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**ANALYSIS OF HAULING CHARGES AND PRODUCER MILK BY  
LOCATION AND SIZE-RANGE OF PRODUCTION**

**PACIFIC NORTHWEST ORDER**

**MAY 2004 (with comparison to May of previous years)**

Staff Paper 05-01

Chris Werner

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Abstract

Hauling charges were examined for 881 producers in May 2004. The milk represented in this study was producer milk (Grade A) pooled on or historically associated with the Pacific Northwest Order. Hauling charges, stop charges, and milk production were obtained from producer payrolls submitted by handlers to the Market Administrator's office. The terms "milk production" and "producer milk" in this study are synonymous. Hauling charges in this paper are given on a per hundredweight basis. The reference to a particular year refers to May of that year. Some comparisons to previous years are reported, but due to changes in Federal order boundaries and order provisions, these comparisons may be biased.

Major findings of this study include:

1. In May 2004, the weighted average hauling charges on the Pacific Northwest Order was 49.50 cents per hundredweight, up 6.74 cents from May 2003.
2. By state, Oregon had the lowest weighted average hauling charge, followed by Idaho, Washington, and California.
3. In general, hauling charges in the Northwest appear to be determined by the density of farms in a region; and their proximity to metropolitan areas or areas of intense milk processing. Hauling charges per hundredweight appear to have become somewhat less dependent on the volume of milk a producer delivers to the market. This may be due to the use of volume premiums paid to producers who deliver larger quantities of milk instead of lowering their hauling rates.
4. Based on producer milk pooled, the average monthly deliveries per producer for the Pacific Northwest Order was 628,800 pounds.

## TABLE OF CONTENTS

I.	INTRODUCTION .....	1
II.	AVERAGE MILK HAULING CHARGES BY STATE AND COUNTY .....	1
	Table 1: Weighted Average Hauling Charges By State .....	2
III.	PRODUCER MILK AND PRODUCER NUMBERS.....	3
IV.	RELATIONSHIP BETWEEN MILK PRODUCTION AND HAULING CHARGES IN .....	4
V.	CONCLUSIONS .....	4
VI.	APPENDIX	
	Tables: A-1 Weighted Average Hauling Charges By State and County, Pacific Northwest Order: May 2004 and 2003 .....	6
	A-2 Number of Producers, Pounds of Milk, and Average Pounds Per Producer By State and County, Pacific Northwest Order: May 2004 and 2003 .....	8
	A-3 Cross Tabulation of <u>Number</u> of Producers Between Milk Production and Hauling Charges, Pacific Northwest Order: May 2004 .....	10
	A-4 Cross Tabulation of <u>Percentage</u> of Producers Between Milk Production and Hauling Charges, Pacific Northwest Order: May 2004 .....	10
	Figures: A-1 Weighted Average Hauling Charges, Pacific Northwest Order: May 2004 .....	11
	A-2 Average Milk Production Per Producer, Pacific Northwest Order: May 2004 .....	12
	A-3 Marketing Area of the Pacific Northwest Order .....	13

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Chris Werner <sup>1/</sup>

**I. INTRODUCTION**

This study analyzes hauling charges and producer milk by location and size-range of production for the Pacific Northwest Order. Previous hauling studies included information for the Western Order, but the order was terminated effective April 1, 2004, and not included in this years study. The order had 699 producers and 439.5 million pounds of producer milk pooled in May 2004. Most producers historically associated with order but not pooled due to the relationship of Class III and uniform prices in May 2004 were included in the hauling portion of this study. A total of 881 producers had hauling charges and were included in this study. The amount of historically associated milk not pooled represents fewer than three handlers, therefore is restricted. The terms “milk production” and “producer milk” in this study are synonymous. Some comparisons to previous years are reported, but due to changes in Federal order provisions beginning in January 2000 and January 2003, these comparisons may be biased. (Please refer to previous years' publications to explain methodology of previous years' data, i.e., in 2002 and 2001 some eligible milk on the Pacific Northwest Order was not pooled.)

Hauling charges are based on producer payrolls submitted by handlers to the Market Administrator's Office in Bothell, Washington. Several handlers identify a stop charge with, or in lieu of, a hauling charge. Stop charges were converted to a per hundredweight basis and added onto, if any, the normal per hundredweight charge. Producers that hauled their own milk to market, typically large-volume producers, were not included in the analysis of hauling charges but were included in the analysis of producer size.

Hauling charges in this paper are given on a per hundredweight basis. The use of May data provides a standard basis to compare between years. The reference to a particular year refers to May of that year.

**II. AVERAGE MILK HAULING CHARGES BY ORDER, STATE, AND COUNTY**

A comparison of average hauling charges between regions in May 2004 tends to reveal the relative efficiency of hauling, as it relates to the density and size of dairy farms and their proximity to milk processors.

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Hauling charges for producers associated with the Pacific Northwest Order averaged 49.50 cents per hundredweight in May 2004, up 6.74 cents from May 2003. By state, hauling charges averaged 31.81 cents in Oregon, 37.87 cents in Idaho, 54.61 cents in Washington, and 73.90 cents in California. (See Table 1.)

Institutional factors aside, average hauling charges have increased from 2003. An increase in fuel prices from early 2003 compared to 2004 may have been a factor in the higher hauling rates.

Weighted average hauling charges for each state under the Pacific Northwest Order are shown in Table 1. Appendix Table A-1 provides hauling charges by state and county for May 2004 and 2003.

Hauling charges in Washington were lower west of the Cascade Mountain Range. Counties located near Seattle, Washington, and further south, near Portland, Oregon, had the lowest hauling charges. The hauling charges increased with distance from Seattle and Spokane, Washington and Portland, Oregon. This is believed to be due to the location of dairy farms relative to plants and the relative concentration of dairy farms.

Hauling charges in Oregon were lowest in the northwest region of the state. The northwest part of Oregon is where the majority of dairy farms and human population are located. Higher hauling charges occurred in Oregon's eastern counties. The distance from the farms to the nearest handler is the probable cause of the higher hauling charges in eastern Oregon. Dairy farmers in some counties in western Oregon may incur relatively higher hauling charges due to the sparse producer numbers in those particular counties.

<u>State</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>
	- - - - - cents per cwt. - - - - -				
California	77.26	66.51	37.77	71.38	<b>73.90</b>
Idaho	109.74	41.88	56.41	116.69	<b>37.87</b>
Oregon	33.02	32.48	32.26	34.39	<b>31.81</b>
Utah	N/A	43.15	R	N/A	N/A
Washington	45.67	41.53	41.49	44.54	<b>54.61</b>
Total	43.31	40.10	39.71	42.76	<b>49.50</b>

N/A = not applicable. R = restricted, represents fewer than three producers.

Hauling charges in Idaho were the lowest in the southern parts of the state. This area is characterized by many large dairies located relatively close to plants. In northern Idaho, the charge of hauling is much higher due most probably to fewer and much smaller dairies located further from plants, when compared to southern Idaho.

Del Norte and Siskiyou counties in California have producer milk historically pooled on the Pacific Northwest Order, only producers in Siskiyou County had hauling charge information. Producers in Del Norte County were not included in the analysis of hauling charges. Average hauling charges by county are displayed in the Appendix. Selected counties are combined with adjacent counties in order to maintain confidentiality. Table A-1 (on pages 6 and 7) shows weighted average hauling charges by county and state.

Mapping data geographically is an ideal way to present and evaluate hauling charge data. Figure A-1 (on page 11) is a map of hauling charges by county. Figure A-3 (on page 13) is a map to reference county names to the maps that do not provide names and an outline of the Pacific Northwest Order. Figure A-1 shows that hauling charges in parts of northwestern Oregon (Tillamook, Marion, Polk, Washington, and Yamhill Counties), western Washington (Clark, King, and Pierce Counties), and southern Idaho (Ada and Canyon Counties) were less than 30 cents. Most of these counties are either in areas characterized by larger volume producers, or a large number of producers located near a plant. Higher hauling charges were generally associated with counties located in more remote areas of the states. In support of the preceding statements, counties located near Seattle and Spokane, Washington, have lower hauling charges than more distant, surrounding counties. To a lesser extent, hauling charges tend to increase as the distance to Portland, Oregon, increases. This latter, “weaker” relationship may be due to the fact that Oregon has many more, relatively smaller plants dispersed over a larger area than is the case in Washington.

### III. PRODUCER MILK AND PRODUCER NUMBERS

The Pacific Northwest Order’s producer milk for May 2004 totaled 439.5 million pounds. Appendix Figure A-2 (on page 12) shows, on a map of the Northwest, current average pounds of milk per producer pooled on the Pacific Northwest Order. Appendix Table A-2 (on pages 8 and 9) provides the pounds of producer milk, producer numbers, and average milk production per producer.

Producer milk originating in Washington totaled 333.4 million pounds in May 2004, a decrease of 127.5 million pounds or 27.7 percent compared to May 2003. Producer milk historically pooled on the Pacific Northwest was not pooled due to the Class III and uniform price relationship. Comparisons to the previous year are biased. The county with the most milk pooled was Whatcom County. Including all eligible producer milk, Yakima County has the most milk production in Washington.

Producer milk originating in Oregon totaled 87.3 million pounds in May 2004 for the Pacific Northwest Order, a decrease of 88.0 million pounds or 50.2 percent compared to May 2003. The number of producers pooled on the Pacific Northwest Order in May 2004 was 148 producers, a decrease of 137 producers. Producer milk historically pooled on the Pacific Northwest was not pooled due to the Class III and uniform price relationship. Comparisons to the previous year are biased. The county with the most milk pooled was Marion County. Including all eligible producer milk, Tillamook County has the most milk production in Oregon.

Producer milk pooled on the Pacific Northwest Order originating in Idaho and California was 14.5 million pounds and 4.3 million pounds, respectively, in May 2004. The number of producers in Idaho and California was 33 and six, respectively. Due to changes in order provisions and institutional factors, comparisons of producer milk and number of producers to May 2003 are biased.

#### IV. RELATIONSHIP BETWEEN MILK PRODUCTION AND HAULING CHARGES

The data in this study shows that as the milk production of a dairy farm increases, up to 600,000 pounds of milk per month, the rate charged for hauling decrease. Over 600,000 pounds of milk per month, as milk production increase hauling rates tend to increase. The expected inverse relationship between milk production and hauling charge rates are not true across all ranges of milk production. A possible reason for a deviation from an inverse relationship may be the way handlers of milk pay volume premiums instead of decreasing hauling rates to producers with larger monthly milk deliveries. Also, the location of larger dairy farms to the proximity of milk processing and fluid milk outlet may also influence hauling rates of larger producers.

Appendix Table A-3 representing 881 producers, shows the number of producers for each range of hauling charges and milk production for the Pacific Northwest Order. Included in the table is a weighted average hauling charge for each size-range of milk production. Appendix Table A-4, shows the percentage of producers for each range of hauling charges and milk production for the Pacific Northwest Order.

In the Pacific Northwest Order, 24 producers were charged over \$1.00 per hundredweight for hauling; most these producers produced less than 300,000 pounds. Only three of the 32 producers with less than 50,000 pounds had hauling charges less than 50 cents. The mid-range hauling charge (20 to 70 cents) is populated by a great variety of producers. There were seven producers with hauling charges less than 20 cents. The average hauling rate for each size-range (Table A-3) decreases as deliveries increase until 600,000 pounds. Above 600,000 pounds, the average hauling charge begins to increase. This increase may be attributable to location or institutional factors that affect charges for hauling.

#### V. CONCLUSIONS

This study examined hauling charges for 881 producers whose milk was pooled on or historically associated with the Pacific Northwest Order in May 2004.

Hauling rates compared to previous years' studies were higher due probably to higher fuel costs in the year 2004 compared to 2003. In May 2004, the weighted average hauling charges on the Pacific Northwest Order was 49.50 cents per hundredweight.

By state, Oregon had the lowest weighted average hauling charge, followed by Idaho, Washington, and California.

In general, hauling charges on the Pacific Northwest Order appears to be determined by the density of farms in a region; the size of dairy farms; and their proximity to metropolitan areas or areas of intense milk processing. Hauling charges per hundredweight appear to have become somewhat less dependent on the volume of milk a producer delivers to the market. This may be due to the use of volume premiums paid to producers who deliver larger quantities of milk instead of lowering their hauling rates.

Based on producer milk pooled, average monthly deliveries per producer for the Pacific Northwest Order was about 628,800 pounds.



Table A-1  
 Weighted Average Hauling Charges By State and County  
 Pacific Northwest Order  
 May 2004 and 2003 \*

State & County	2004	2003
Cents per Cwt.		
<b>California</b>		
Siskiyou	73.90	71.38
Weighted Average California	73.90	71.38
<b>Idaho</b>		
Bonner & Boundary	86.05	89.29
Idaho & Latah	130.99	135.04
Southern Idaho	29.98	n/a
Weighted Average Idaho	37.87	116.69
<b>Oregon</b>		
Benton & Lincoln	32.86	43.86
Clackamas, Columbia, Multnomah, & Umatilla	45.32	54.21
Clatsop	47.85	48.87
Coos	39.66	n/a
Crook & Deschutes	50.51	44.22
Josephine	49.35	59.19
Klamath & Jackson	102.30	95.16
Lane	39.74	46.95
Linn	36.51	39.76
Malheur	47.93	n/a
Marion	26.56	31.98
Polk	24.61	31.81
Tillamook	24.63	25.04
Washington	29.57	37.31
Yamhill	27.71	31.48
Weighted Average Oregon	31.81	34.39

Table A-1  
 Weighted Average Hauling Charges By State and County  
 Pacific Northwest Order  
 May 2004 and 2003 \*

State & County	2004	2003
	Cents per Cwt.	
<b>Washington</b>		
Adams & Whitman	58.86	53.74
Benton	71.10	50.44
Clallam	64.75	67.49
Clark	12.56	15.04
Cowlitz	31.83	36.55
Franklin	63.09	58.37
Grant & Kittitas	60.38	55.20
Grays Harbor	45.93	37.81
Island	44.08	42.80
Jefferson	73.48	78.42
King	28.31	33.66
Lewis	42.19	38.96
Pacific	74.78	55.85
Pierce	24.39	31.89
Skagit	42.77	37.15
Snohomish	32.81	32.37
Spokane & Lincoln	49.50	52.15
Stevens	65.21	67.13
Thurston	30.55	29.20
Wahkiakum	76.59	78.44
Whatcom	48.16	40.49
Yakima	70.99	51.42
Weighted Average Washington	54.61	44.54
Pacific Northwest Order	49.50	42.76

\* Data obtained from producer payrolls submitted by handlers.

In 2004, eligible milk not pooled due to the relationship between the Class III Price and the Uniform Price was included in weighted average hauling charges shown in this table. In 2003, hauling charges based on milk pooled.

n/a = not applicable.

Table A-2  
Number of Producers, Pounds of Milk, and Average Pounds Per Producer By State and County  
Pacific Northwest Order  
May 2004 and 2003

State & County	Number of Producers		Pounds of Producer Milk		Average Pounds Per Producer	
	2004	2003	2004	2003	2004	2003
----- 1,000 pounds -----						
<b>California</b>						
Del Norte & Siskiyou	6	6	4,289	4,403	715	734
Total/Average California	6	6	4,289	4,403	715	734
<b>Idaho</b>						
Bonner & Boundary	5	5	705	641	141	128
Idaho & Latah	5	7	745	956	149	137
Southern Idaho	23	0	13,088	0	569	0
Total/Average Idaho	33	12	14,537	1,597	441	133
<b>Oregon</b>						
Benton & Lincoln	6	7	4,339	4,050	723	579
Clackamas & Multnomah	12	12	1,664	1,813	139	151
Clatsop	0	5	0	1,097	0	219
Coos & Curry	20	8	3,574	1,467	179	183
Deschutes & Crook	7	7	1,115	1,225	159	175
Josephine	4	6	1,661	3,052	415	509
Klamath & Jackson	11	11	9,448	9,001	859	818
Lane	6	6	5,142	5,222	857	870
Linn	9	9	6,224	6,479	692	720
Marion	34	34	29,411	28,739	865	845
Polk	4	4	8,496	8,258	2,124	2,064
Tillamook	0	141	0	47,442	0	336
Umatilla (& Malhuer 2004)(& Morrow 2003)	8	5	1,808	41,126	226	8,225
Washington	20	22	6,918	7,684	346	349
Yamhill	7	8	7,502	8,608	1,072	1,076
Total/Average Oregon	148	285	87,301	175,265	590	615

Table A-2  
Number of Producers, Pounds of Milk, and Average Pounds Per Producer By State and County  
Pacific Northwest Order  
May 2004 and 2003

State & County	Number of Producers		Pounds of Producer Milk		Average Pounds Per Producer	
	2004	2003	2004	2003	2004	2003
----- 1,000 pounds -----						
<b>Washington</b>						
Adams & Whitman	7	8	9,882	10,073	1,412	1,259
Benton 1/	1/	3	1/	3,550	1/	1,183
Clallam	5	5	1,503	1,614	301	323
Clark	11	12	7,685	8,030	699	669
Cowlitz	3	3	1,149	1,089	383	363
Franklin	11	12	18,606	18,663	1,691	1,555
Grant & Kittitas	28	29	24,468	25,075	874	865
Grays Harbor	13	14	5,114	6,269	393	448
Island	4	4	2,306	2,532	577	633
Jefferson	3	3	365	339	122	113
King	36	39	18,554	20,035	515	514
Klickitat 1/	4	3	1,154	908	288	303
Lewis	37	39	13,912	16,111	376	413
Pacific	9	11	3,177	3,137	353	285
Pierce	10	11	6,443	6,889	644	626
Skagit	49	51	31,525	32,078	643	629
Snohomish	38	41	24,059	25,103	633	612
Spokane & Lincoln	15	16	2,878	3,124	192	195
Stevens	14	16	2,130	2,433	152	152
Thurston	16	15	10,539	11,020	659	735
Wahkiakum	4	4	852	728	213	182
Whatcom	177	189	108,281	112,567	612	596
Yakima	18	72	38,804	149,493	2,156	2,076
Total/Average Washington	512	600	333,385	460,858	651	768
Pacific Northwest Order	699	903	439,513	642,123	629	711

\* Data obtained from producer payrolls submitted by handlers.

n/a = not available.

1/ In 2004, Benton County, Washington, had fewer than 3 producers and was included with Klickitat County, Washington.

Table A-3  
 Cross Tabulation of Number of Producers Between Milk Production and Hauling Charges  
 Pacific Northwest Order  
 May 2004

		Hauling Charges (cents per hundredweight)										Weighted Average Rate (cents / cwt.)	
		Less than 10	10 to 20	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	70 to 80	80 to 100	Greater than 100		Total
Milk Production (1,000 pounds)	Less than 50	----- number of producers -----										0.84	
	50 to 100			12	4	4	16	13	10	6	7	72	0.61
	100 to 200			28	13	41	44	25	9	10	4	174	0.51
	200 to 300	1		22	30	28	35	10	2	2	3	133	0.45
	300 to 400		1	25	9	23	7	7	3	3		78	0.43
	400 to 500	1		18	13	14	5	5	3	2		56	0.40
	500 to 600		1	19	9	9	6	3	1	2		50	0.39
	600 to 700			10	12	11	3	3	2	1		42	0.42
	700 to 1,000	1		24	16	25	2	7	4	2	1	82	0.42
	1,000 to 3,000	2		26	20	30	10	28	12	6	1	135	0.51
	More than 3,000			7		2	1	17				27	0.58
Total		5	2	191	128	188	130	120	49	44	24	881	0.50

Table A-4  
 Cross Tabulation of Percentage of Producers Between Milk Production and Hauling Charges  
 Pacific Northwest Order  
 May 2004

		Hauling Charges (cents per hundredweight)										Weighted Average Rate (cents / cwt.)	
		Less than 10	10 to 20	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	70 to 80	80 to 100	Greater than 100		Total 1/
Milk Production (1,000 pounds)	Less than 50	----- percent of producers -----										0.84	
	50 to 100			1.4	0.5	0.5	1.8	1.5	1.1	0.7	0.8	8.2	0.61
	100 to 200			3.2	1.5	4.7	5.0	2.8	1.0	1.1	0.5	19.8	0.51
	200 to 300	0.1		2.5	3.4	3.2	4.0	1.1	0.2	0.2	0.3	15.1	0.45
	300 to 400		0.1	2.8	1.0	2.6	0.8	0.8	0.3	0.3		8.9	0.43
	400 to 500	0.1		2.0	1.5	1.6	0.6		0.3	0.2		6.4	0.40
	500 to 600		0.1	2.2	1.0	1.0	0.7	0.3	0.1	0.2		5.7	0.39
	600 to 700			1.1	1.4	1.2	0.3	0.3	0.2	0.1		4.8	0.42
	700 to 1,000	0.1		2.7	1.8	2.8	0.2	0.8	0.5	0.2	0.1	9.3	0.42
	1,000 to 3,000	0.2		3.0	2.3	3.4	1.1	3.2	1.4	0.7	0.1	15.3	0.51
	More than 3,000			0.8		0.2	0.1	1.9				3.1	0.58
Total 1/		0.6	0.2	21.7	14.5	21.3	14.8	13.6	5.6	5.0	2.7	100.0	0.50

1/ Total may not add due to rounding.

FIGURE A-1  
Weighted Average Hauling Charges  
Pacific Northwest Order: May 2004

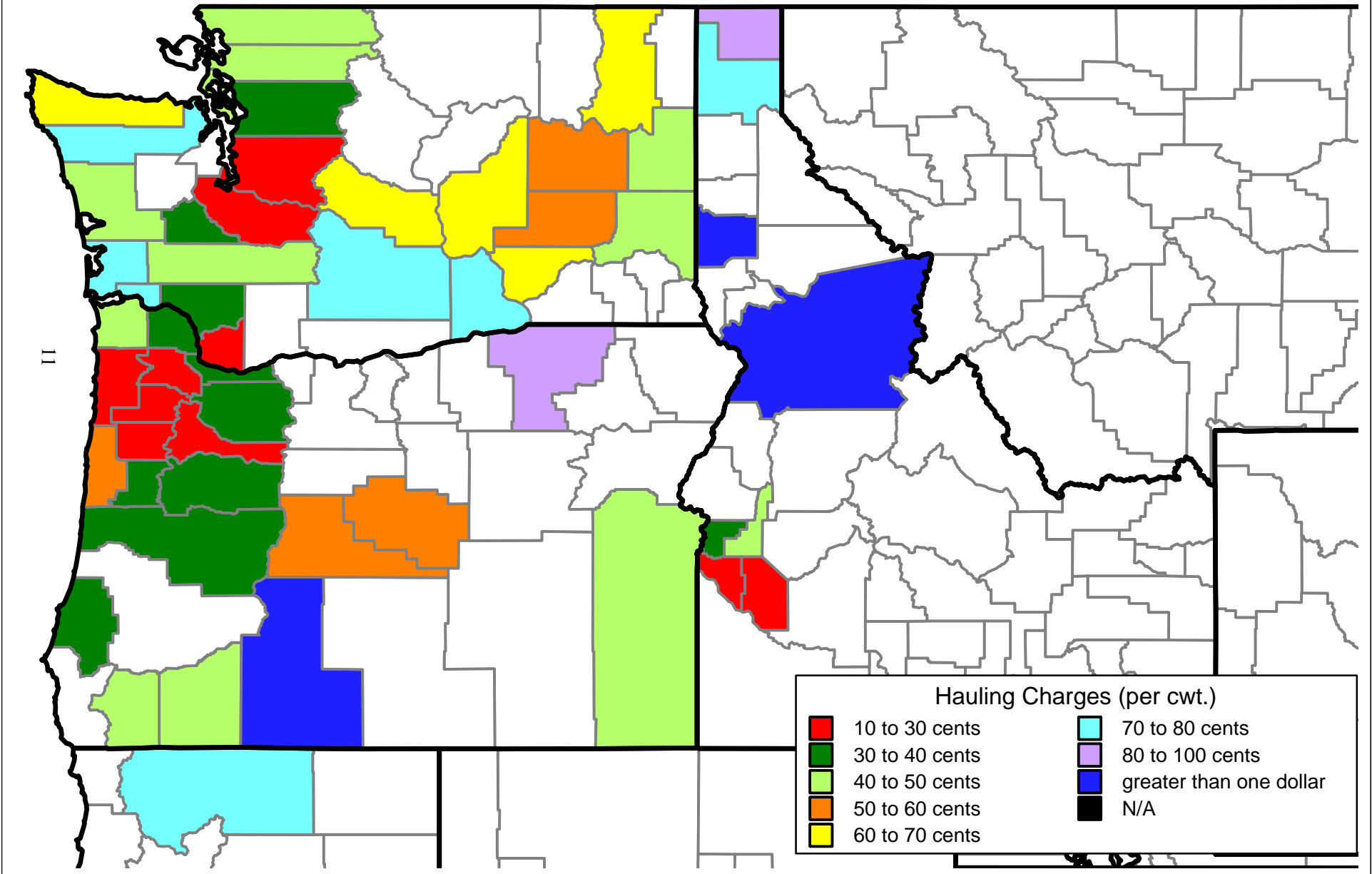


FIGURE A-2  
Average Milk Production Per Producer  
Pacific Northwest Order: May 2004

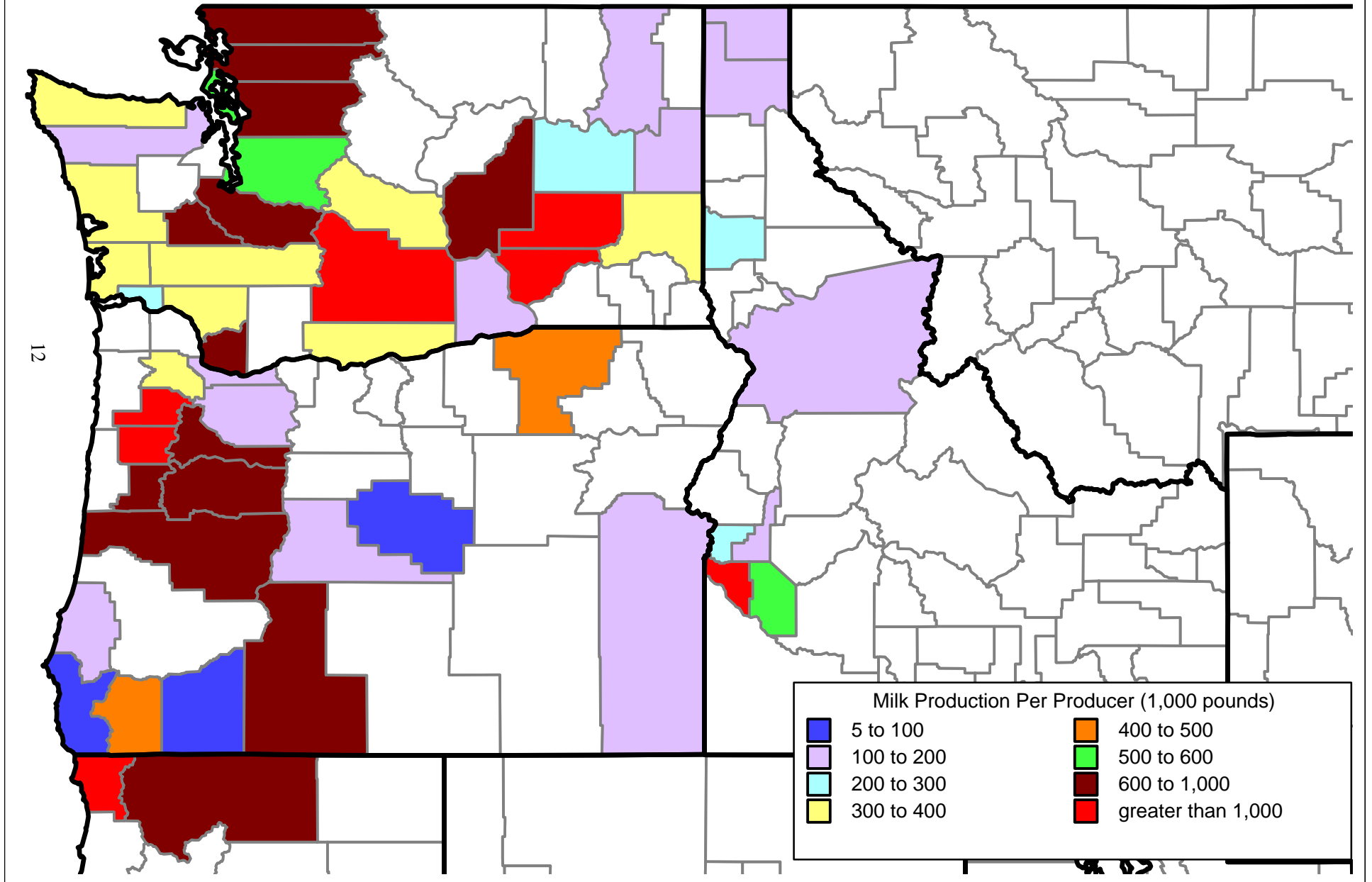


FIGURE A-3  
Pacific Northwest Order Marketing Area

