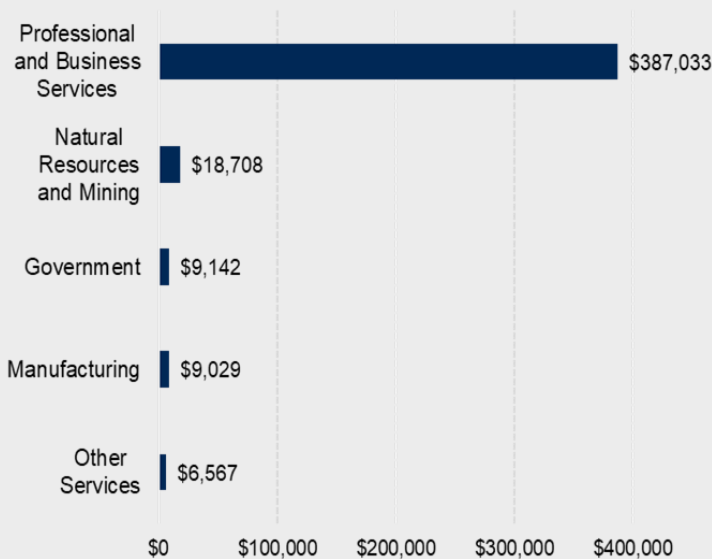# Quarter 3 of Calendar Year 2021

Inefficiencies from old rules are cumulative, and over time, the impacts are compounded by multiplier effects. Removing burdens associated with 30 rules in the third quarter of calendar year 2021 eliminated $430,480 of lost productivity for Arizona businesses. These changes do not reduce the welfare of Arizonans.

30 Rules Improved or Eliminated

Across

6 Agencies

$430,480

Annual Savings for the Arizona Economy

$0.00

Lost Benefits for Arizonans

Value of Rule Improvements and Rule Eliminations from CY2021 Q3 by Supersector

Supersector	Value
Professional and Business Services	$387,033
Natural Resources and Mining	$18,708
Government	$9,142
Manufacturing	$9,029
Other Services	$6,567

Axis: $0 $100,000 $200,000 $300,000 $400,000

The monetized economic impact refers to the costs to businesses simply due to the existence of these outdated or obsolete rules within the Arizona Administrative Code (AAC). These rules may have become obsolete due to timeliness or even lack of statutory authority. The estimates for lost economic activity quantify how much productivity businesses lose because a worker must sift through these rules even though they are invalid. This could mean reading an outdated rule, consulting the Arizona Revised Statutes (ARS) for statutory authority, or even possibly making a business decision based on a rule that lacks validity. Since these rules do not increase societal welfare, there is no loss in benefits. These estimates are focusing on a very narrow and conservative estimate of how businesses can be impacted by outdated rules.

Introduction

This report contains tables and charts that monetize the impact of regulation improvement during the third quarter of calendar year (CY) 2021 (July 2021 – September 2021). This includes the value of both rule improvements and rule eliminations. The final section includes the methodology for each process as well as a sample of the formula that is used to generate these estimates. These estimates represent preliminary impacts using a very conservative process. The following table shows the status of each quarter in calendar year 2021.

Progress of Monetization Project by Quarter				
Calendar Quarter	**Calendar Equivalent**	**Monetization Status**	**Rule Count**	**Savings**
Q1 CY2021	January - March 2021	Completed	82	$6,741,718
Q2 CY2021	April - June 2021	Completed	30	$2,006,623
Q3 CY2021	July - September 2021	Completed	30	$430,480
Q4 CY2021	October - December 2021	Outstanding	-	-
Total			**142**	**$9,178,821**

In the third quarter of CY 2021, 6 agencies improved or eliminated 30 rules. We estimate that the unimproved versions of these rules resulted in an aggregate loss of $430,480 every year across the economy of Arizona in the form of lost productivity. In regulation, the benefits must always be considered against the costs, and for these regulations, the benefits were $0.00 each year. Individually, these rules have minimal impact, but over the entire economy over time, these very minimal impacts can combine to produce significant inefficiencies in the economy.

Eliminations and Improvements Combined

Value of Rule Eliminations and Rule Improvements from CY2021 Q3 by Agency		
Agency	**Total Savings**	**Rule Count**
Board of Manufactured Housing	$9,029	8
Commission for the Deaf and Hard of Hearing	$387,033	2
Department of Health Services	$9,142	1
Game and Fish Commission	$36	5
Department of Agriculture	$18,672	13
Citizens Clean Election Commission	$6,567	1
Total	**$430,480**	**30**

Value of Rule Eliminations and Rule Improvements from CY2021 Q3 by Supersector

NAICS	Supersector	Total Savings
10000000	Natural Resources and Mining	$18,708
20000000	Construction	$0
30000000	Manufacturing	$9,029
40000000	Trade, Transportation, and Utilities	$0
50000000	Information	$0
55000000	Financial Activities	$0
60000000	Professional and Business Services	$387,033
65000000	Education and Health Services	$0
70000000	Leisure and Hospitality	$0
80000000	Other Services	$6,567
90000000	Government	$9,142
	Total	**$430,480**

Value of Rule Improvements and Rule Eliminations from CY2021 Q3 by Supersector
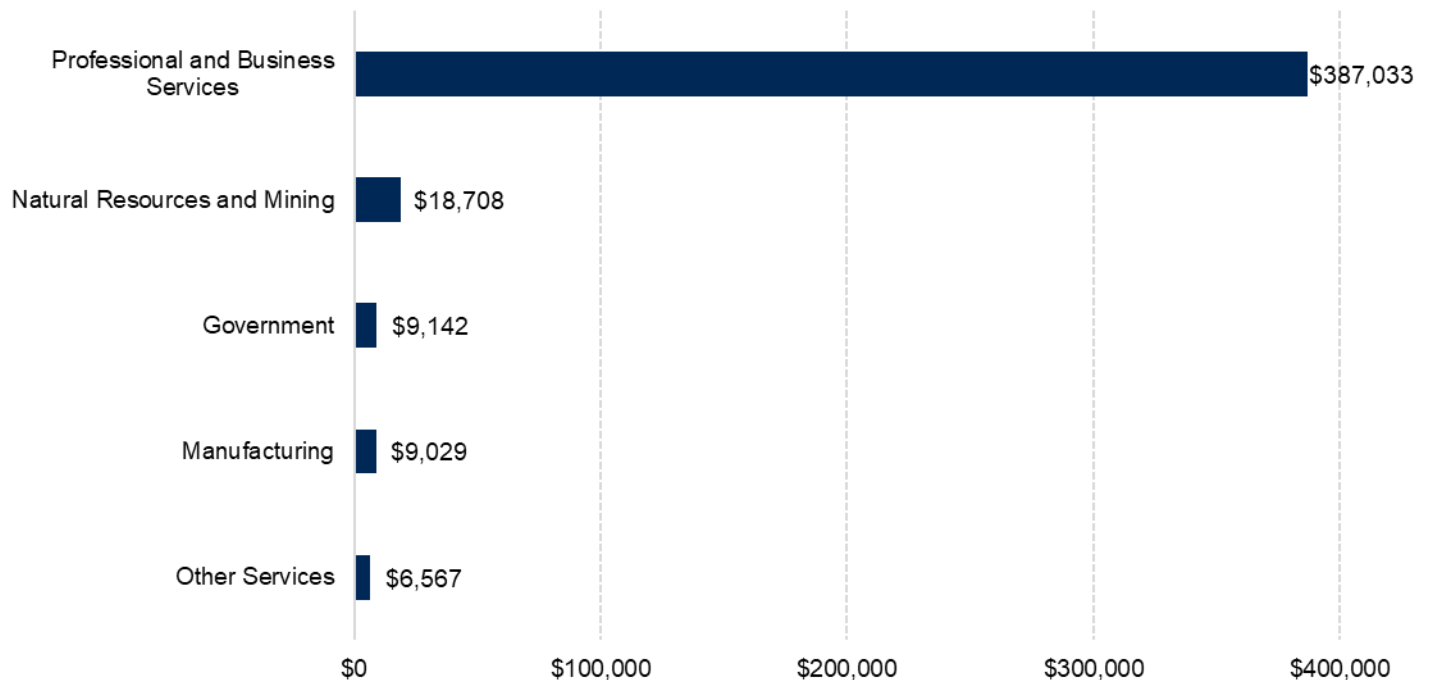
Improvements Only

Value of Rule Improvements from CY2021 Q3 by Agency		
Agency	**Rule**	**Total Savings**
Board of Manufactured Housing	R4-34-XXX	$8,992
Commission for the Deaf and Hard of Hearing	R9-26-50X	$387,033
Department of Health Services	R9-6-502	$9,142
Game and Fish Commission	R12-4-30X	$27
Department of Agriculture	R3-4-10XX	$18,672
Citizens Clean Election Commission	R2-20-109	$6,567
Total	**26**	**$430,433**

Value of Rule Improvements from CY2021 Q3 by Supersector

NAICS	Supersector	Total Savings
10000000	Natural Resources & Mining	$18,699
20000000	Construction	$0
30000000	Manufacturing	$8,992
40000000	Trade, Transportation & Utilities	$0
50000000	Information	$0
55000000	Financial Activities	$0
60000000	Professional & Business Svcs	$387,033
65000000	Education and Health Services	$0
70000000	Leisure & Hospitality	$0
80000000	Other Services	$6,567
90000000	Government	$9,142
	Total	**$430,433**

Value of Rule Improvements from CY2021 Q3 by Supersector
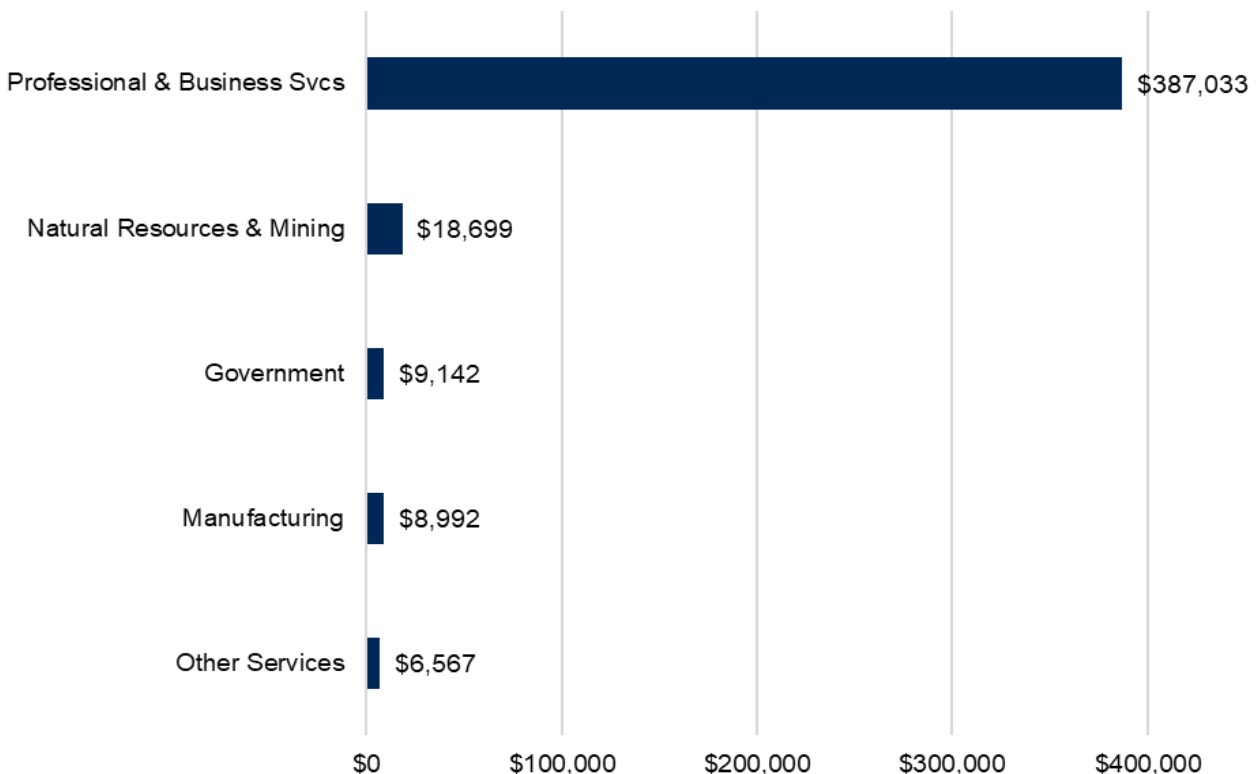
Eliminations Only

Value of Rule Eliminations from CY2021 Q3 by Agency		
Agency	**Rule**	**Total Savings**
Board of Manufactured Housing	R2-34-504	$37
Game and Fish Commission	R12-4-XXX	$10
Total	**4**	**$47**

Value of Rule Eliminations from CY2021 Q3 by Supersector

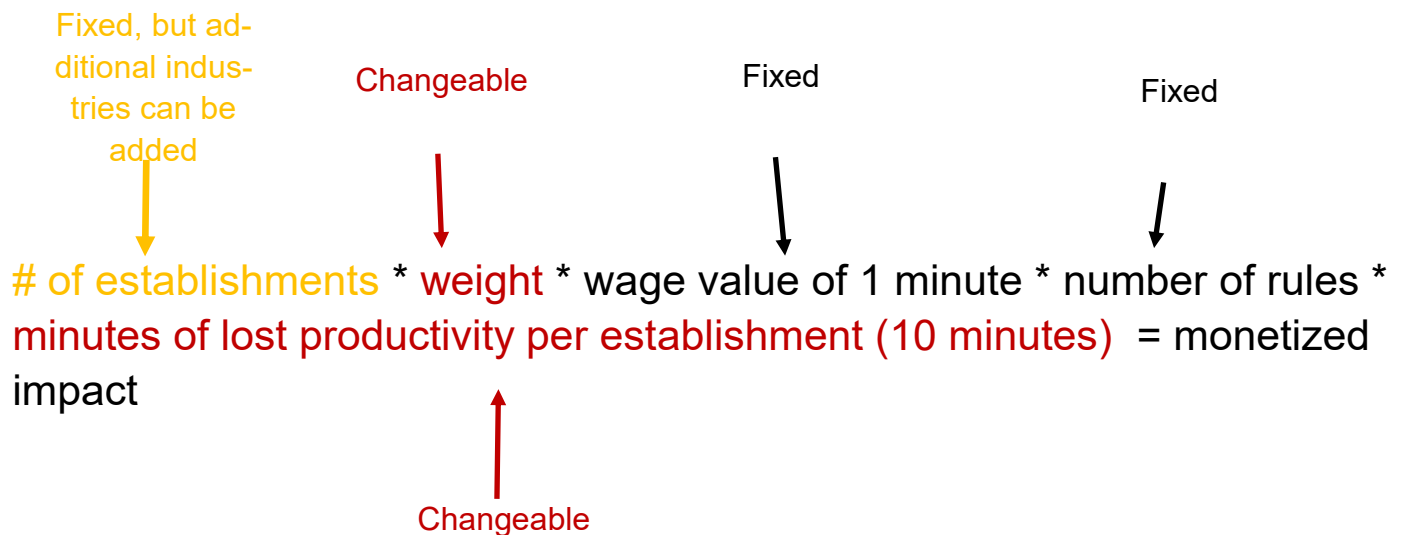| NAICS	Supersector	Total Savings
10000000	Natural Resources & Mining	$10
20000000	Construction	$0
30000000	Manufacturing	$37
40000000	Trade, Transportation & Utilities	$0
50000000	Information	$0
55000000	Financial Activities	$0
60000000	Professional & Business Services	$0
65000000	Education and Health Services	$0
70000000	Leisure & Hospitality	$0
80000000	Other Services	$0
90000000	Government	$0
	Total	**$47**

Value of Rule Eliminations from CY2021 Q3 by Supersector
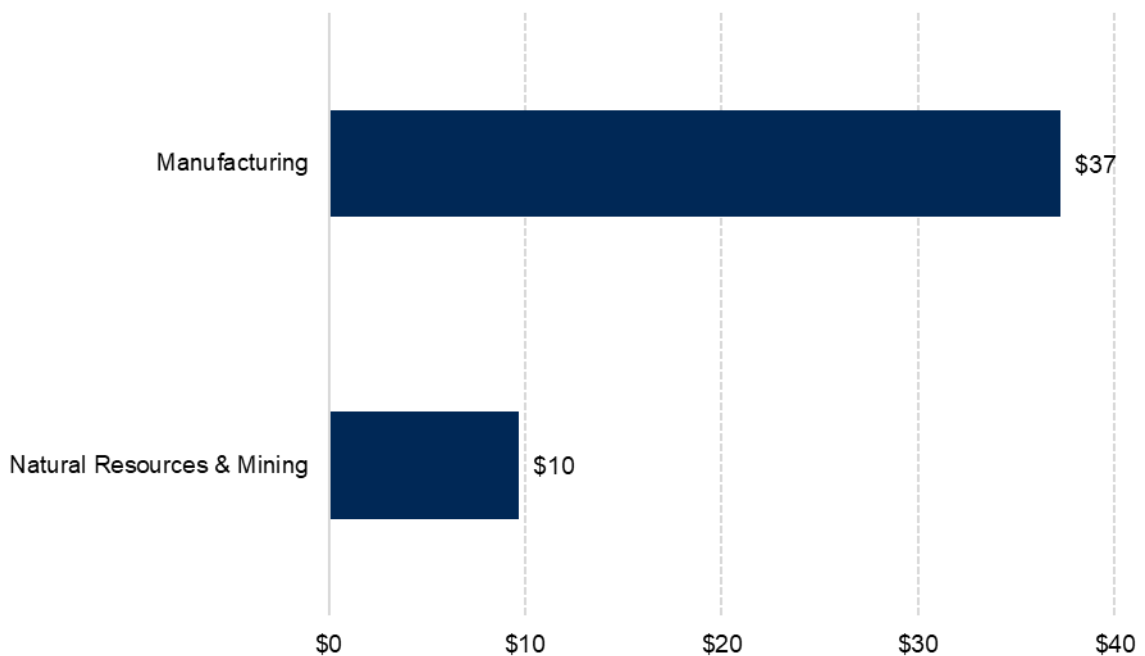
Improvement Formula

of establishments * weight * wage value of 1 minute * number of rules * minutes of lost productivity per establishment (10 minutes) = monetized

1,230 * 1 * $0.24 * 13 * 10= $38,376.00 (rounded value for wage used in this example)

Fixed, but additional industries can be added

Changeable

Fixed

Fixed

# of establishments * weight * wage value of 1 minute * number of rules * minutes of lost productivity per establishment (10 minutes) = monetized impact

Changeable

Number of establishments– derived from number of establishments for each industry attached to particular rules from QCEW at the three digit NAICS level or higher.

Weight– this number can control for industries that are comprised of a small number of very large establishments (NAICS 622: Hospitals). The ratio of average employees per establishment in the industry over the average employees per establishment among all industries. Minimum value is 1. Values that exceed 1 are rounded down to the whole integer. This is designed to control for industries that have a small number of large establishments.

This number can also be used to control for industries that are overly broad (NAICS 541: Professional, Scientific, and Technical Services). Reducing this number below the value of 1 can limit the size of establishments used in overly broad NAICS industries.

Wage value of 1 minute– derived from the weekly wages for each industry attached to a particular rules from QCEW at the three digit NAICS level or higher.

Number of rules– derived from the quantity of rules in each group of rulemakings.

Minutes of lost productivity per establishment– a reasonable estimate of 10 minutes are used for each rule.

Improvement Methodology

1. Identify at least one industry at the three digit or higher North American Industrial Classification System (NAICS) level.[1] These are somewhat broad industry classifications at the three digit level. Not all businesses in each industry will be impacted in the same way. There will also be businesses outside of each industry that could be impacted. This analysis includes businesses that are probably not impacted and excludes businesses that are probably impacted.

2. Use Quarterly Census of Employment and Wages (QCEW) data from the first quarter of 2021. At the state level, this data set can provide a quarterly average of the number of establishments and average weekly wages in each industry at the three digit NAICS level or higher.

3. Assume that each establishment has at least one person dedicated to working on compliance issues for the establishment. Some establishments will have more individuals working on compliance, and others may outsource their regulatory compliance matters to outside businesses. Our analysis generally assumes that each obsolete rule drains productivity of compliance employees once per year.

4. Divide the average number of employees in the industry by the average number of employees in all industries. Round this value down to the nearest integer (minimum value of 1). This weight controls for large industries with few establishments, like NAICS 622: Hospitals.

5. Establish the cost or burden of the rule on each individual's time. This is established by assigning a weight of 10 minutes for each rule. This weight is then multiplied by the number of rules improved to establish a rough estimate of time saved for each individual. This weight is intended to include time saved by not working with statutes and rules that are out of sync or unclear.

6. Apply the weekly average wage in the industry to the amount of time lost by the individual employee in each establishment. (Average Weekly Wage/2,400).

7. Multiply the cost of the lost time by the number of establishments to get the total lost productivity from the rule for an entire year across the entire industry. (Average Weekly Wage/2,400) * Number of Establishments.

8. This final number estimates how much businesses lose in productivity due to the existence of obsolete and outdated rules each year.

Elimination Formula

\# of establishments * weight * wage value of 1 minute * (word count/100) = monetized impact

20,306 * 0.5 * \$0.58 * (2,981/100)= \$175,921.67 (rounded value for wage used in this example)

Fixed, but additional industries can be added

Changeable

Fixed

Fixed

Changeable

\# of establishments * weight * wage value of 1 minute * (word count/ 100) * = monetized impact

Number of establishments– derived from number of establishments for each industry attached to particular rules from QCEW at the three digit NAICS level or higher.

Weight– this number can control for industries that are comprised of a small number of very large establishments (NAICS 622: Hospitals). The ratio of average employees per establishments in the industry over the average employees per establishment among all industries. Minimum value is 1. Values that exceed 1 are rounded down to the whole integer. This is designed to control for industries that have a small number of large establishments.

This number can also be used to control for industries that are overly broad (NAICS 541: Professional, Scientific, and Technical Services). Reducing this number below the value of 1 can limit the size of establishments used in overly broad NAICS industries.

Wage value of 1 minute– derived from the weekly wages for each industry attached to a particular rules from QCEW at the three digit NAICS level or higher.

Word Count– number of words in the eliminated rules.

100– an estimated reading speed of 100 words per minute for an individual reading the AAC.

Elimination Methodology

1. Identify at least one industry at the three digit or higher North American Industrial Classification System (NAICS) level. These are somewhat broad industry classifications at the three digit level. Not all businesses in each industry will be impacted in the same way. There will also be businesses outside of each industry that could be impacted. This analysis includes businesses that are probably not impacted and excludes businesses that are probably impacted.

2. Use Quarterly Census of Employment and Wages (QCEW) data from the first quarter of 2021. At the state level, this data set can provide a quarterly average of the number of establishments and average weekly wages in each industry at the three digit NAICS level or higher.

3. Assume that each establishment has one person dedicated to working on compliance issues for the establishment. Some establishments will have more individuals working on compliance, and others may outsource their regulatory compliance matters to outside businesses. Our analysis assumes that each obsolete rule drains productivity of compliance employees once per year.

4. Divide the average number of employees in the industry by the average number of employees in all industries. Round this value down to the nearest integer (minimum value of 1). This weight controls for large industries with few establishments.

5. Establish the cost or burden of the rule on each individual's time. This is established by counting the words in each repealed section and assuming that individuals read legal documents at roughly 100 words per minute (WPM). Generally, adults read somewhere between 200 and 300 words per minute, but legal and technical documents generally take more time. Some rules may include references to other places in the Arizona Administrative Code (AAC). Other rules may require frequent re-reading due to their complexity. These types of issues are excluded from the analysis aside from the 100 WPM assumption.

6. Apply the weekly average wage in the industry to the amount of time lost by the individual employee in each establishment. (Average Weekly Wage/2,400).

7. Multiply the cost of the lost time by the number of establishments to get the total lost productivity from the rule for an entire year across the entire industry. (Average Weekly Wage/2,400) * Number of Establishments.

8. This final number estimates how much businesses lose in productivity due to the existence of obsolete and outdated rules each year.

Conclusion

30 obsolete or antiquated rules were improved or eliminated in the third quarter of CY 2021. Some of these rules had minimal impact on a narrow set of businesses, and others had minimal impact on a very broad set of businesses. These minimal impacts are insignificant on the individual level, but as these aggregate, they can become a significant drag on economic growth.

For this limited set of rules, OEO estimates that Arizona businesses forego $430,480 in lost productivity each year. This may also seem insignificant in a state with Gross Domestic Product of $331 billion, but these annual losses become cumulative over multiple years. Even modest gains in GDP can multiply into immense gains over large time horizons. This analysis is limited in scope to the current year, but future projects will include future projections of the economic activity generated from the removal of these rules ten years into the future.

Addendum

The following table includes the information from all twenty quarters of rule monetization that have been completed by OEO to date. These quarters all use the same methodology. When OEO makes improvements to its methodology, historic quarters are updated to reflect any new methodological changes.

Calendar Quarter	Calendar Equivalent	Rule Count	Savings
Q3 CY2016	July - Sept. 2016	144	$5,746,774
Q4 CY2016	Oct. - Dec. 2016	69	$2,773,221
Q1 CY2017	Jan. - March 2017	144	$6,569,110
Q2 CY2017	April - June 2017	145	$10,769,528
Q3 CY2017	July - Sept. 2017	255	$24,032,472
Q4 CY2017	Oct. - Dec. 2017	132	$7,589,385
Q1 CY2018	Jan. - March 2018	113	$3,423,126
Q2 CY2018	April - June 2018	95	$6,710,569
Q3 CY2018	July - Sept. 2018	105	$10,827,569
Q4 CY2018	Oct. - Dec. 2018	109	$10,471,985
Q1 CY2019	Jan. - March 2019	158	$17,058,721
Q2 CY2019	April - June 2019	186	$13,949,558
Q3 CY2019	July - Sept. 2019	69	$9,407,096
Q4 CY2019	Oct. - Dec. 2019	224	$13,472,850
Q1 CY2020	Jan. - March 2020	55	$3,399,148
Q2 CY2020	April - June 2020	159	$4,606,195
Q3 CY2020	July - Sept. 2020	90	$2,482,360
Q4 CY2020	Oct. - Dec. 2020	158	$4,170,538
Q1 CY2021	Jan. - March 2021	82	$6,741,718
Q2 CY2021	April - June 2021	30	$2,006,623
Q3 CY2021	July – Sept. 2021	30	$430,480
Total		**2,552**	**$166,639,026**