

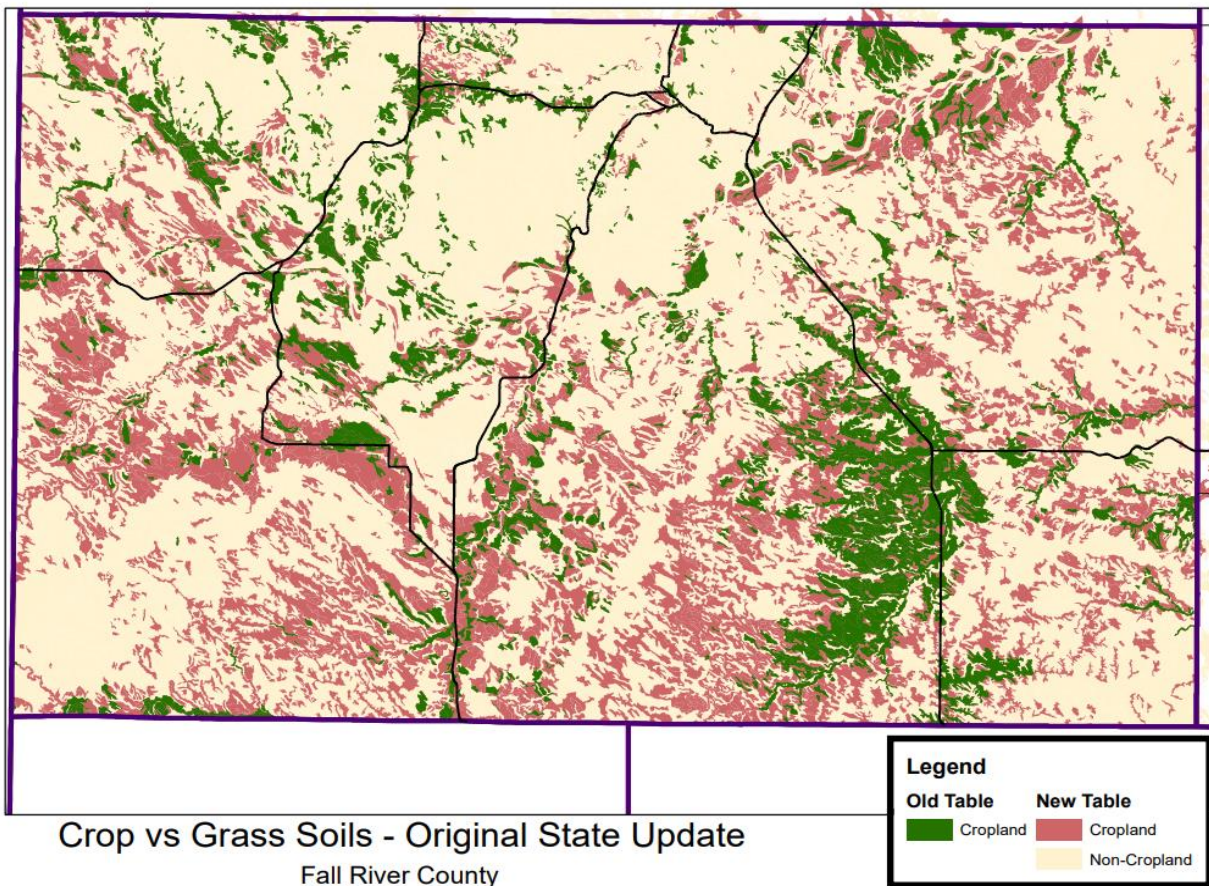
Preliminary Report

Data used based on soil table issued by Department of Revenue in July 2020; currently pending review.

Fall River County Ag Land Valuation Change

This report describes the increase in value for Fall River County due to the new soil table. While the change of the Class 4 soils from non-crop to crop was the greater part of this increase, there was a further mathematical effect as a result of that shift. The shift of the Class 4 soils caused, within the calculation of the top dollars, an addition increase to the county's overall value.

The map below shows the difference in the soils that are designated as crop land between the old and new table. The pink soils are those that have been added as crop land with the new table, the green soils were and remain crop soils. Originally 14% of Fall River County's agricultural land was designated as a crop soil. The new table designates 42% of the county's agricultural land as crop soil.



| County Ag Land Designated as Crop Soil | |
|--|-----------|
| Original Table | New Table |
| 14% | 42% |

The shift of Class 4 soils from non-crop to crop is the most obvious cause for the value increase. But this shift of the Class 4 soils caused another less obvious increase due to the formula that is used to calculate the top dollar.

First, the weighted soil rating averages for crop and non-crop land are used in the calculation of the top dollars for each soils class. The weighted rating has an inverse relationship to the top dollar. Meaning, for example, as the crop weighted soil rating gets smaller the crop top dollar gets larger.

The soils ratings on the new table decreased. The table below shows the weighted rating from the old table and what the weighted rating would have been from the new table IF the Class 4 soils had not changed classes. It is important to look at these numbers before the shift of the Class 4 soils so that we are comparing apples to apples.

| | Original Weighted Average | New Weighted Average |
|----------------|----------------------------------|-----------------------------|
| Crop Soils | 0.892 | 0.669 |
| Non-Crop Soils | 0.395 | 0.354 |

The final portion of the top dollar calculation is dividing the “Average Land Value” for either crop or non-crop land by its associated weighted soil rating average. For 2021 this Average Land value in Fall River County was \$845.35 for crop land and \$131.26 for non-crop land. This is how the calculation would look with both the old and new table:

| | Average Land Value | Table Used | Weighted Rating | Top Dollar |
|---------------|--------------------|------------|-----------------|-------------|
| Crop Soil | \$ 845.35 | Old | 0.892 | \$ 947.86 |
| | | New | 0.669 | \$ 1,263.74 |
| Non-crop Soil | \$ 131.26 | Old | 0.395 | \$ 332.00 |
| | | New | 0.354 | \$ 371.13 |

We can see that as the weighted rating decreases the top dollar increases but this relationship is directly proportional. This can be seen when using these numbers to calculate the county value for each group below.

| | | Weighted rate x acres x top \$ | Total Value |
|---------------------|-----------------------|---|----------------|
| Cropland | Old Table Calculation | $0.89185 \times 107656 \times \947.86 | = \$91,006,885 |
| | New Table Calculation | $0.66893 \times 107656 \times \$1,263.74$ | = \$91,007,386 |
| Non-Cropland | Old Table Calculation | $0.39537 \times 686,849 \times \332 | = \$90,157,750 |
| | New Table Calculation | $0.35368 \times 686,849 \times \371.13 | = \$90,156,664 |

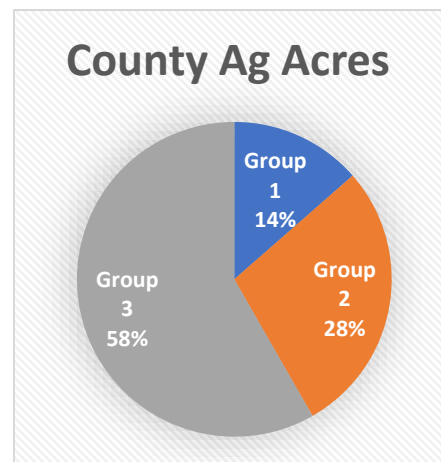
The total values for each group are almost exactly the same (the difference is in the rounding). This is because the top dollar increased in direct correlation with the decrease of the soil rating. Without the shift of the Class 4 soils the county would not have seen any increase from the new soil table only a shift of value between parcels as soil rating adjusted in proportion to each other.

So, what effect did the shift of the Class 4 soils have? The Class 4 soils were the best of the non-crop soils so by removing their ratings from the non-crop weighted average that average dropped from 0.354 to 0.329. The Class 4 soils were added to the crop soils average, but they are lower rated crop soils than the original crop soil group so they end up lowering this group as well. The crop weighted average drops from 0.669 to 0.603. How does the further lowering of these weighted averages effect the top dollar?

| | Average Land Value | Table Used | Weighted Rating | Top Dollar |
|---------------|--------------------|--------------------|-----------------|--------------------|
| Crop Soil | \$ 845.35 | Old | 0.892 | \$ 947.86 |
| | | New | 0.669 | \$ 1,263.74 |
| | | New – Class 4 move | 0.603 | \$ 1,402.96 |
| Non-crop Soil | \$ 131.26 | Old | 0.395 | \$ 332.00 |
| | | New | 0.354 | \$ 371.13 |
| | | New – Class 4 move | 0.329 | \$ 398.64 |

To see the effect of these new top dollars we will break the soils into three groups:

- Group 1: Soils that were crop soils on the old table and remained crop soils
- Group 2: Soils that were non-crop soils on the old table and are now crop soils
- Group 3: Soils that were non-crop soils on the old table and remained non-crop soils



Group 1:

| Original Crop Soil Group | Top Dollar | Value |
|--------------------------|------------|---------------|
| New | \$1,263.74 | \$ 91,007,387 |
| New – Class 4 move | \$1,402.96 | \$101,033,222 |

The original crop soils group has increase by \$10 million due to the change in top dollar that resulted from the Class 4 soils moving from non-crop to crop land. [107,656 acres]

Group 2:

| Class 4 Soils - Move | Top Dollar | Value |
|----------------------|------------|---------------|
| New as Non-crop | \$271.13 | \$ 33,577,100 |
| New as Crop | \$1,263.74 | \$161,424,152 |
| New with Move | \$1,402.96 | \$179,207,137 |

If the Class 4 soils had remained non-crop their value in the new table would have been \$33 million. Instead, they were moved to crop, this would have resulted in a value of \$161 million. However, their own move caused an increase in the crop top dollar that resulted in an additional increase of \$17 million. So, the overall increase for the Class 4 soils is \$145 million. [223,851 acres]

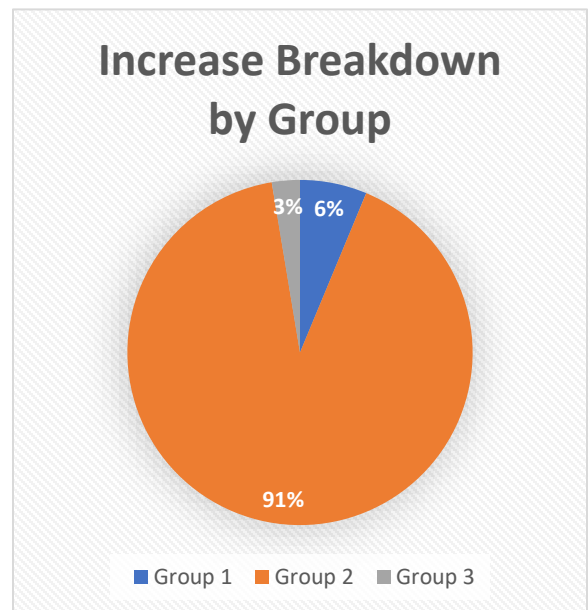
Group 3:

| Remaining Non-Crop Soil Group | Top Dollar | Value |
|-------------------------------|------------|---------------|
| New | \$371.13 | \$ 56,579,270 |
| New with Move | \$398.64 | \$ 60,773,207 |

The non-crop soils that remained non-crop increased \$4 million due to the change in top dollar resulting from the Class 4 soils move. [462,998 acres]

The vast majority of this increase is seen in the 28% of the county that makes up the Class 4 soils.

| | Value Increase |
|---------|-----------------|
| Group 1 | \$10.0 million |
| Group 2 | \$145.6 million |
| Group 3 | \$4.2 million |



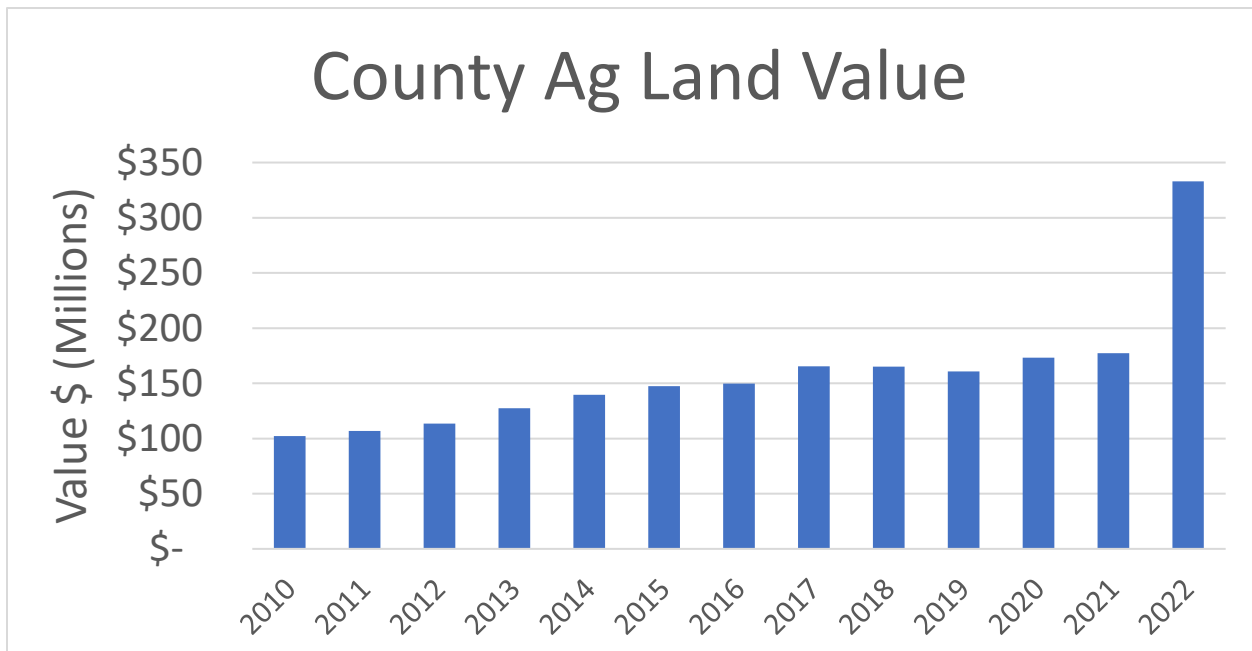
| State Expected Value for Fall River County | |
|--|----------------|
| 2021 | 2022 |
| \$ 181 Million | \$ 342 Million |

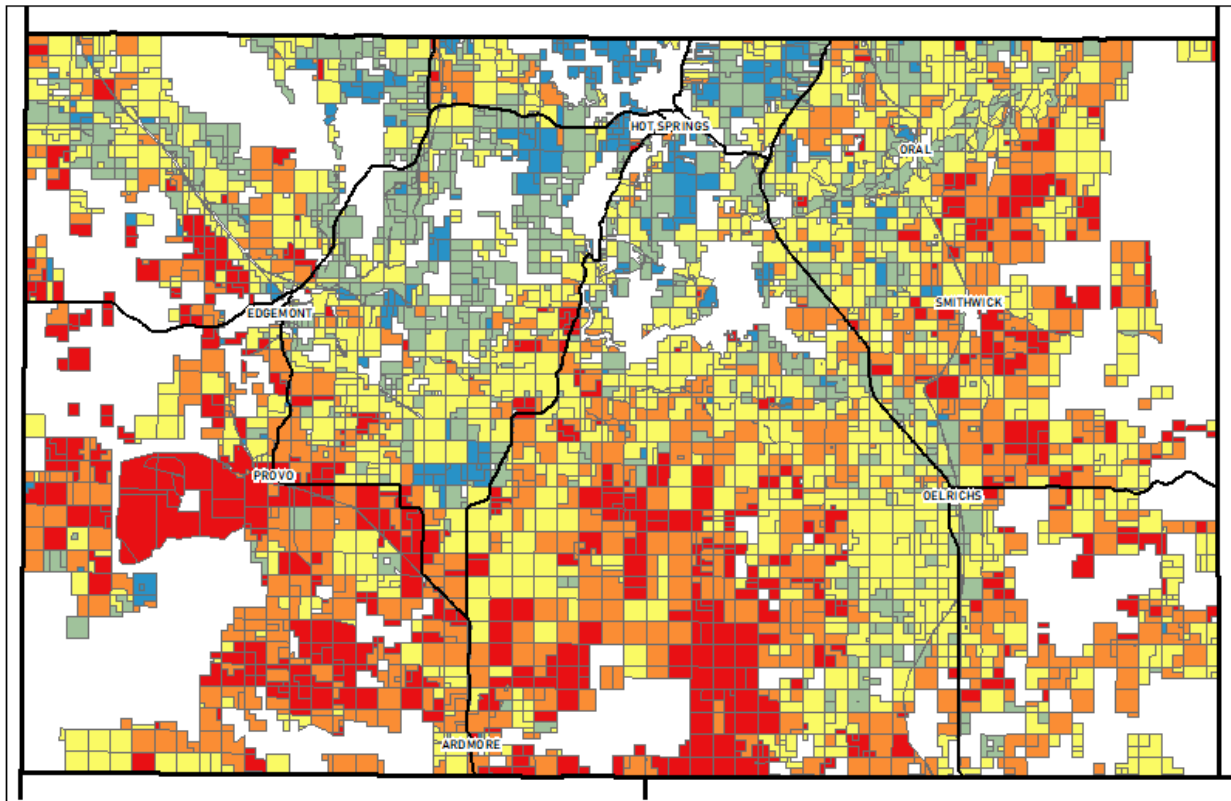
To put this increase into perspective, below is a table of Fall River County’s value from 2010 when the Ag Productivity Method was adopted to the present. *The 2020 value was used as the 2021 abstract has not yet been completed (tentative 2021 value after adjustments would be \$177 million)*

| | County Ag Land Value | |
|-------------|--|---|
| 2010 | \$ 102.3 million | |
| 2020 | \$ 173.1 million (\$181 before adjustments) | Increase of \$70.8 million over 10 years |
| 2022 | \$ 333.0 million (\$341 before adjustments) | Increase of \$159.8 million by next year? |

Bottom line: The increase from this new soil table is double the increase taken by the county over the last decade.

Below is a graph of Fall River County’s increases since 2010 with the proposed 2022 increase.

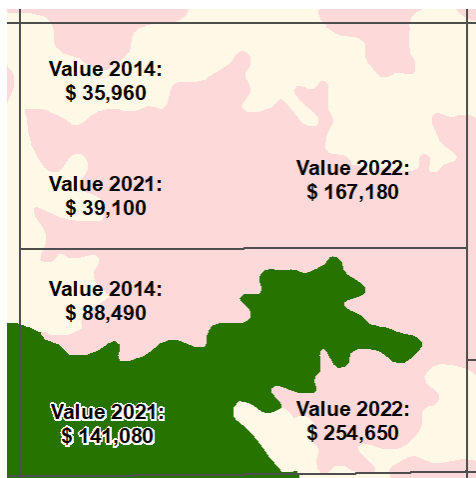




(Areas of white are non-agricultural or exempt lands)

On the map above parcels marked in red are more than tripling in value, orange parcels are more than doubling. The parcels around Oelrichs and Oral that are yellow are increasing but not doubling because they already have the higher crop soils rates. Green are increasing but less than 20%. Blue are decreasing, most by a percent or two.

Blue also represents many of our timber parcels. These parcels have some of the worst soils in the county when they are being rated for grass production. But the owners are not growing grass they are growing timber. Ponderosa pine likes poor soils and this is not taken into account in the soil table. Timber parcels are already under-valued and this new table will drop the values even farther.



To the left we have a map of Tom White's famous north ½ and south ½. The green marks the original crop soils, the pink has been added as crop soils with this new table.

You can see the original disparity between the values of these two pastures. And the affect the Class 4 soils changing to grass will have on the value.

Report compiled by
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Fall River County 4/29/2021