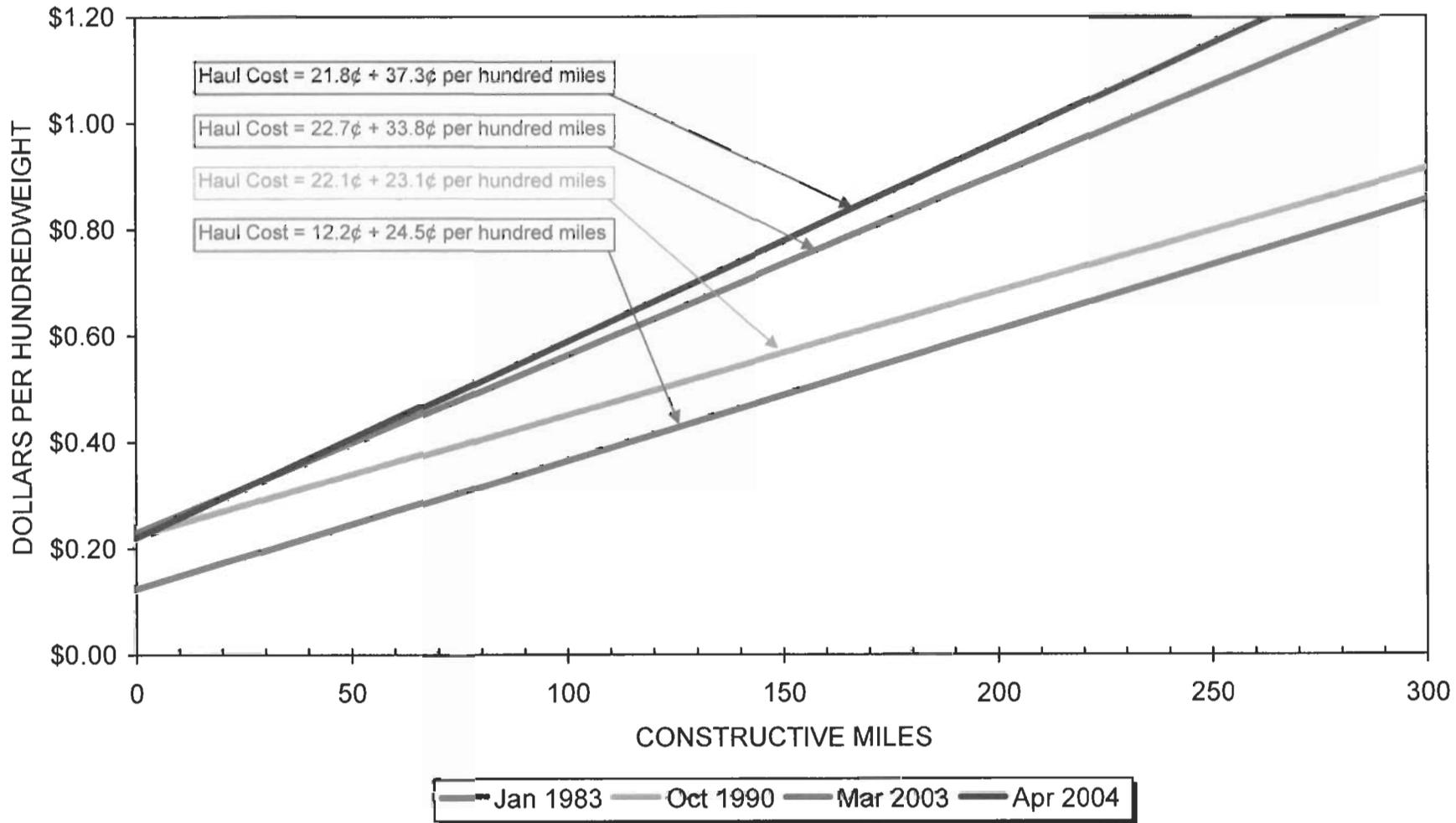


Figure 4 - TRANSPORTATION ALLOWANCE COSTS
Comparison of pre and post August 2003 changes
Northern and Southern California, Monthly, August 2002 through May 2004

10

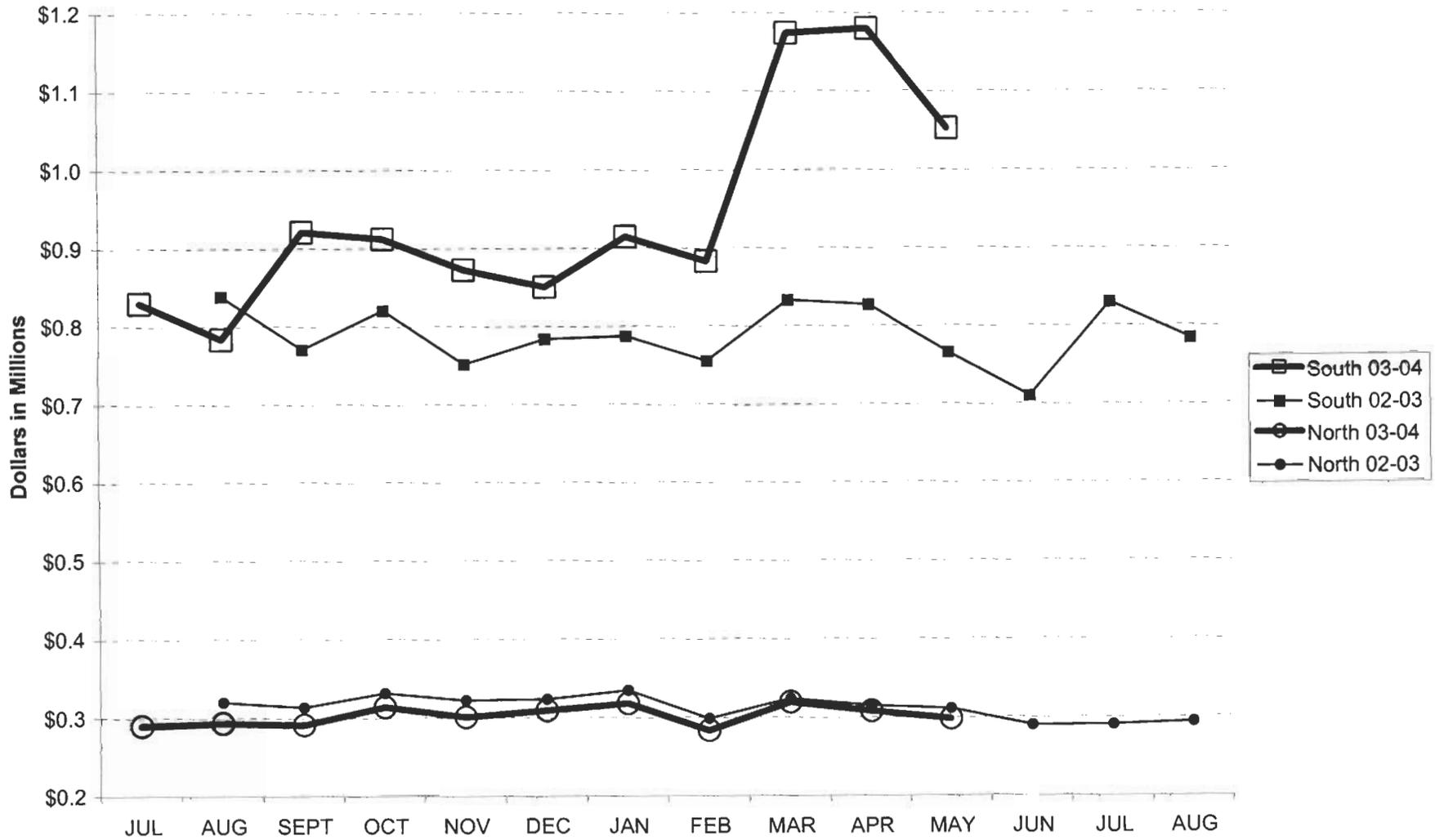


Table 3 - TRANSPORTATION ALLOWANCE COSTS

	NORTHERN	SOUTHERN	TOTAL
JUL			
2002 AUG	\$320,142	\$838,566	\$1,158,708
SEPT	\$313,669	\$770,612	\$1,084,281
OCT	\$331,548	\$820,261	\$1,151,809
NOV	\$322,263	\$751,583	\$1,073,846
DEC	\$323,445	\$783,670	\$1,107,115
2003 JAN	\$334,609	\$787,485	\$1,122,094
FEB	\$298,605	\$755,554	\$1,054,159
MAR	\$323,894	\$833,055	\$1,156,949
APR	\$314,760	\$826,973	\$1,141,734
MAY	\$310,728	\$766,113	\$1,076,841
JUN	\$289,659	\$709,763	\$999,422
JUL	\$289,779	\$829,553	\$1,119,332
AUG	\$293,631	\$783,843	\$1,077,473
SEPT	\$291,326	\$921,098	\$1,212,424
OCT	\$313,729	\$912,095	\$1,225,824
NOV	\$300,889	\$872,488	\$1,173,377
DEC	\$309,182	\$850,196	\$1,159,378
2004 JAN	\$317,935	\$914,479	\$1,232,415
FEB	\$283,287	\$883,130	\$1,166,417
MAR	\$319,180	\$1,173,942	\$1,493,121
APR	\$307,969	\$1,179,624	\$1,487,593
MAY	\$297,990	\$1,052,327	\$1,350,317

Tables 4 and 5 – Comparison of Efficiency of Ranch-to-Plant and Plant-to-Plant Milk Movement

Both tables use the same estimate of the hauling costs and the marginal processing costs of supplying Southern California with 2-10 milk. Both tables compare costs for Ranch-to-Plant and Plant-to-Plant milk movement. They differ in that *Table 4* includes the incentives supplied by the current transportation allowances and credits, while *Table 5* includes the incentives that would be supplied if the LOL proposal were adopted.

Figure 5 – Condensed Skim Eligible for Transportation Credits - **NEW**

Effective August 2003, the Department made changes to the transportation allowance system. The figure compares the total volume of condensed skim eligible for transportation credits for the twelve months prior to the change and for the first ten months since the change. *Figure 4* and *5* are similar in showing a before and after picture for the August 2003 changes to allowances and credits. The two figures differ in that *Figure 4* measures the cost of transportation allowances, while *Figure 5* measures the volume of product eligible.

Figure 6: Condensed Skim Utilized in Class 1 Products - **NEW**

Beginning July 2002, this figure shows the amount of condensed skim moving plant-to-plant, prorated to the receiving plants Class 1 utilization. The shipping plant includes both instate and out-of-state plants. It does not include condensed skim produced and utilized in the same plant.

Figures 7-9: Product Eligible for both Transportation Allowances and Credits,

Figure 7: Bulk Milk - **NEW**

Figure 8: Condensed Skim - **NEW**

Figure 9: Bulk Milk and Condensed Skim - **NEW**

For the 12-month period June 2003 to May 2004, these three figures show the prorated volume of product associated with those plants that are eligible for transportation allowances on their incoming milk (ranch-to-plant) and transportation credits for their outgoing product (plant-to-plant). Eligibility is based both on the current stabilization and pooling plans and on CDI amendments to those plans.

**Table 4 - Comparison of Efficiency
of Ranch-to-Plant and Plant-to-Plant
Milk Movement**

Current Allowances and Credits

	<u>Plant-to-Plant</u>	<u>Ranch-to-Plant</u>	<u>Ranch-to-Plant</u>
	Tulare Ranch to Tulare Plant to So Cal Plant	Kern Ranch to So Cal Plant back to Tulare Plant	Tulare Ranch to So Cal Plant back to Tulare Plant
Ranch-To-Plant Hauling	\$29	\$85	\$112
Plant-To-Plant Hauling	\$102	\$4	\$4
Cream Processing	\$4	\$14	\$14
Cond. Skim Processing	\$9	\$17	\$17
Skim Processing	\$18	\$86	\$86
Total	\$163	\$207	\$234
Less Transportation Allowance		(\$49)	(\$67)
Less Transportation Credit	(\$95)		
Net	\$68	\$157	\$167

Assumptions:

- 11,494 pounds of 3.5%, 8.7% ranch milk
- 10,000 pounds of 2%, 10% plant milk
- 2%,10% milk from 55% ranch milk (3.5,8.7), 40% skim (0.1,9.0) and 5% condensed skim (0.4,32.0)

Dairy Marketing Branch, CDFA

whole milk	3.50%	8.70%	55.0%
skim milk	0.12%	9.00%	40.0%
condensed skim	0.43%	32.00%	5.0%
2-10 milk	1.99%	9.99%	100.00%

**Table 5 - Comparison of Efficiency
of Ranch-to-Plant and Plant-to-Plant
Milk Movement**

Proposed Allowances and Credits

	<u>Plant-to-Plant</u>	<u>Ranch-to-Plant</u>	<u>Ranch-to-Plant</u>
	Tulare Ranch to Tulare Plant to So Cal Plant	Kern Ranch to So Cal Plant back to Tulare Plant	Tulare Ranch to So Cal Plant back to Tulare Plant
Ranch-To-Plant Hauling	\$29	\$85	\$112
Plant-To-Plant Hauling	\$102	\$4	\$4
Cream Processing	\$4	\$14	\$14
Cond. Skim Processing	\$9	\$17	\$17
Skim Processing	\$18	\$86	\$86
Total	\$163	\$207	\$234
Less Transportation Allowance		(\$55)	(\$67)
Less Transportation Credit	(\$102)		
Net	\$61	\$151	\$167

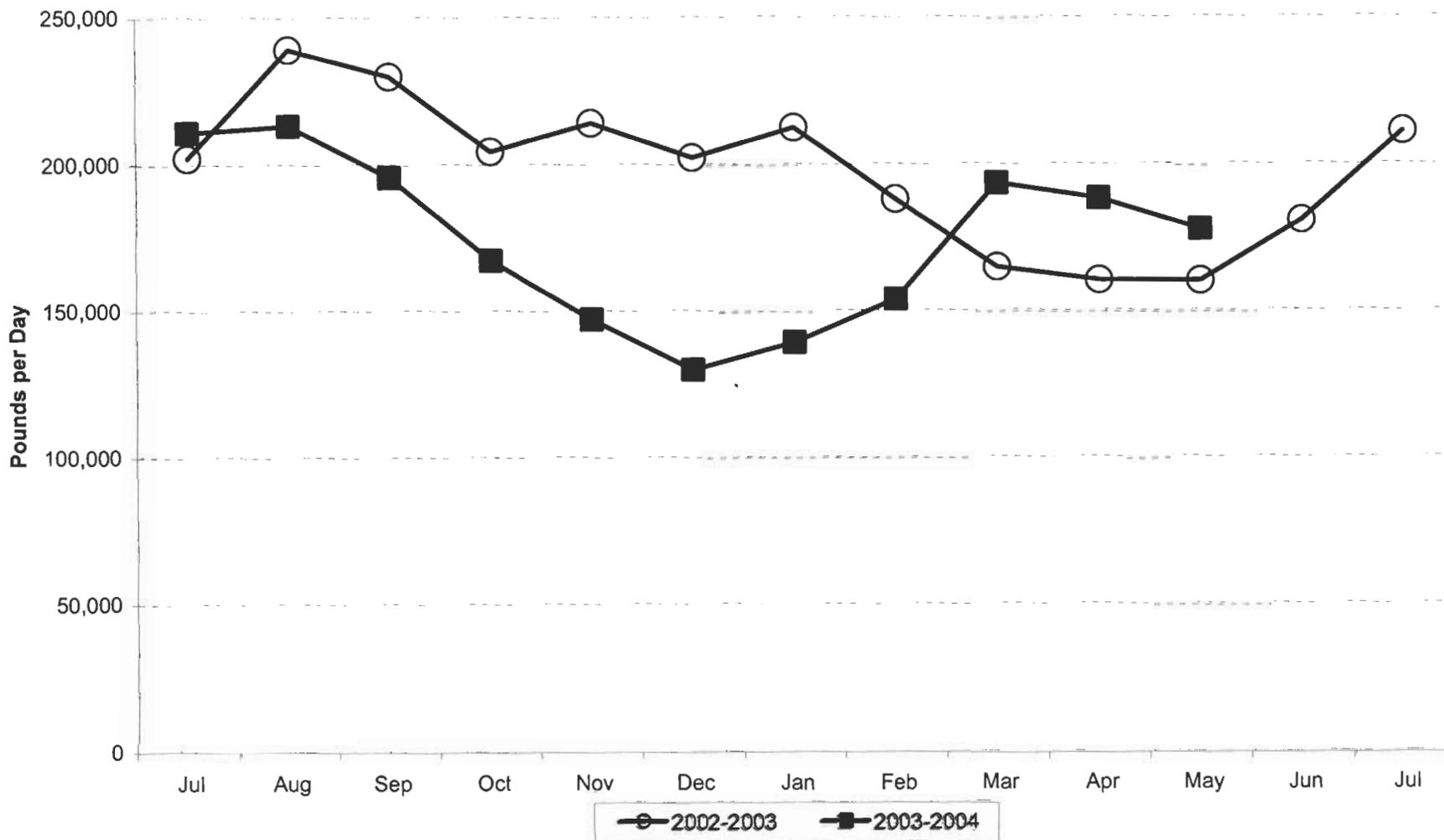
Assumptions:

11,494 pounds of 3.5%, 8.7% ranch milk
 10,000 pounds of 2%, 10% plant milk
 2%, 10% milk from 55% ranch milk (3.5, 8.7), 40% skim (0.1, 9.0) and 5% condensed skim (0.4, 32.0)

Dairy Marketing Branch, CDFA

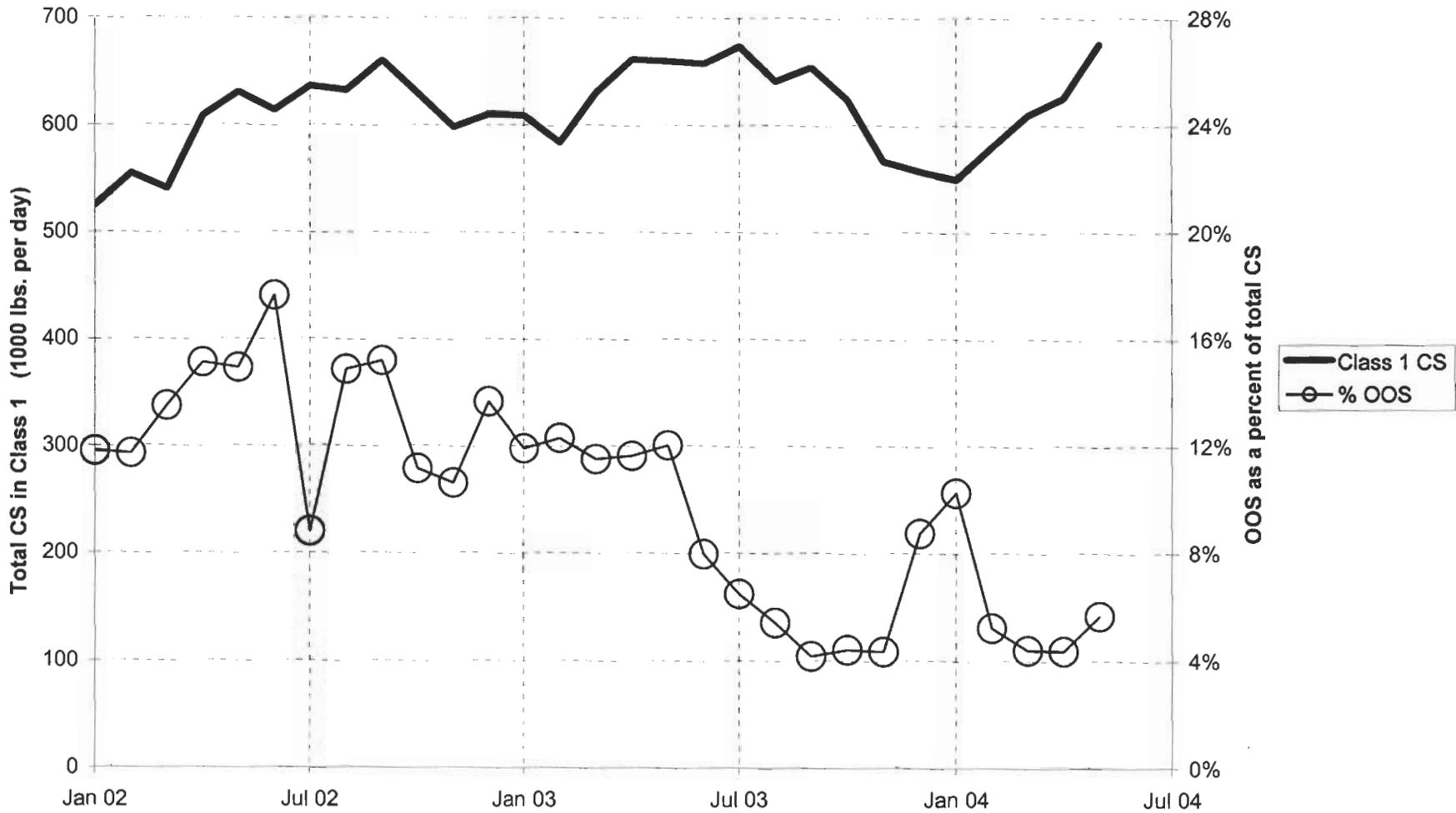
whole milk	3.50%	8.70%	55.0%
skim milk	0.12%	9.00%	40.0%
condensed skim	0.43%	32.00%	5.0%
2-10 milk	1.99%	9.99%	100.00%

Figure 5 - CONDENSED SKIM ELIGIBLE FOR TRANSPORTATION CREDITS
Comparison of Pre and Post August 2003 Amendments
July 2002 to July 2003 and July 2003 to May 2004



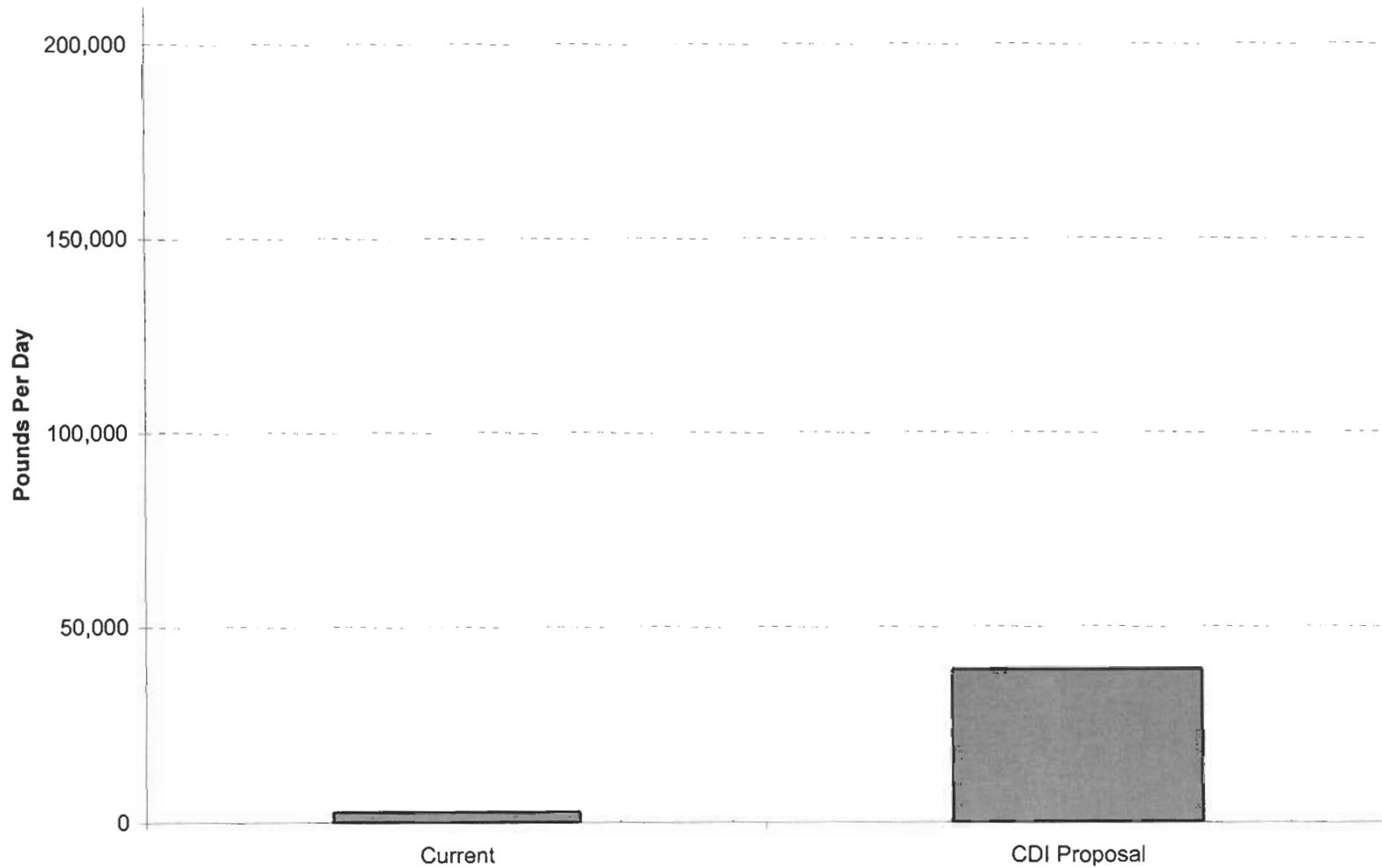
[New figure based on request made at the July 20, 2004 Pre-Hearing Workshop]

Figure 6 - CONDENSED SKIM (CS) UTILIZED IN CLASS 1 PRODUCTS
Total Volume and Percent from Out-of-State (OOS) Plants
 Does not include CS produced and utilized in the same plant, January 2002 to May 2004



[New figure based on request made at the July 20, 2004 Pre-Hearing Workshop]

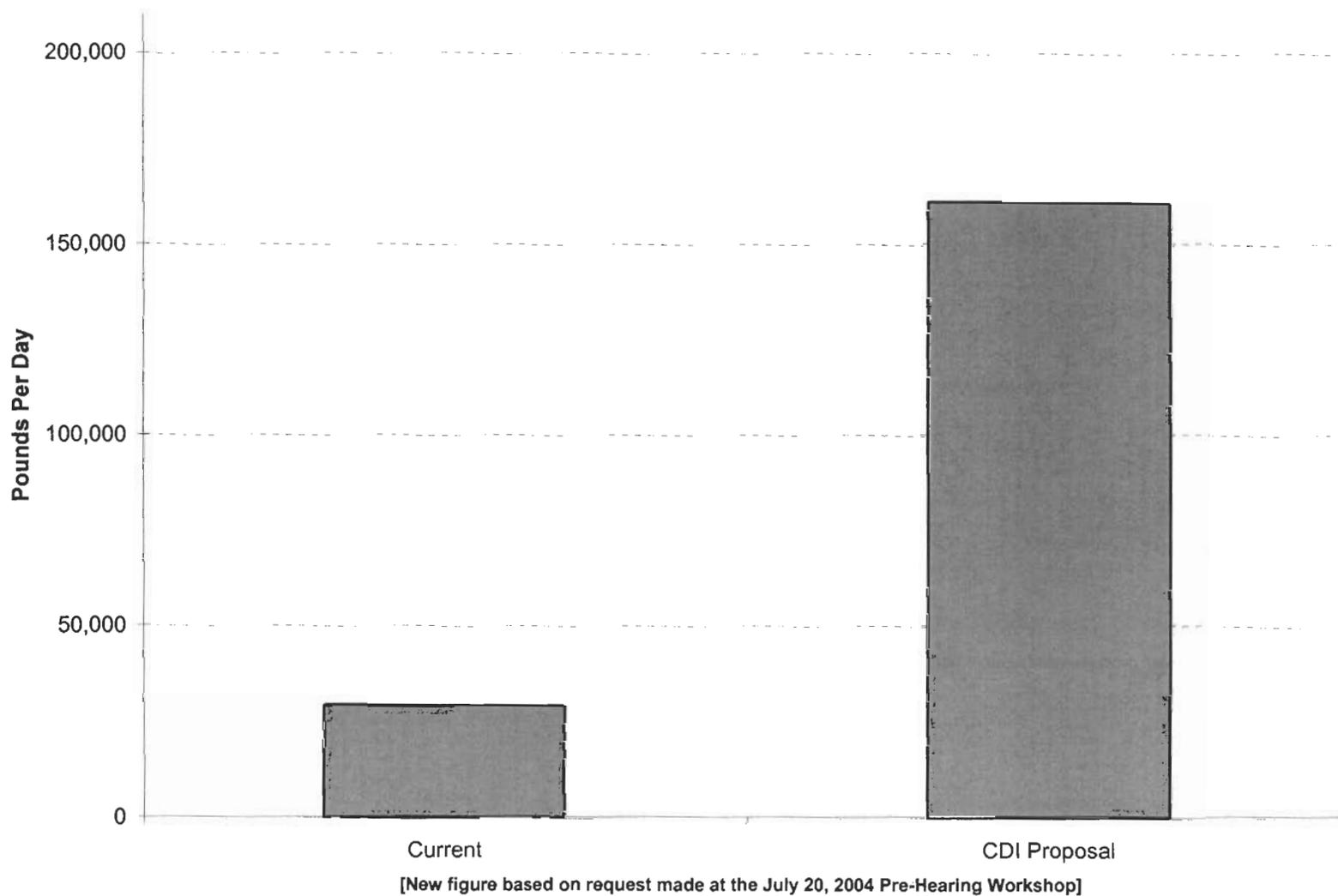
Figure 7 - BULK MILK ELIGIBLE FOR BOTH TRANSPORTATION ALLOWANCES AND CREDITS
Current and additional from CDI Proposal
Total for June 2003 to May 2004



[New figure based on request made at the July 20, 2004 Pre-Hearing Workshop]

17

Figure 8 - CONDENSED SKIM ELIGIBLE FOR BOTH TRANSPORTATION ALLOWANCES AND CREDITS
Current and additional from CDI Proposal
Total for June 2003 to May 2004



18

Figure 9 - BULK MILK AND CONDENSED SKIM ELIGIBLE FOR BOTH ALLOWANCES AND CREDITS
Current and additional from CDI Proposal
Total for June 2003 to May 2004

