# Information Letter Series 

# Making Sense of Your Milk Price in the Pandemic Economy: Negative PPDs, Depooling, and Reblending 

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## Background

Milk and dairy product prices have been highly volatile since about the mid1990s. The spread from highs to lows dampened from 2015 to 2018, when average prices got stuck in a low range, but even during this recent period the spread was as much as $\$ 4$ per cwt. The Pandemic Economy seems to have brought a new period of extreme volatility.

Eye-catching as the swings in 2020 have been, we've seen larger swings from the low to high prices in previous cycles. The biggest swing remains the up-down-up that took the all milk price:

- Up $\$ 10.10$ from the low of $\$ 11.70$ in July 2006 to the high of $\$ 21.80$ in September 2007
- Down \$10.50 from September 2007 to the low of \$11.30 in June 2009
- Up \$10.80 from June 2009 to $\$ 22.10$ in August 2011

[^0]This unprecedented period of price turbulence spanned 5 years, covering two price cycles. What we've seen in 2020 isn't as large but it's happening a lot faster. In the 6 months from November 2019 to April 2020, the national average All Milk Price dropped $\$ 6.60$. Although we won't have an official June price reported until the end of July, current futures prices suggest that the price will swing back up by at least as much. Certainly, the down and up of the Class III price has been breath-taking.

The question that we try to address here is how several fresh elements of pricing in the Pandemic Economy are impacting your price. We will take a look at three:

1. The Federal Order Producer Price Differential or PPD and depooling of Class III milk
2. The spread between Class III and IV prices and what that means for the Class I price
3. Reblending of market returns by cooperatives after the Federal Order minimums have been applied.
Each of these elements have been around for a long time, but what makes them stand out now is how large they have become under the unprecedented stresses of the Pandemic Economy.

## Federal Order Statistical Uniform Prices and the PPD

The Federal Milk Marketing Order (FMMO) system provides structure for milk price discovery and equitable distribution of proceeds to dairy farmers. These functions are often called "pricing and pooling" and they are done monthly. Pricing is basically about the way that money is collected from dairy plants and pooling is the method of paying those funds out to dairy producers.

Milk pricing establishes a minimum price that must be paid for milk depending on what products are made from it. It is a floor price and premiums are often paid above those levels. Currently there are four milk classes:

- Class I are milk components used in fluid milk products
- Class II are components used in so-called "soft products" like creams, yogurt, ice cream, sour cream, etc.
- Class III are components used to make hard cheeses like cheddar, mozzarella, etc. and whey products
- Class IV are components used in butter and milk powders


## Price Discovery and Class Prices

Federal Orders determine and enforce minimum class prices every month. Since Federal Orders were "reformed" in January 2000, the method used is called product formula pricing. Plants producing cheddar cheese, whey, butter and nonfat dry milk are required by USDA to report the volume and price received from their products each
week. ${ }^{1}$ These product prices are used to calculate the value of the milk used in the manufacturing process for each class.

Class III and IV prices are calculated most directly using the product price values that correspond directly to the definition of the class. Federal Order price formulas require a butter price to determine a milkfat value, and therefore, survey prices and calculations are made and enforced with a one-month delay. For example, on July 1, 2020, we are able to calculate the June monthly values for the product prices and these can then be used to calculate Class III and IV values that will be applied to milk sold in June. Because of this delay, cheese-whey and butter-powder plants don't actually know what their milk cost will be until they have already processed their product. But, they do know that their minimum price will be aligned with the market price for the basic cheese, whey, butter and milk powder commodities.

Class I and II milk is priced somewhat differently. Rather than somehow collecting wholesale prices for beverage milk, yogurt and so on, Class I and II prices are derived from the same factors that determine Class III and IV prices, with two additions. A "premium" or add-on, typically called a "differential" are added to the base prices that undergird the Class I and II prices. Because this approach provides no assurance that retroactive milk prices would align with wholesale prices for their products, Class I and II processors are told what their minimum milk prices will be in advance. The two-week advance notice makes it feasible for sellers and buyers in these markets to negotiate wholesale prices that are better aligned with the announced minimums. So, fluid plants knew what their June minimum milk prices were going to be on May 20, 2020 based on the product prices for the first two weeks of May.

The typical expectation has been that the highest minimum prices are for Class I milk and milk values decline through Class IV. However, we have learned that anything, literally, is possible. Since, the introduction of the current Federal Order pricing formulae in 2000, the Class IV price has exceeded the Class III price $40 \%$ of the time. In the Northeast Order, a relatively high Class I price market, there have been 3 months when the Class III price exceeded the Class I price for the middle of the milkshed (only once for the city center price or base zone). In a lower Class I price area, the Upper Midwest, the number of months when this has occurred is 12.

The Class II price is, in concept, equal to the Class IV price plus 70¢, but in practice this relationship becomes more complicated because the Class II price uses component prices based on only the first two weeks of a month for the skim milk portion and the full month prices for butterfat. Because of this seemingly innocent quirk, there have been 19 months when the Class II price was lower than the Class IV price ( $7.8 \%$ of the time since January 2020).

Each of these seemingly minor or innocent quirks can result in a milk check that doesn't look quite like one might have expected.

[^1]
## Milk Checks and the PPD

In 7 of the 11 Federal Orders, farms are paid on the basis of the Class III component values for protein, butterfat, and other solids (mostly lactose). ${ }^{2}$ When Class prices behave according to the usual expectations -Class I price is the highest value there is money left over in the pool after withdrawing the Class III component values and that remainder is distributed to producers based on the volume of milk sold. Expressed in dollars per cwt., that remaining value is called the Producer Price Differential, or PPD.

The PPD can be thought of as an accounting exercise, but there is a purpose to this approach as well. For the seven orders in which this system is used, there is a notable volume of cheese production, and it was believed to be a good idea to reward farmers for producing higher protein milk, which is not one-for-one the same as higher skim solids milk. ${ }^{3}$ Once it was decided to pay out to producers on the basis of the same components that are used in Class III, and only in Class III, then it made mathematical sense to begin the blend price calculation with the Class III price and add (or subtract) whatever moneys remained in the pool.

It is essential to remember that buyers of milk have a cost of milk that is defined primarily by the minimum class price pertaining to their business. A cheesemaker will pay the blend price to her farmers, but her cost of milk is the Class III price. The difference between the Class III price and the blend price is paid from the pool to the cheesemaker, a value called the equalization payment or "pool draw".

## Why We Get Negative PPDs

As sensible as this system seemed, we did not anticipate the possibility of a Class III price, calculated after the advance Class I price was already announced, rising so much in the span of a few weeks so as to result in a Class III price that was higher than the total average amount of money paid into the pool. Thus, we can have a month where the Class III price is higher than the blend price, and in this instance, the PPD calculation will be negative. All that means is that we paid out more money to producers in Class III component values than we collected from plants across all

[^2]classes of milk. For farmers, it is really just a curiosity in the accounting method. (For cheesemakers, it is a different issue that can lead to depooling, but more on that shortly.)

The June 2020 Class I price was announced on May 20 and based on product prices for the first two weeks in May when cheese averaged about $\$ 1.18$ per pound. The Class III price for June is based on the June product prices for the full month, when cheese averages are about double the values used in Class I price calculations.

In April 2004, the Northeast Order Class I price was $\$ 16.89$ and the Class III price was $\$ 19.66$. The PPD for that month came out as $-\$ 2.38$. This extremely unusual result was driven by a 2-week average cheese price in March of $\$ 1.46$ that ballooned to a 4-week April average of \$2.05. The price difference between May and June 2020 is twice as large.
This is going to result in large negative PPD values in all of the seven orders in which that system is used. Of course, in July, the much higher product prices in early June will drive a higher Class I price in July and the July cheese price, and associated Class III price, will likely moderate. In most circumstances, we would expect the July PPDs to be larger than normal.

## Average Manufacturing Value vs. The Higher Of

A new wrinkle that was introduced in May 2019 was the change in how the Class I price is built on top of the Class III and/or IV prices. For decades, the general concept was to set Class I price equal to a "basic formula price" plus a differential. For most orders, that basic formula price was the lowest class price. When Federal Orders were dramatically standardized and amended, effective January 2000, the introduction of a four-class system that basically had two manufacturing class categories required a decision about which one to use in setting the Class I price.

As noted earlier, the general design of the Class II price builds up from the Class IV values. This was logically consistent with the idea that most Class II products do not have yields associated with milk protein content. The same could be said for Class I products, but in the case of Class I it was decided to simply begin the calculation with whichever of the Class III or IV prices was higher. This was a decision driven by a desire to create a favorable farm price. It remains the case that Class I processors pay for milk based on its milkfat and skim solids composition.

In 2019, organizations representing both processors and cooperatives agreed to a new system and successfully advocated for legislation to require a change to the pricing regulation. Now, the "driver" on the Class I price is the simple average of the Class III and IV values for each month. Because the simple average will always be less than the "higher of" would have been, $74 ¢$ is added to the average to reflect the difference between the new method and the old method using historical prices. But, when the difference between the two class prices is large enough, the average of the two prices might be more than 74¢ lower than the higher class price. This is when we could get another negative PPD calculation.

As noted above, the Class IV price has exceeded the Class III price about 40\% of the time since the new system took effect. More to the point is the price spread between the two, regardless of which one is higher. The $74 \phi$ adjuster was based on the average differences between the two over a period of time. This amount reflects a difference between the two of $\$ 1.48$. For example, if the Class IV price is $\$ 16$ and the Class III price is $\$ 17.48$, then the simple average of the two prices is $\$ 16.74$. Add $74 ¢$ and the Class I price mover is $\$ 17.48$, exactly the same as the "higher of". Of course, when the two prices are narrower, the 74 ¢ adjuster results in a higher Class I price, just as it results in a lower Class I price when the spread is greater that $\$ 1.48$. If the difference between the two prices stays in a fairly narrow range, then the price arithmetic arguably comes out in the wash.

Since January 2000, the difference between the two prices has exceeded $\$ 1.48$ $38 \%$ of the time. It's exceeded $\$ 2$ about $22 \%$ of the time and $\$ 3$ over $8 \%$ of the time. It exceeded $\$ 5$ twice. In June it looks to exceed $\$ 8$. What this means is that the Class I price will be pushed up by the dramatically high Class III price, but it will be equally held back by a dramatically low Class IV.

A spread this large between Class III and Class IV impacts the blend price regardless of which Class is higher, by comparison to the former system, but when the Class III price is so much higher than Class IV that means both the Class I and Class II prices will be very low in comparison to Class III. In the 7 markets that pay producers on protein content, this means a double whammy on the PPD.


## Depooling

So far, we have focused on the impact of current prices and our pricing system on farmers. There is also an important implication for processors, or cheese makers in particular.

Right now we are experiencing both a very rapidly rising price and a very large spread between Classes III and IV, and this will cause the largest negative PPD that we have ever seen under Federal Orders. The magnitude of difference between the blend price and the Class III price will be different in each order due to Class I price differentials and the relative utilization of milk in each class. This will also be true in the 4 orders that use skim milk pricing, but Class III utilization is low in those orders to begin with. Under this condition, the June milk prices will be such that Class III plants will contribute money to the pool that Class I plants will use to pay their producers in all of the Orders... or will they?

Recall, that under Federal Order rules participation for Class I plants is mandatory, but manufacturing class plants don't have to be regulated. Indeed, processors who have no Class I milk are required to demonstrate some connection to or service to the Class I market to gain access to pool prices and the expected pool draw by which Class I processors subsidize milk purchased by other processors. This is called pool qualification.

In some Marketing Orders, typically those with high Class I utilization, such as the Northeast or Southeast, pool qualification criteria are rather stringent. It is harder for a cheesemaker to get in, and out. In the Upper Midwest and California orders, jumping in and out of the pool is easier for a cheese plant. Whenever the Class III price is going to be higher than the blend, i.e., when there is a negative PPD, it is logical for cheesemakers to want to opt out of the pool. They can pay their suppliers the blend price but escape subsidizing the other processors in the marketplace by avoiding the unusual situation of having to pay into the pool instead of drawing out of the pool.

If the cheese plants depool their milk, what do they have to pay? The simple answer is whatever it takes to get milk into the door of the plant. If they choose to pay the Class III minimum, then their producers benefit by receiving a higher milk price than they would have received if they had stayed pooled. However, cheese plants might realize that they can pay their producers the lower pool price they would have gotten if the cheese plant had stayed pooled and contributed money to other class plants. The cheese plant saves money and their producers are no worse off. But, by not making a payment into the pool, there is a lowering impact on the blend price.

While this arithmetic is appealing to the cheesemaker, it disadvantages the rest of the market. Because the higher valued Class III milk is withdrawn from the pool, it pulls down the total and average value of the pool. The (new) blend price is lower than it would have been had Class III milk stayed. Indeed, it is easy to see a scenario where the new average milk price paid by processors is driven below what would have
otherwise been the case. The pool value and blend price is diminished either way but perhaps cheese makers will follow it down when they determine their pay prices.

With the gigantic difference in June prices, this could have a very dramatic impact on what producers are expecting vs. what they will actually get.

## What Can We Expect?

Most Federal Orders have different requirements for plants to pool their milk. Under most circumstances manufacturing plants benefit from being pooled because they receive a pool draw. Many Orders require them to demonstrate "performance" by "touching base" occasionally. The general concept is that the manufacturing plant has to demonstrate performance or the ability to perform by giving up milk to a Class I plant when milk is tight. Touching base refers to a manufacturing plant showing that they are willing to give up a load of milk to a fluid plant. They do that by sending a tanker of milk periodically to the fluid plant, which may or may not be accepted by the plant, but the manufacturing plant has at least demonstrated their willingness to give up milk if it was needed. In many Orders, there is also a qualification period for manufacturing plants. This tends to be the case for Orders in which Class I utilization is high. If a plant depools they may not be able to requalify their plant to participate in the Order for several months. So, the calculation to depool can be complicated by answering the questions about what is gained with what may be lost in the way of revenues.

By our estimates, Class III plant contributions to the pool in the eleven Federal Orders could range from just less than $\$ 5$ to more than $\$ 8$. This is a very strong incentive to depool milk. Moreover, in many Orders it won't be just June milk that has that incentive to depool, it is likely to be July, August and possibly September milk as well, at least based on current CME futures price opinions. The June contribution comes from a combination of rapidly rising milk prices as well as a very large spread in the Class III and IV price. The other months are not from rapidly rising milk prices but rather the expected continuation of the spread between Class III and IV.

## Reblending and Base/Excess Pricing

As cooperatives faced added pressure to find a home for stranded milk during the first phase of the Pandemic Economy, some milk was dumped and a lot more was sold below the market price. Of course, no cooperative wants to do that, but if the choice is between dumping and discounting, discounting is less bad.

For cooperatives that experienced these losses on milk sales, the costs are often shared back to farmer members in a process referred to as reblending. When times are good, reblending means adding back in premiums paid by buyers or profits from operations to give farmers higher prices. In bad times, it means a deduction. Deductions have been substantial during the Pandemic Economy. The flip side of the run up in cheese prices is that buyers are screaming for more milk. This will not create new sales for all cooperatives in all parts of the U.S. but in the main all boats should rise to some degree on this tide.

It has also been the case that many cooperatives either initiated a Base/Excess type pricing plan or doubled down on one they had in place. Under these plans, farmer members are typically assigned some kind of a base milk production for which they will receive the normal price, but farmers who market in excess of that base are assigned all of the losses from distressed milk sales, dumping, and unprofitable operations. Farmers have seen huge differences in their base and excess (or overbase) milk prices in the last few months. The impact of current markets will also put this situation in reverse, but this impact will be much more personal and larger for farmers who have taken a big hit because of their over-base marketings.

It is likely that June will also show much smaller reblending deductions or overbase penalties, if indeed there are any such reductions in price. This will contribute to an even greater swing in the mailbox price, beyond the changes in minimum blend prices we've already discussed. However, this swing up will only apply to farms that had previously endured a bigger price penalty for their "excess" milk.

## The Bottom Line...

The CME futures prices expect Class III and IV prices to converge by the end of the year and to return to a more normal relationship. In other words, buyers and sellers think there will be a return to normalcy. That is actually a common expectation for futures markets 9 or months out. Having normal times, however, is hardly guaranteed.

For the next few months, producers will very likely be frustrated by seeing that Class III prices have rebounded dramatically from the pandemic induced lows but that their milk check doesn't reflect all of the optimism from dairy headlines.

Since we have had multiple component pricing, we have occasionally experienced negative PPDs-most often associated with rapidly rising prices. With the change in Class I price calculations from the "higher of" to the average of Class III and IV plus 74 c , we have a new mechanism which can cause a negative PPD. Under more ordinary price relationships and movements, negative PPDs and depooling are not as common an occurrence. But, a pandemic is anything but common. The addition of cooperative pricing plans to discriminate prices for farms that are increasing production more rapidly is yet another factor that is causing turbulence in month-tomonth milk prices, as well as substantial differences from one farm to the next.


## Appendix - Estimates of Depooling Incentive Across 11 Federal Orders

The following pages are simplified calculations to approximate the Statistical Uniform Price in a federal milk marketing order. For each Order, the approximate utilization for all four classes are entered if all milk is pooled. The Class I differential is also entered for each Order's primary city zone and added to the Class I base price.

The class prices can be entered if known or they are approximated from CME futures for class III \& IV settlement prices. If not entered directly, Class I base prices are estimated as the average of the current and previous months Class III \& IV prices plus 744 . Class II prices are estimated as the average of the current and previous Class IV price + 70¢. There are always some differences in an order because the weighted average Class I differential differs from weighted average zoned differential for milk delivered to all plants. The "Misc Adjustment" provides a place to "fine tune" an FMMO's uniform price announcement based on historic adjustments unique to each order.

In the column labeled Uniform Price, the weighted average blend is calculated if all milk is pooled. For any month in which a manufacturing milk price is greater than the Uniform Price, there is an incentive for that class of plant to de-pool. Those values will be shown in red for the different classes. The column labeled Uniform with Depooling, the weighted average blend price is again calculated but with 100 percent of the milk depooled for those classes with the perceived disincentive to pool.

The Uniform Price and the Uniform with Depooling prices represent the boundaries of blend prices likely to be seen. For a variety of reasons, plants with a depooling incentive may not choose to take their milk off of the pool.

| Upper Midwest Order 30 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Utilization: | 8\% | 4\% | 84\% | 4\% |  | 100\% |  |  |  |
|  | Class I Base | Class I Differential | Class I | Class II | Class III | Class IV | Misc Adjust | Uniform Price | PPD | Uniform with Depooling | PPD with Depooling |
| Oct-19 | \$17.84 | \$1.80 | \$19.64 | \$16.68 | \$18.72 | \$16.39 | -\$0.03 | \$18.59 | -\$0.13 | \$17.90 | -\$0.82 |
| Nov-19 | \$18.14 | \$1.80 | \$19.94 | \$16.85 | \$20.45 | \$16.60 | -\$0.03 | \$20.08 | -\$0.37 | \$18.15 | -\$2.30 |
| Dec-19 | \$19.33 | \$1.80 | \$21.13 | \$16.81 | \$19.37 | \$16.70 | -\$0.03 | \$19.27 | -\$0.10 | \$18.76 | -\$0.61 |
| Jan-20 | \$19.01 | \$1.80 | \$20.81 | \$17.05 | \$17.05 | \$16.65 | -\$0.03 | \$17.30 | \$0.25 | \$17.30 | \$0.25 |
| Feb-20 | \$17.55 | \$1.80 | \$19.35 | \$16.84 | \$17.00 | \$16.20 | -\$0.03 | \$17.12 | \$0.12 | \$17.12 | \$0.12 |
| Mar-20 | \$17.46 | \$1.80 | \$19.26 | \$16.75 | \$16.25 | \$14.87 | -\$0.03 | \$16.43 | \$0.18 | \$16.41 | \$0.16 |
| Apr-20 | \$16.64 | \$1.80 | \$18.44 | \$13.87 | \$13.07 | \$11.40 | -\$0.03 | \$13.43 | \$0.36 | \$13.42 | \$0.35 |
| May-20 | \$12.95 | \$1.80 | \$14.75 | \$12.30 | \$12.14 | \$10.67 | -\$0.03 | \$12.27 | \$0.13 | \$12.27 | \$0.13 |
| Jun-20 | \$11.42 | \$1.80 | \$13.22 | \$12.66 | \$21.01 | \$13.25 | -\$0.03 | \$19.71 | -\$1.30 | \$12.90 | -\$8.11 |
| Jul-20 | \$16.56 | \$1.80 | \$18.36 | \$14.70 | \$21.56 | \$14.75 | -\$0.03 | \$20.73 | -\$0.83 | \$16.36 | -\$5.20 |
| Aug-20 | \$18.52 | \$1.80 | \$20.32 | \$15.70 | \$19.55 | \$15.25 | -\$0.03 | \$19.26 | -\$0.29 | \$17.71 | -\$1.84 |
| Sep-20 | \$17.87 | \$1.80 | \$19.67 | \$16.20 | \$17.96 | \$15.74 | -\$0.03 | \$17.91 | -\$0.05 | \$17.63 | -\$0.33 |
| Oct-20 | \$17.32 | \$1.80 | \$19.12 | \$16.53 | \$16.68 | \$15.92 | -\$0.03 | \$16.81 | \$0.13 | \$16.81 | \$0.13 |
| Nov-20 | \$17.02 | \$1.80 | \$18.82 | \$16.67 | \$16.49 | \$16.01 | -\$0.03 | \$16.63 | \$0.14 | \$16.63 | \$0.14 |
| Dec-20 | \$16.89 | \$1.80 | \$18.69 | \$16.71 | \$16.10 | \$16.01 | -\$0.03 | \$16.30 | \$0.20 | \$16.28 | \$0.18 |


| Mideast Order 33 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Utilization: | 35\% | 18\% | 32\% | 15\% |  | 100\% |  |  |  |
|  | $\begin{aligned} & \text { Class I } \\ & \text { Base } \end{aligned}$ | Class I Differential | Class I | Class II | Class III | Class IV | Misc Adjust | Uniform Price | PPD | Uniform with Depooling | PPD with Depooling |
| Oct-19 | \$17.84 | \$2.00 | \$19.84 | \$16.68 | \$18.72 | \$16.39 | -\$0.40 | \$18.00 | -\$0.72 | \$17.65 | -\$1.07 |
| Nov-19 | \$18.14 | \$2.00 | \$20.14 | \$16.85 | \$20.45 | \$16.60 | -\$0.40 | \$18.72 | -\$1.73 | \$17.90 | -\$2.55 |
| Dec-19 | \$19.33 | \$2.00 | \$21.33 | \$16.81 | \$19.37 | \$16.70 | -\$0.40 | \$18.79 | -\$0.58 | \$18.52 | -\$0.85 |
| Jan-20 | \$19.01 | \$2.00 | \$21.01 | \$17.05 | \$17.05 | \$16.65 | -\$0.40 | \$17.98 | \$0.93 | \$17.98 | \$0.93 |
| Feb-20 | \$17.55 | \$2.00 | \$19.55 | \$16.84 | \$17.00 | \$16.20 | -\$0.40 | \$17.34 | \$0.34 | \$17.34 | \$0.34 |
| Mar-20 | \$17.46 | \$2.00 | \$19.46 | \$16.75 | \$16.25 | \$14.87 | -\$0.40 | \$16.86 | \$0.61 | \$16.86 | \$0.61 |
| Apr-20 | \$16.64 | \$2.00 | \$18.64 | \$13.87 | \$13.07 | \$11.40 | -\$0.40 | \$14.51 | \$1.44 | \$14.51 | \$1.44 |
| May-20 | \$12.95 | \$2.00 | \$14.95 | \$12.30 | \$12.14 | \$10.67 | -\$0.40 | \$12.53 | \$0.39 | \$12.53 | \$0.39 |
| Jun-20 | \$11.42 | \$2.00 | \$13.42 | \$12.66 | \$21.01 | \$13.25 | -\$0.40 | \$15.29 | -\$5.72 | \$12.59 | -\$8.42 |
| Jul-20 | \$16.56 | \$2.00 | \$18.56 | \$14.70 | \$21.56 | \$14.75 | -\$0.40 | \$17.85 | -\$3.71 | \$16.11 | -\$5.45 |
| Aug-20 | \$18.52 | \$2.00 | \$20.52 | \$15.70 | \$19.55 | \$15.25 | -\$0.40 | \$18.15 | -\$1.40 | \$17.49 | -\$2.06 |
| Sep-20 | \$17.87 | \$2.00 | \$19.87 | \$16.20 | \$17.96 | \$15.74 | -\$0.40 | \$17.58 | -\$0.38 | \$17.40 | -\$0.56 |
| Oct-20 | \$17.32 | \$2.00 | \$19.32 | \$16.53 | \$16.68 | \$15.92 | -\$0.40 | \$17.06 | \$0.38 | \$17.06 | \$0.38 |
| Nov-20 | \$17.02 | \$2.00 | \$19.02 | \$16.67 | \$16.49 | \$16.01 | -\$0.40 | \$16.93 | \$0.44 | \$16.93 | \$0.44 |
| Dec-20 | \$16.89 | \$2.00 | \$18.89 | \$16.71 | \$16.10 | \$16.01 | -\$0.40 | \$16.77 | \$0.67 | \$16.77 | \$0.67 |


| Central Order 32 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Utilization: | 30\% | 10\% | 41\% | 19\% |  | 100\% |  |  |  |
|  | Class I <br> Base | Class I <br> Differential | Class I | Class II | Class III | Class IV | Misc Adjust | Uniform Price | PPD | Uniform with Depooling | PPD with Depooling |
| Oct-19 | \$17.84 | \$2.00 | \$19.84 | \$16.68 | \$18.72 | \$16.39 | -\$0.55 | \$17.86 | -\$0.86 | \$17.26 | -\$1.46 |
| Nov-19 | \$18.14 | \$2.00 | \$20.14 | \$16.85 | \$20.45 | \$16.60 | -\$0.55 | \$18.72 | -\$1.73 | \$17.51 | -\$2.94 |
| Dec-19 | \$19.33 | \$2.00 | \$21.33 | \$16.81 | \$19.37 | \$16.70 | -\$0.55 | \$18.64 | -\$0.73 | \$18.14 | -\$1.23 |
| Jan-20 | \$19.01 | \$2.00 | \$21.01 | \$17.05 | \$17.05 | \$16.65 | -\$0.55 | \$17.61 | \$0.56 | \$17.61 | \$0.56 |
| Feb-20 | \$17.55 | \$2.00 | \$19.55 | \$16.84 | \$17.00 | \$16.20 | -\$0.55 | \$17.05 | \$0.05 | \$17.05 | \$0.05 |
| Mar-20 | \$17.46 | \$2.00 | \$19.46 | \$16.75 | \$16.25 | \$14.87 | -\$0.55 | \$16.45 | \$0.20 | \$16.42 | \$0.17 |
| Apr-20 | \$16.64 | \$2.00 | \$18.64 | \$13.87 | \$13.07 | \$11.40 | -\$0.55 | \$13.95 | \$0.88 | \$13.95 | \$0.88 |
| May-20 | \$12.95 | \$2.00 | \$14.95 | \$12.30 | \$12.14 | \$10.67 | -\$0.55 | \$12.17 | \$0.03 | \$12.16 | \$0.02 |
| Jun-20 | \$11.42 | \$2.00 | \$13.42 | \$12.66 | \$21.01 | \$13.25 | -\$0.55 | \$15.87 | -\$5.14 | \$12.30 | -\$8.71 |
| Jul-20 | \$16.56 | \$2.00 | \$18.56 | \$14.70 | \$21.56 | \$14.75 | -\$0.55 | \$18.13 | -\$3.43 | \$15.75 | -\$5.81 |
| Aug-20 | \$18.52 | \$2.00 | \$20.52 | \$15.70 | \$19.55 | \$15.25 | -\$0.55 | \$18.09 | -\$1.46 | \$17.07 | -\$2.48 |
| Sep-20 | \$17.87 | \$2.00 | \$19.87 | \$16.20 | \$17.96 | \$15.74 | -\$0.55 | \$17.38 | -\$0.58 | \$16.98 | -\$0.98 |
| Oct-20 | \$17.32 | \$2.00 | \$19.32 | \$16.53 | \$16.68 | \$15.92 | -\$0.55 | \$16.76 | \$0.08 | \$16.76 | \$0.08 |
| Nov-20 | \$17.02 | \$2.00 | \$19.02 | \$16.67 | \$16.49 | \$16.01 | -\$0.55 | \$16.62 | \$0.13 | \$16.62 | \$0.13 |
| Dec-20 | \$16.89 | \$2.00 | \$18.89 | \$16.71 | \$16.10 | \$16.01 | -\$0.55 | \$16.43 | \$0.33 | \$16.40 | \$0.30 |



| Florida Order 6 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Utilization: | 83\% | 13\% | 2\% | 2\% |  | 100\% |  |  |  |
|  | Class I <br> Base | Class I Differential | Class I | Class II | Class III | Class IV | Misc Adjust | Uniform Price | PPD | Uniform with Depooling | PPD with Depooling |
| Oct-19 | \$17.84 | \$5.40 | \$23.24 | \$16.68 | \$18.72 | \$16.39 | -\$0.10 | \$22.06 | \$3.34 | \$22.06 | \$3.34 |
| Nov-19 | \$18.14 | \$5.40 | \$23.54 | \$16.85 | \$20.45 | \$16.60 | -\$0.10 | \$22.37 | \$1.92 | \$22.37 | \$1.92 |
| Dec-19 | \$19.33 | \$5.40 | \$24.73 | \$16.81 | \$19.37 | \$16.70 | -\$0.10 | \$23.33 | \$3.96 | \$23.33 | \$3.96 |
| Jan-20 | \$19.01 | \$5.40 | \$24.41 | \$17.05 | \$17.05 | \$16.65 | -\$0.10 | \$23.05 | \$6.00 | \$23.05 | \$6.00 |
| Feb-20 | \$17.55 | \$5.40 | \$22.95 | \$16.84 | \$17.00 | \$16.20 | -\$0.10 | \$21.80 | \$4.80 | \$21.80 | \$4.80 |
| Mar-20 | \$17.46 | \$5.40 | \$22.86 | \$16.75 | \$16.25 | \$14.87 | -\$0.10 | \$21.67 | \$5.42 | \$21.67 | \$5.42 |
| Apr-20 | \$16.64 | \$5.40 | \$22.04 | \$13.87 | \$13.07 | \$11.40 | -\$0.10 | \$20.49 | \$7.42 | \$20.49 | \$7.42 |
| May-20 | \$12.95 | \$5.40 | \$18.35 | \$12.30 | \$12.14 | \$10.67 | -\$0.10 | \$17.19 | \$5.05 | \$17.19 | \$5.05 |
| Jun-20 | \$11.42 | \$5.40 | \$16.82 | \$12.66 | \$21.01 | \$13.25 | -\$0.10 | \$16.19 | -\$4.82 | \$16.09 | -\$4.92 |
| Jul-20 | \$16.56 | \$5.40 | \$21.96 | \$14.70 | \$21.56 | \$14.75 | -\$0.10 | \$20.76 | -\$0.80 | \$20.75 | -\$0.81 |
| Aug-20 | \$18.52 | \$5.40 | \$23.92 | \$15.70 | \$19.55 | \$15.25 | -\$0.10 | \$22.49 | \$2.94 | \$22.49 | \$2.94 |
| Sep-20 | \$17.87 | \$5.40 | \$23.27 | \$16.20 | \$17.96 | \$15.74 | -\$0.10 | \$21.99 | \$4.03 | \$21.99 | \$4.03 |
| Oct-20 | \$17.32 | \$5.40 | \$22.72 | \$16.53 | \$16.68 | \$15.92 | -\$0.10 | \$21.55 | \$4.87 | \$21.55 | \$4.87 |
| Nov-20 | \$17.02 | \$5.40 | \$22.42 | \$16.67 | \$16.49 | \$16.01 | -\$0.10 | \$21.32 | \$4.83 | \$21.32 | \$4.83 |
| Dec-20 | \$16.89 | \$5.40 | \$22.29 | \$16.71 | \$16.10 | \$16.01 | -\$0.10 | \$21.22 | \$5.12 | \$21.22 | \$5.12 |


| Northeast Order 1 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Utilization: | 31\% | 24\% | 27\% | 18\% |  | 100\% |  |  |  |
|  | $\begin{aligned} & \text { Class I } \\ & \text { Base } \end{aligned}$ | Class I Differentia I | Class I | Class II | Class III | Class IV | Misc Adjust | Uniform Price | PPD | Uniform with Depooling | PPD with Depooling |
| Oct-19 | \$17.84 | \$3.25 | \$21.09 | \$16.68 | \$18.72 | \$16.39 | \$0.20 | \$18.75 | \$0.03 | \$18.75 | \$0.03 |
| Nov-19 | \$18.14 | \$3.25 | \$21.39 | \$16.85 | \$20.45 | \$16.60 | \$0.20 | \$19.38 | -\$1.07 | \$18.99 | -\$1.46 |
| Dec-19 | \$19.33 | \$3.25 | \$22.58 | \$16.81 | \$19.37 | \$16.70 | \$0.20 | \$19.47 | \$0.10 | \$19.47 | \$0.10 |
| Jan-20 | \$19.01 | \$3.25 | \$22.26 | \$17.05 | \$17.05 | \$16.65 | \$0.20 | \$18.79 | \$1.74 | \$18.79 | \$1.74 |
| Feb-20 | \$17.55 | \$3.25 | \$20.80 | \$16.84 | \$17.00 | \$16.20 | \$0.20 | \$18.20 | \$1.20 | \$18.20 | \$1.20 |
| Mar-20 | \$17.46 | \$3.25 | \$20.71 | \$16.75 | \$16.25 | \$14.87 | \$0.20 | \$17.70 | \$1.45 | \$17.70 | \$1.45 |
| Apr-20 | \$16.64 | \$3.25 | \$19.89 | \$13.87 | \$13.07 | \$11.40 | \$0.20 | \$15.28 | \$2.21 | \$15.28 | \$2.21 |
| May-20 | \$12.95 | \$3.25 | \$16.20 | \$12.30 | \$12.14 | \$10.67 | \$0.20 | \$13.37 | \$1.23 | \$13.37 | \$1.23 |
| Jun-20 | \$11.42 | \$3.25 | \$14.67 | \$12.66 | \$21.01 | \$13.25 | \$0.20 | \$15.84 | -\$5.17 | \$13.93 | -\$7.08 |
| Jul-20 | \$16.56 | \$3.25 | \$19.81 | \$14.70 | \$21.56 | \$14.75 | \$0.20 | \$18.35 | -\$3.21 | \$17.16 | -\$4.40 |
| Aug-20 | \$18.52 | \$3.25 | \$21.77 | \$15.70 | \$19.55 | \$15.25 | \$0.20 | \$18.74 | -\$0.81 | \$18.44 | -\$1.11 |
| Sep-20 | \$17.87 | \$3.25 | \$21.12 | \$16.20 | \$17.96 | \$15.74 | \$0.20 | \$18.32 | \$0.36 | \$18.32 | \$0.36 |
| Oct-20 | \$17.32 | \$3.25 | \$20.57 | \$16.53 | \$16.68 | \$15.92 | \$0.20 | \$17.91 | \$1.23 | \$17.91 | \$1.23 |
| Nov-20 | \$17.02 | \$3.25 | \$20.27 | \$16.67 | \$16.49 | \$16.01 | \$0.20 | \$17.82 | \$1.33 | \$17.82 | \$1.33 |
| Dec-20 | \$16.89 | \$3.25 | \$20.14 | \$16.71 | \$16.10 | \$16.01 | \$0.20 | \$17.68 | \$1.58 | \$17.68 | \$1.58 |


| Appalachian Order 5 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Utilization: | 70\% | 15\% | 6\% | 9\% |  | 100\% |  |  |  |
|  | $\begin{aligned} & \text { Class I } \\ & \text { Base } \end{aligned}$ | Class I Differentia I | Class I | Class II | Class III | Class IV | Misc Adjust | Uniform Price | PPD | Uniform with Depooling | PPD with Depooling |
| Oct-19 | \$17.84 | \$3.40 | \$21.24 | \$16.68 | \$18.72 | \$16.39 | \$0.15 | \$20.12 | \$1.40 | \$20.12 | \$1.40 |
| Nov-19 | \$18.14 | \$3.40 | \$21.54 | \$16.85 | \$20.45 | \$16.60 | \$0.15 | \$20.48 | \$0.03 | \$20.48 | \$0.03 |
| Dec-19 | \$19.33 | \$3.40 | \$22.73 | \$16.81 | \$19.37 | \$16.70 | \$0.15 | \$21.25 | \$1.88 | \$21.25 | \$1.88 |
| Jan-20 | \$19.01 | \$3.40 | \$22.41 | \$17.05 | \$17.05 | \$16.65 | \$0.15 | \$20.92 | \$3.87 | \$20.92 | \$3.87 |
| Feb-20 | \$17.55 | \$3.40 | \$20.95 | \$16.84 | \$17.00 | \$16.20 | \$0.15 | \$19.82 | \$2.82 | \$19.82 | \$2.82 |
| Mar-20 | \$17.46 | \$3.40 | \$20.86 | \$16.75 | \$16.25 | \$14.87 | \$0.15 | \$19.58 | \$3.33 | \$19.58 | \$3.33 |
| Apr-20 | \$16.64 | \$3.40 | \$20.04 | \$13.87 | \$13.07 | \$11.40 | \$0.15 | \$18.07 | \$5.00 | \$18.07 | \$5.00 |
| May-20 | \$12.95 | \$3.40 | \$16.35 | \$12.30 | \$12.14 | \$10.67 | \$0.15 | \$15.13 | \$2.99 | \$15.13 | \$2.99 |
| Jun-20 | \$11.42 | \$3.40 | \$14.82 | \$12.66 | \$21.01 | \$13.25 | \$0.15 | \$14.88 | -\$6.13 | \$14.48 | -\$6.53 |
| Jul-20 | \$16.56 | \$3.40 | \$19.96 | \$14.70 | \$21.56 | \$14.75 | \$0.15 | \$18.95 | -\$2.61 | \$18.78 | -\$2.78 |
| Aug-20 | \$18.52 | \$3.40 | \$21.92 | \$15.70 | \$19.55 | \$15.25 | \$0.15 | \$20.39 | \$0.84 | \$20.39 | \$0.84 |
| Sep-20 | \$17.87 | \$3.40 | \$21.27 | \$16.20 | \$17.96 | \$15.74 | \$0.15 | \$19.96 | \$2.00 | \$19.96 | \$2.00 |
| Oct-20 | \$17.32 | \$3.40 | \$20.72 | \$16.53 | \$16.68 | \$15.92 | \$0.15 | \$19.56 | \$2.88 | \$19.56 | \$2.88 |
| Nov-20 | \$17.02 | \$3.40 | \$20.42 | \$16.67 | \$16.49 | \$16.01 | \$0.15 | \$19.37 | \$2.88 | \$19.37 | \$2.88 |
| Dec-20 | \$16.89 | \$3.40 | \$20.29 | \$16.71 | \$16.10 | \$16.01 | \$0.15 | \$19.27 | \$3.17 | \$19.27 | \$3.17 |



| Arizona Order 131 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Utilization: | 25\% | 8\% | 30\% | 37\% |  | 100\% |  |  |  |
|  | $\begin{aligned} & \text { Class I } \\ & \text { Base } \end{aligned}$ | Class I Differential | Class I | Class II | Class III | Class IV | Misc Adjust | Uniform Price | PPD | Uniform with Depooling | PPD with Depooling |
| Oct-19 | \$17.84 | \$2.35 | \$20.19 | \$16.68 | \$18.72 | \$16.39 | -\$0.15 | \$17.91 | -\$0.81 | \$17.57 | -\$1.15 |
| Nov-19 | \$18.14 | \$2.35 | \$20.49 | \$16.85 | \$20.45 | \$16.60 | -\$0.15 | \$18.60 | -\$1.85 | \$17.80 | -\$2.65 |
| Dec-19 | \$19.33 | \$2.35 | \$21.68 | \$16.81 | \$19.37 | \$16.70 | -\$0.15 | \$18.60 | -\$0.77 | \$18.28 | -\$1.09 |
| Jan-20 | \$19.01 | \$2.35 | \$21.36 | \$17.05 | \$17.05 | \$16.65 | -\$0.15 | \$17.83 | \$0.78 | \$17.83 | \$0.78 |
| Feb-20 | \$17.55 | \$2.35 | \$19.90 | \$16.84 | \$17.00 | \$16.20 | -\$0.15 | \$17.27 | \$0.27 | \$17.27 | \$0.27 |
| Mar-20 | \$17.46 | \$2.35 | \$19.81 | \$16.75 | \$16.25 | \$14.87 | -\$0.15 | \$16.52 | \$0.27 | \$16.50 | \$0.25 |
| Apr-20 | \$16.64 | \$2.35 | \$18.99 | \$13.87 | \$13.07 | \$11.40 | -\$0.15 | \$13.85 | \$0.78 | \$13.84 | \$0.77 |
| May-20 | \$12.95 | \$2.35 | \$15.30 | \$12.30 | \$12.14 | \$10.67 | -\$0.15 | \$12.25 | \$0.11 | \$12.24 | \$0.10 |
| Jun-20 | \$11.42 | \$2.35 | \$13.77 | \$12.66 | \$21.01 | \$13.25 | -\$0.15 | \$15.51 | -\$5.50 | \$13.15 | -\$7.86 |
| Jul-20 | \$16.56 | \$2.35 | \$18.91 | \$14.70 | \$21.56 | \$14.75 | -\$0.15 | \$17.68 | -\$3.88 | \$16.02 | -\$5.54 |
| Aug-20 | \$18.52 | \$2.35 | \$20.87 | \$15.70 | \$19.55 | \$15.25 | -\$0.15 | \$17.83 | -\$1.72 | \$17.09 | -\$2.46 |
| Sep-20 | \$17.87 | \$2.35 | \$20.22 | \$16.20 | \$17.96 | \$15.74 | -\$0.15 | \$17.41 | -\$0.55 | \$17.18 | -\$0.78 |
| Oct-20 | \$17.32 | \$2.35 | \$19.67 | \$16.53 | \$16.68 | \$15.92 | -\$0.15 | \$16.98 | \$0.30 | \$16.98 | \$0.30 |
| Nov-20 | \$17.02 | \$2.35 | \$19.37 | \$16.67 | \$16.49 | \$16.01 | -\$0.15 | \$16.90 | \$0.41 | \$16.90 | \$0.41 |
| Dec-20 | \$16.89 | \$2.35 | \$19.24 | \$16.71 | \$16.10 | \$16.01 | -\$0.15 | \$16.75 | \$0.65 | \$16.75 | \$0.65 |


| Pacific Northwest Order 124 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Utilization: | 20\% | 6\% | 37\% | 37\% |  | 100\% |  |  |  |
|  | Class I <br> Base | Class I Differential | Class I | Class II | Class III | Class IV | Misc Adjust | Uniform Price | PPD | Uniform with Depooling | PPD with Depooling |
| Oct-19 | \$17.84 | \$1.90 | \$19.74 | \$16.68 | \$18.72 | \$16.39 | -\$0.35 | \$17.59 | -\$1.13 | \$16.93 | -\$1.79 |
| Nov-19 | \$18.14 | \$1.90 | \$20.04 | \$16.85 | \$20.45 | \$16.60 | -\$0.35 | \$18.38 | -\$2.07 | \$17.16 | -\$3.29 |
| Dec-19 | \$19.33 | \$1.90 | \$21.23 | \$16.81 | \$19.37 | \$16.70 | -\$0.35 | \$18.25 | -\$1.12 | \$17.59 | -\$1.78 |
| Jan-20 | \$19.01 | \$1.90 | \$20.91 | \$17.05 | \$17.05 | \$16.65 | -\$0.35 | \$17.32 | \$0.27 | \$17.32 | \$0.27 |
| Feb-20 | \$17.55 | \$1.90 | \$19.45 | \$16.84 | \$17.00 | \$16.20 | -\$0.35 | \$16.83 | -\$0.17 | \$16.73 | -\$0.27 |
| Mar-20 | \$17.46 | \$1.90 | \$19.36 | \$16.75 | \$16.25 | \$14.87 | -\$0.35 | \$16.04 | -\$0.21 | \$15.83 | -\$0.42 |
| Apr-20 | \$16.64 | \$1.90 | \$18.54 | \$13.87 | \$13.07 | \$11.40 | -\$0.35 | \$13.24 | \$0.17 | \$13.20 | \$0.13 |
| May-20 | \$12.95 | \$1.90 | \$14.85 | \$12.30 | \$12.14 | \$10.67 | -\$0.35 | \$11.80 | -\$0.34 | \$11.52 | -\$0.62 |
| Jun-20 | \$11.42 | \$1.90 | \$13.32 | \$12.66 | \$21.01 | \$13.25 | -\$0.35 | \$15.75 | -\$5.26 | \$12.66 | -\$8.35 |
| Jul-20 | \$16.56 | \$1.90 | \$18.46 | \$14.70 | \$21.56 | \$14.75 | -\$0.35 | \$17.66 | -\$3.90 | \$15.37 | -\$6.19 |
| Aug-20 | \$18.52 | \$1.90 | \$20.42 | \$15.70 | \$19.55 | \$15.25 | -\$0.35 | \$17.55 | -\$2.00 | \$16.38 | -\$3.17 |
| Sep-20 | \$17.87 | \$1.90 | \$19.77 | \$16.20 | \$17.96 | \$15.74 | -\$0.35 | \$17.04 | -\$0.92 | \$16.51 | -\$1.45 |
| Oct-20 | \$17.32 | \$1.90 | \$19.22 | \$16.53 | \$16.68 | \$15.92 | -\$0.35 | \$16.55 | -\$0.13 | \$16.47 | -\$0.21 |
| Nov-20 | \$17.02 | \$1.90 | \$18.92 | \$16.67 | \$16.49 | \$16.01 | -\$0.35 | \$16.46 | -\$0.03 | \$16.42 | -\$0.07 |
| Dec-20 | \$16.89 | \$1.90 | \$18.79 | \$16.71 | \$16.10 | \$16.01 | -\$0.35 | \$16.29 | \$0.19 | \$16.27 | \$0.17 |


| California Order 51 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Utilization: | 12\% | 9\% | 33\% | 46\% |  | 100\% |  |  |  |
|  | Class I <br> Base | Class I Differential | Class I | Class II | Class III | Class IV | Misc Adjust | Uniform Price | PPD | Uniform with Depooling | PPD with Depooling |
| Oct-19 | \$17.84 | \$2.10 | \$19.94 | \$16.68 | \$18.72 | \$16.39 | -\$0.10 | \$17.51 | -\$1.21 | \$16.92 | -\$1.80 |
| Nov-19 | \$18.14 | \$2.10 | \$20.24 | \$16.85 | \$20.45 | \$16.60 | -\$0.10 | \$18.23 | -\$2.22 | \$17.14 | -\$3.31 |
| Dec-19 | \$19.33 | \$2.10 | \$21.43 | \$16.81 | \$19.37 | \$16.70 | -\$0.10 | \$18.06 | -\$1.31 | \$17.41 | -\$1.96 |
| Jan-20 | \$19.01 | \$2.10 | \$21.11 | \$17.05 | \$17.05 | \$16.65 | -\$0.10 | \$17.25 | \$0.20 | \$17.25 | \$0.20 |
| Feb-20 | \$17.55 | \$2.10 | \$19.65 | \$16.84 | \$17.00 | \$16.20 | -\$0.10 | \$16.84 | -\$0.16 | \$16.74 | -\$0.26 |
| Mar-20 | \$17.46 | \$2.10 | \$19.56 | \$16.75 | \$16.25 | \$14.87 | -\$0.10 | \$15.96 | -\$0.29 | \$15.67 | -\$0.58 |
| Apr-20 | \$16.64 | \$2.10 | \$18.74 | \$13.87 | \$13.07 | \$11.40 | -\$0.10 | \$12.95 | -\$0.12 | \$12.75 | -\$0.32 |
| May-20 | \$12.95 | \$2.10 | \$15.05 | \$12.30 | \$12.14 | \$10.67 | -\$0.10 | \$11.73 | -\$0.41 | \$11.40 | -\$0.74 |
| Jun-20 | \$11.42 | \$2.10 | \$13.52 | \$12.66 | \$21.01 | \$13.25 | -\$0.10 | \$15.69 | -\$5.32 | \$13.07 | -\$7.94 |
| Jul-20 | \$16.56 | \$2.10 | \$18.66 | \$14.70 | \$21.56 | \$14.75 | -\$0.10 | \$17.36 | -\$4.20 | \$15.29 | -\$6.27 |
| Aug-20 | \$18.52 | \$2.10 | \$20.62 | \$15.70 | \$19.55 | \$15.25 | -\$0.10 | \$17.25 | -\$2.30 | \$16.12 | -\$3.43 |
| Sep-20 | \$17.87 | \$2.10 | \$19.97 | \$16.20 | \$17.96 | \$15.74 | -\$0.10 | \$16.92 | -\$1.04 | \$16.41 | -\$1.55 |
| Oct-20 | \$17.32 | \$2.10 | \$19.42 | \$16.53 | \$16.68 | \$15.92 | -\$0.10 | \$16.55 | -\$0.13 | \$16.48 | -\$0.20 |
| Nov-20 | \$17.02 | \$2.10 | \$19.12 | \$16.67 | \$16.49 | \$16.01 | -\$0.10 | \$16.50 | \$0.01 | \$16.48 | -\$0.01 |
| Dec-20 | \$16.89 | \$2.10 | \$18.99 | \$16.71 | \$16.10 | \$16.01 | -\$0.10 | \$16.36 | \$0.26 | \$16.33 | \$0.23 |


[^0]:    *Mark Stephenson is the Director of Dairy Policy Analysis at the University of Wisconsin-Madison, and Andrew Novakovic is the E.V. Baker Professor of Agricultural Economics Emeritus, in the Charles H. Dyson School of Applied Economics and Management at Cornell University.

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[^1]:    ${ }^{1}$ National Dairy Products Sales Report.
    https://usda.library.cornell.edu/concern/publications/zs25x847n

[^2]:    ${ }^{2}$ The Appalachian, Southeast, Florida and Arizona Orders use the same Class III and IV prices as all other orders, but the class and blend prices are calculated on the basis of skim milk and milkfat values This means that protein test or content is not a factor in determining either a processor's cost of milk or a farmer's price, other than for the fact that it is one part of skim solids. An extra pound of skim solids in these orders has the same value whether it is protein or other solids (carbohydrates). In this system, it is possible for the Class I price to be less than the Class III price for the same reason as occurs everywhere else: a large increase in the Class III price in a one-month period. The difference is that there is no accounting need to have a PPD in these pricing systems. Hence, the impact on the producer milk check is much less obvious.
    ${ }^{3}$ Of course, the opposite reason led us to charge other classes of milk for skim solids as one thing. The salue or yield on beverage milk is not driven by protein vs. carbohydrate content.

