WESTERNUNITEDDAIRYMEN

March 22, 2017

Charlene Herbst
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670-6114

Via email to Charlene.herbst@waterboards.ca.gov

Re: Financial Impact of the Water Board's proposed Bovine Order to dairy heifer raising facilities

Dear Ms. Herbst:

WUD 1 Western United Dairymen, a trade association representing the state's dairy families, is concerned with the proposed Bovine Order, as we firmly believe its implementation would harm California dairy families and therefore the economy of California due to the added costs of production. Changes should be made to Order to minimize the increased costs and allow for more time to implement the requirements so that the costs can be spread over a longer period of time while meeting the water quality goals the Board is seeking. The proposed changes are included in a comment letter from the Dairy Cares coalition, of which Western United Dairymen is a founding member.

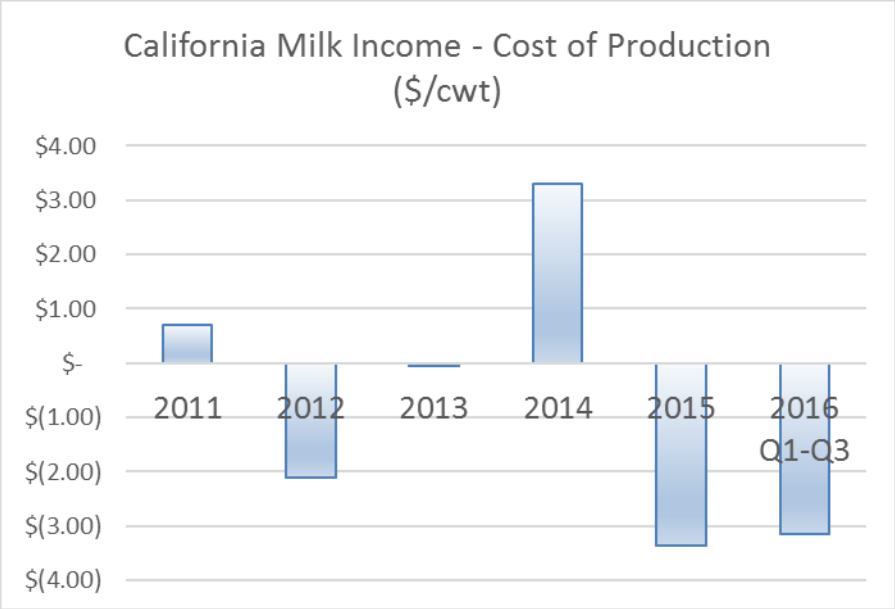
While we understand this Order would not apply to heifers raised by dairies covered under the Dairy General Order, it will result in higher costs to those dairies that contract out their heifer or calve raising or purchase their replacements. Dairy replacements, which are included in this proposed Order, are an important part of the cost of milk production[1]. Any increase in the cost of dairy replacements would be a direct hit on the California dairy industry. The Bovine Order may not be directed at the milk production enterprise, but it has a significant impact on it. According to CDFA cost of production data, herd replacements costs represented 12% of the total cost of producing milk in 2015. The same data set showed California dairies lost an average of $3.37/cwt in 2015. Even the slightest increase in their cost of production is another hit they cannot afford to take. The net loss of dairy operations between 2008 and 2015 is 460

[1] CDFA staff goes to dairies and gathers actual financial information. A sample representing approximately 10% of the dairy farms in California is analyzed each year to provide a representative picture of the financial health of the state's dairy operations. Studies can be found at: www.cdfa.ca.gov/dairy/dairycop_annual.html

(or -25%). This number is not a representation of how many dairy farmers were forced out of business because of difficult financial times; that total would be higher. The 460 represents a net loss, which means that if a dairy farmer went through bankruptcy and a neighbor purchased the liquidated facility it would not count as a loss of a dairy.

Over the last decade, dairies have had to weather various pricing conditions, but clearly the overall trend is one of declining margins. A quick glance at the average income received minus the total cost of producing milk illustrates that point (see Figure 1).

Figure 1: California Declining Margins



While the milk production business needs replacement animals, it is often viewed as a separate enterprise. Some producers raise their own animals, while others rely on purchasing said animals from a custom grower, or heifer ranch. Therefore, the impact of the new Bovine Order will have a different impact on those two separate structures. As was the result for a study conducted by the University of Wisconsin on the cost of dairy replacements[2], the cost of

[2] University of Wisconsin – Extension, "Economic costs and labor efficiencies associated with raising dairy herd replacements on Wisconsin dairy farms and custom heifer raising operations", 2013 Version 4 with 2015 updates, https://counties.uwex.edu/eauclaire/files/2013/10/ICPA-2013-v4.pdf .

production in California was lower for custom growers than dairy producers. In 2015, average custom growers had positive margins ($77.50/head) while dairy producers lost money on that part of their operation (-$409.62 /head). The cost of production data used to arrive at this number is included in Appendix A.

It is important to mention that revenues on the sale of heifers are highly variable. While 2015 was a good year for heifer prices (for those selling them), it is not always the case. Margins are highly variable and the added cost burden suggested by the proposed Bovine Order will put margin pressure that many operations will not be able to sustain.

The table below shows the cost per head of the Bovine Order based on the estimates from the Water Board in the Information Sheet's (IS) economic analysis. We would argue the real costs to livestock operations would be higher because the costs listed in the IS analysis do not take into consideration infrastructure changes that may be needed for operations to comply with the Order.

Additional costs bovine order	Range		Cost per Head	
Small facility year 1	$10,000	$41,600	$ 40.00	$ 166.40
Small facility recurring	$6,600	$22,700	$ 26.40	$ 90.80
Medium facility year 1	$13,400	$46,600	$ 6.70	$ 23.30
Medium facility recurring	$9,100	$27,200	$ 4.55	$ 13.60

Adding those costs to small and medium operations (dairy producer owned or custom growers) would significantly alter the cost of production. On the upper end of the estimate, it would even qualify the Order as the second or third biggest expense category. Even on the low end, it would approach costs per head for veterinary services or electricity/fuel. The table below outlines the gains/losses that would have occurred in 2015 if those costs had been included in the cost of production.

	Dairy producer Revenue per head		Custom grower Revenue per head	
	Simple	Complex	Simple	Complex
Small facility year 1	$ (449.62)	$ (576.02)	$ 37.50	$ (88.90)
Small facility recurring	$ (436.02)	$ (500.42)	$ 51.10	$ (13.30)
Medium facility year 1	$ (416.32)	$ (432.92)	$ 70.80	$ 54.20
Medium facility recurring	$ (414.17)	$ (423.22)	$ 72.95	$ 63.90

Milk and associated dairy products (cheese, dry milk powder, butter, ice cream, etc.) are California's top grossing agricultural products. According to a study conducted by the University of California Agricultural Issues Center (AIC) for the California Milk Advisory Board (CMAB) in 2015, 189,000 jobs in California are associated with the dairy industry. Based on this same study, California's dairy families are responsible for generating $65 billion in economic activity in the state. Losing California dairy farm families does not only mean a family losing employment: it has a ripple effect that is felt throughout the state. Bankers, feed suppliers, veterinarians, farm workers, dairy processing facilities, plant workers, equipment dealers, accountants are all tied to the number one agricultural commodity in the state. Unfortunately, the California dairy industry in recent years has been hit on many fronts, creating unsustainable margins that have forced many families out of business. Nationally, California's production is significant: in 2015, California led the nation in milk production, producing 19% of the U.S.'s milk supply.

The Bovine Order will increase the cost of production for heifer raising operations to the point that it will no longer be viable for some operations. Because dairy producers are price takers, this increased cost of production cannot be passed on to the dairy processor so it directly reduces the profitability of the dairy farm operation. Dairy producers cannot afford to lose any more money than they already are, and custom growers cannot pass on the added costs to their customers (dairy operations). Dairies are already regulated under the Dairy Order; regulating them under the Bovine Order would add additional regulatory costs. These costs could be the final add-on that may put a heifer grower out of business, or yet another dairy operation.

We look forward to modifications to the proposed order that would minimize the costs of this Order for those directly regulated by it and for dairy farm families.

Sincerely,

Annie AcMoody

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Director of Economic Analysis

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Appendix A

Scope/methodology

No two heifer raising facilities are exactly alike; dairy operators and cattle growers have different resources and production facilities. Therefore, this report provides financial impacts for four different types of facilities. The estimated costs of the proposed Bovine Order were based on an analysis provided by the Water Board.

After doing a wide review of literature, it was determined that specific and recent farm financial information for California facilities does not currently exist. More specifically, cost of production data was not available. The California Department of Food and Agriculture (CDFA) and its Cost of Production Unit within the Dairy Marketing Branch compiles cost of producing milk on a quarterly basis, but treats heifer raising as a separate enterprise and therefore does not conduct analysis on that aspect of the dairy production.

Fortunately, the Wisconsin dairy industry is a rich source of information for dairy-related data. Specifically, the University of Wisconsin's extension conducted a study on the cost of production for dairy herd replacements[3] (hereafter referred to as the Study). The Study has been updated multiple times to continually provide Wisconsin operators a timely benchmark, and was last updated in 2016 to include 2015 data. The Study states "the objective of this project was to evaluate the economic costs and labor efficiencies associated with raising dairy herd replacements on Wisconsin dairy farms and custom calf and heifer raising operations." Cost of production information combined with the value of end product is an appropriate method to determine how additional costs resulting from the proposed Bovine Order would impact operations so this Study is of use to this analysis.

The Wisconsin dairy industry is large – Wisconsin is the second largest dairy state – but despite the size, there are some differences in costs that are worth considering. This means that directly using the numbers from this Study may not yield the most representative result for California: operators may have similar production structures, but they may not be faced with identical costs due to regional differences. To take into account the differences that may exist between the two states' cost, the numbers from the Study were indexed to reflect California's reality.

To determine an appropriate index on some costs used in the Study, the United States Department of Agriculture's Economic Research Service (ERS) data was used. ERS produces data at the state level for milk production costs, which allows apples to apples comparisons. Many of the cost categories used in dairy production costs analysis and heifer production costs are the same. Therefore, looking at the difference between Wisconsin and California costs for milk production allows us to modify the costs used in the Wisconsin Study to make it relevant to California. For example, ERS reports the cost of veterinary services in California is 41% below Wisconsin's. Therefore, the cost of veterinary services in

[3] University of Wisconsin – Extension, "Economic costs and labor efficiencies associated with raising dairy herd replacements on Wisconsin dairy farms and custom heifer raising operations", 2013 Version 4 with 2015 updates, https://counties.uwex.edu/eauclaire/files/2013/10/ICPA-2013-v4.pdf .

the Study were reduced by that amount to determine the California equivalent. All the indexed data is shown in Appendix B.

The ERS database does not present data for the value of heifer calves in California. Since it is a rather large component of heifer raising costs, it was important to find a value that was representative of California's prices. CDFA compiles California heifer calf prices based on The Hoyt Report. The average price for 2015 was used for this analysis.

Data

1) Cost of production

To calculate the impact of the Bovine Order, cost of production data from the Study was used.
The cost of the Bovine Order was analyzed under four different scenarios. The first main scenario is for heifer raising facilities that are owned by dairymen but are not covered by the Dairy Order. The second main scenario is for heifer growers who buy calves and raise them to just before calving. Those two scenarios match the available data in the Study (labeled there as free-stall and heifer grower, respectively. The Study also included data for tie-stall operations, but those are not the norm in California so it was therefore excluded). The two aforementioned scenarios were then split into two scenarios each. The costs of the Bovine Order were presented by the Water Board based on various Scenarios, most of which followed herd sizes. For the purpose of this analysis, the small and medium facilities scenarios were utilized to do an impact analysis. The large facilities were described as housing 100,000 livestock, which is larger than what heifer raising facilities typically are. There is no official data set to corroborate this decision, but the survey conducted by Mike Francesconi and presented to the Bovine Committee on August 22, 2016 showed much smaller herd sizes for heifer ranches. Sizes varied widely but the largest reported herd was under 10,000 head, making that herd closer in operation's size to a medium facility (2,000) than a large one (100,000 head). In summary, this makes for four scenarios: 1.A) small facility, dairymen owned 1.B) medium facility, dairymen owned 2.A) small facility, heifer grower 2.B) medium facility, heifer grower.

2) Revenue

Dairy operators who raise their own heifers do not see a separate revenue from their heifer raising operation. Rather, it is ultimately an increase or decrease on their milk cost of production. Heifer growers on the other hand, are dependent on the heifer sales price: a price below cost of production is a direct hit on their finances. Sales data for dairy heifers is transparent being that auction yards publish sales results[4]. This data was used to determine revenues for heifer growers. That same number was used for dairymen owned facilities since it would be equivalent to their opportunity cost.

[4] Data from Turlock's auction (http://www.turlocklivestock.com/) and Escalon's auction (http://www.escalonlivestockmarket.com/) was used. Since the auctions publish a low end and high end price, the average of the two was used. Turlock's data includes top Holstein springing heifers while Escalon's data used includes top and good Holstein springing heifers. Top Jerseys averaged a lower price in 2015 but the data was not used since Holstein is the most common breed in California.

Appendix B

	Dairy producer owned (free stall)			Calf/Heifer grower		
	Wisconsin	Index	California	Wisconsin	Index	California
Calf costs ($/calf)						
Variable cost						
Liquid feed	$ 91.49	1.25	$ 114.36	$ 73.17	1.25	$ 91.46
Calf starter	$ 67.68	1.25	$ 84.60	$ 70.04	1.25	$ 87.55
Forage	$ 1.67	1.25	$ 2.09	$ -		$ -
Bedding	$ 3.51	0.24	$ 0.85	$ 20.89	0.24	$ 5.08
Vet	$ 26.53	0.59	$ 15.63	$ 10.60	0.59	$ 6.25
Death loss	$ 19.14		$ 19.14	$ 12.85		$ 12.85
Interest	$ 6.31	2.00	$ 12.62	$ 2.06	2.00	$ 4.12
Paid Labor	$ 65.00	0.90	$ 58.40	$ 55.92	0.90	$ 50.24
PaidManagement	$ 4.96	0.90	$ 4.46	$ 6.35	0.90	$ 5.70
Total variable	$ 286.29		$ 312.15	$ 251.88		$ 263.25
Fixed Cost						
Calf housing	$ 19.64		$ 19.64	$ 13.96		$ 13.96
Calf equipment	$ 12.22		$ 12.22	$ 1.83		$ 1.83
Total fixed	$ 31.86		$ 31.86	$ 15.79		$ 15.79
Opportunity cost unpaid labor/mana	$ 71.40	0.13	$ 9.28	$ 0.72	0.13	$ 0.09
Calf cost/opportunity cost	$ 400.00		$ 245.00	$ 400.00		$ 245.00
Total costs	$ 789.55		$ 598.28	$ 668.39		$ 524.14
Heifer costs ($/heifer)						
Variable costs						
Feed	$1,021.98	1.25	$1,281.68	$ 773.25	1.25	$ 969.74
Bedding	$ 113.55	0.24	$ 27.62	$ 60.94	0.24	$ 14.82
Vet	$ 41.91	0.59	$ 24.70	$ 48.75	0.59	$ 28.73
Breeding	$ 38.79		$ 38.79	$ 22.45		$ 22.45
Electric and fuel	$ 35.21	0.65	$ 22.94	$ 29.40	0.65	$ 19.15
Interest	$ 56.32	2.00	$ 112.64	$ 41.80	2.00	$ 83.60
Death loss	$ 10.93		$ 10.93	$ 4.23		$ 4.23
Paid labor	$ 188.43	0.90	$ 169.28	$ 193.79	0.90	$ 174.10
Paid management	$ 19.17	0.90	$ 17.22	$ 8.53	0.90	$ 7.66
Total variable	$1,526.29		$1,705.80	$ 1,183.14		$1,324.49
Fixed costs						
Manure storage	$ 15.85		$ 15.85	$ 8.29		$ 8.29
Housing	$ 162.70		$ 162.70	$ 150.10		$ 150.10
Equipment	$ 23.59		$ 23.59	$ 13.55		$ 13.55
Total fixed	$ 202.14		$ 202.14	$ 171.94		$ 171.94
Opportunity cost unpaid labor&mgt	$ 118.48	0.13	$ 15.39	$ 107.28	0.13	$ 13.94
Calf rearing expenses	$ 789.55		$ 598.28	$ 668.39		$ 524.14
Total costs	$2,636.46		$2,521.62	$ 2,130.75		$2,034.50
Revenue			$2,112.00			$2,112.00
Gain/loss			$ (409.62)			$ 77.50