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The biofuel industry, facing poor margins due to overproduction and declining exports, is trying various tactics to force more ethanol and biodiesel into the U.S. fuel supply. They currently claim that [small refinery exemptions \(SREs\)](#) — critical tools protecting small fuel manufacturing facilities from disproportionate economic harm brought on by the federal [Renewable Fuel Standard](#) (RFS) — are “[destroying demand](#)” for biofuels.

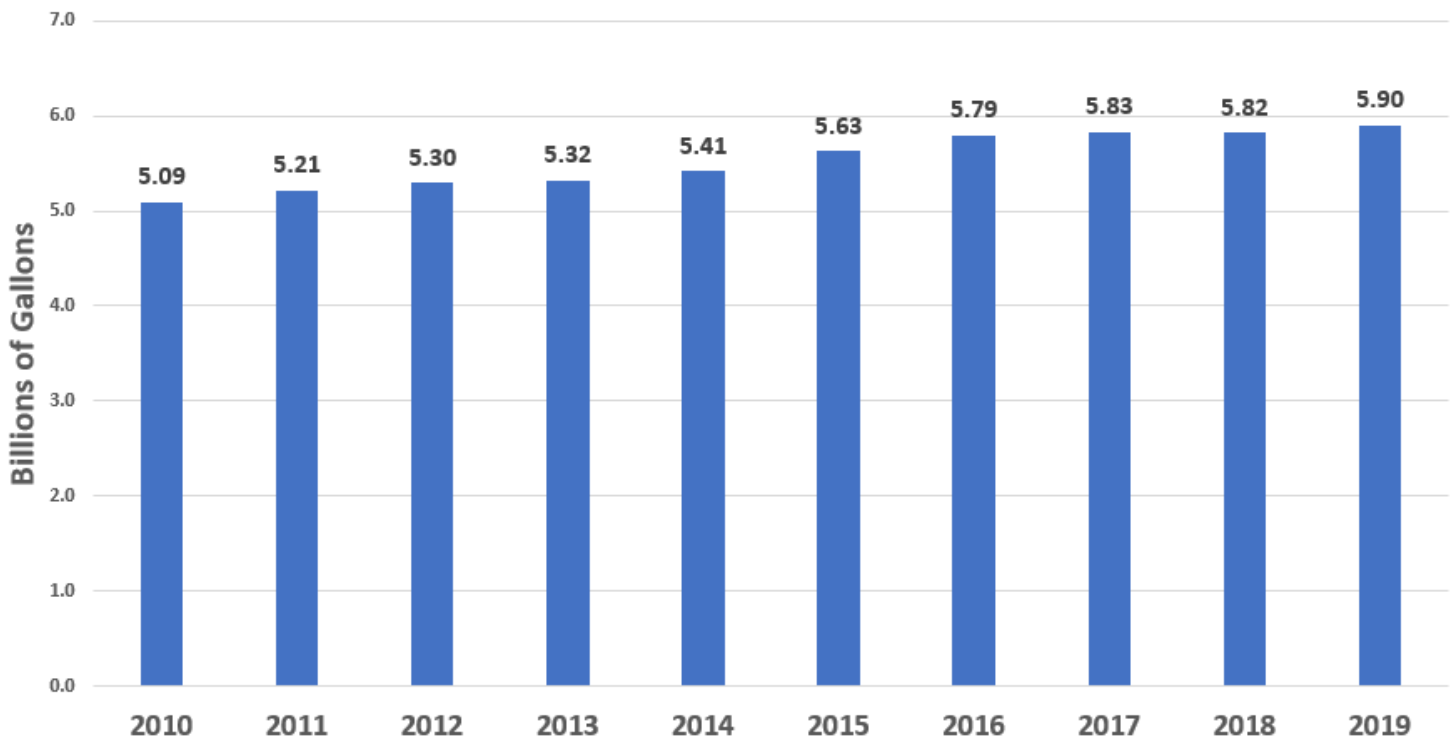
However, U.S. Energy Information Administration data shows no evidence of ethanol or biodiesel demand destruction this year versus last year (see data below). While SREs may have impacted the price of Renewable Identification Numbers (RINs), they have not impacted renewable fuels consumption. In fact, ethanol and biodiesel consumption are up this year compared to previous years.

Reallocating exempted 2018 RFS volume obligations, as the biofuel industry is encouraging the administration to do, would not be expected to impact renewable fuels consumption — but it would likely raise the cost of RINs and RFS compliance for fuel manufacturers and adversely affect small refineries that have demonstrated economic harm.

The current SRE policy works for refiners with no impact to farmers and should be maintained.

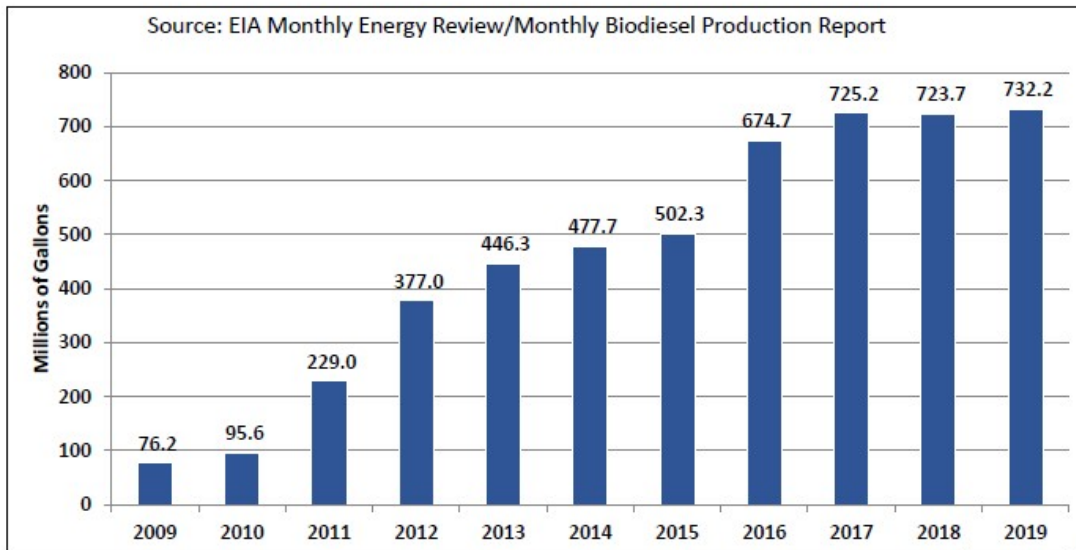
Total consumption of ethanol is up for the first five months of 2019 as compared with all prior years, **suggesting there has not been ethanol demand destruction from Small Refinery Exemptions (SREs) granted** for years prior to 2018.

# U.S. Ethanol Consumption January through May Cumulative



**Biodiesel consumption for the first 5 months of 2019 is up** versus all prior years, suggesting **there has not been biodiesel demand destruction from SREs granted** for years prior to 2018.

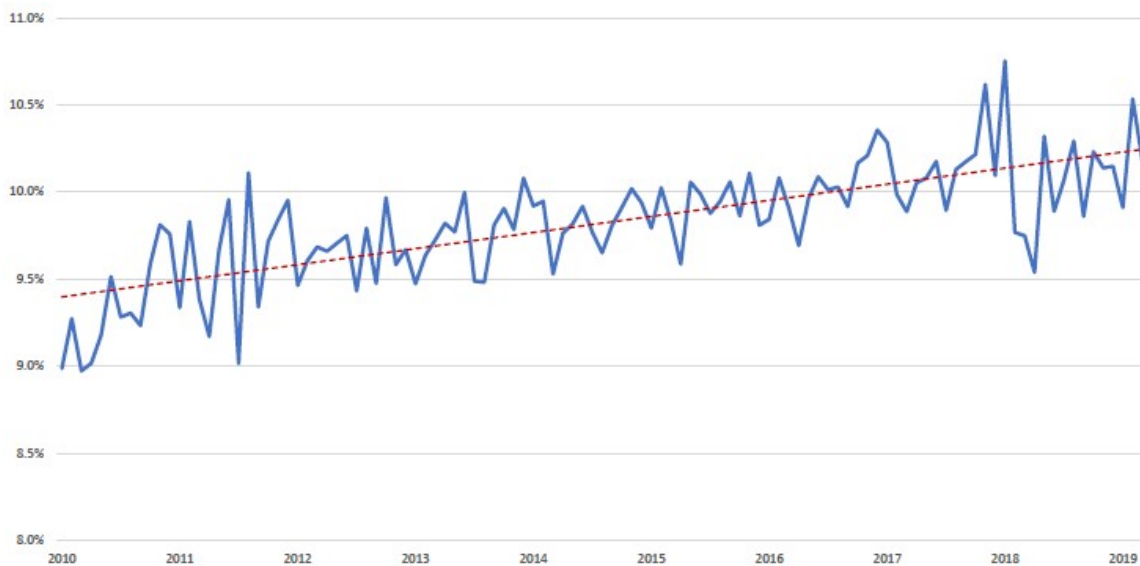
## U.S. Biodiesel Consumption January through May (cumulative)



Sources: EIA, Argus Media

A simple linear trend line applied to ethanol content of gasoline suggests it is increasing.

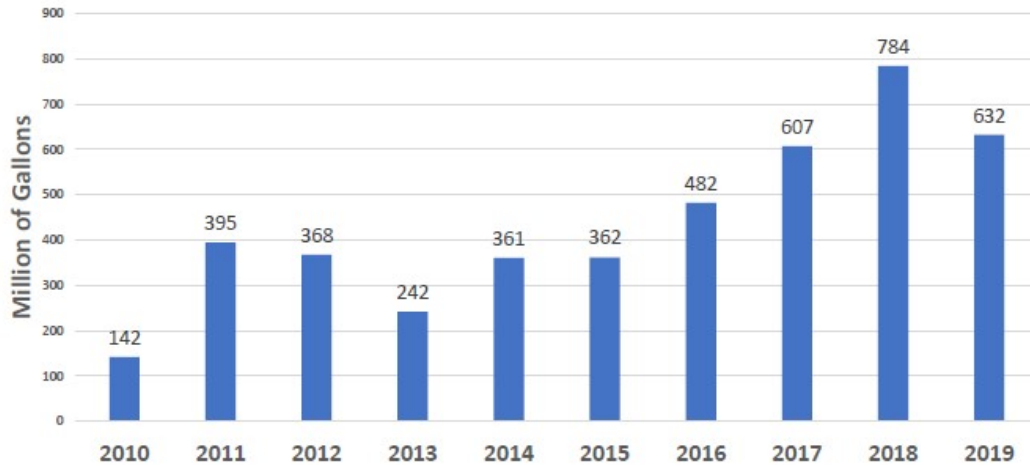
## Ethanol Blend Rate



Sources: EIA, Argus Media

**Exports of ethanol are down by about 150 million gallons as compared with 2018.**

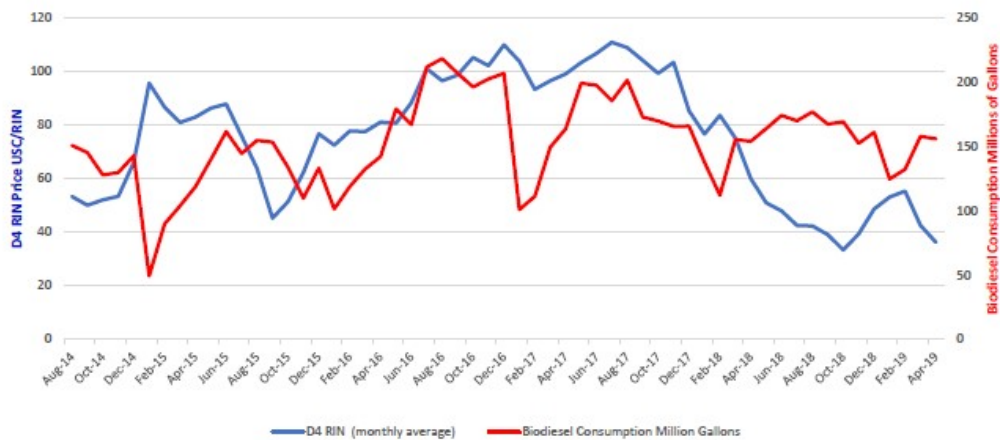
## U.S. Ethanol Exports January through May (Cumulative)



Sources: EIA, Argus Media

A comparison of current year average monthly D4 RIN price to monthly biodiesel consumption does not reveal a strong relationship. It shows periods of possible positive correlation but also periods of possible negative correlation.

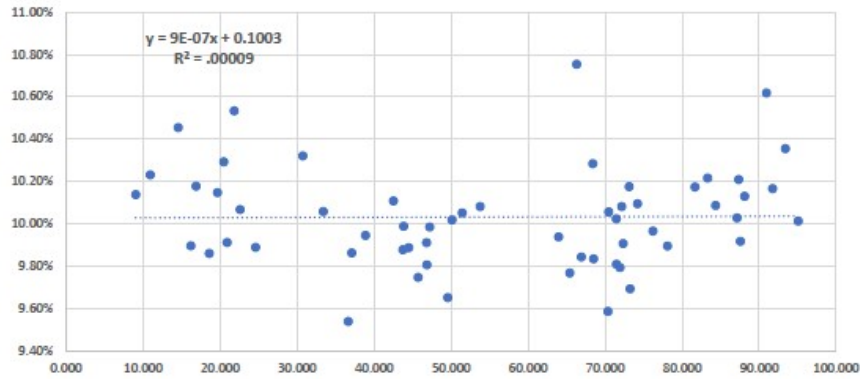
## Monthly U.S. Biodiesel Consumption Vs Monthly D4 RIN Price



Sources: EIA, Argus Media

A scatter plot of D6 RIN prices against the ethanol blend rate reveals that there is no correlation between D6 RIN prices and ethanol blending.

## Scatter Plot – Does not Suggest Correlation Current Year D6 RIN Price vs Ethanol Blend Rate



Sources: EIA, Argus Media

A regression analysis of D6 RIN price and the ethanol blend rate affirms no correlation – R squared of .00009

# Regression Analysis

SUMMARY OUTPUT: Ethanol Blend Rate a function of D6 RIN Price

Regression Statistics	
Multiple R	0.00925646
R Squared	0.00008568
Adjusted R Square	-0.017769931
Standard Error	0.00238313
Observations	58

R Squared suggests no correlation between Ethanol Blend Rate and D6 RIN Price

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	2.72528E-08	2.72528E-08	0.00479860	0.945019908
Residual	56	0.000318041	5.67931E-06		
Total	57	0.000318069			

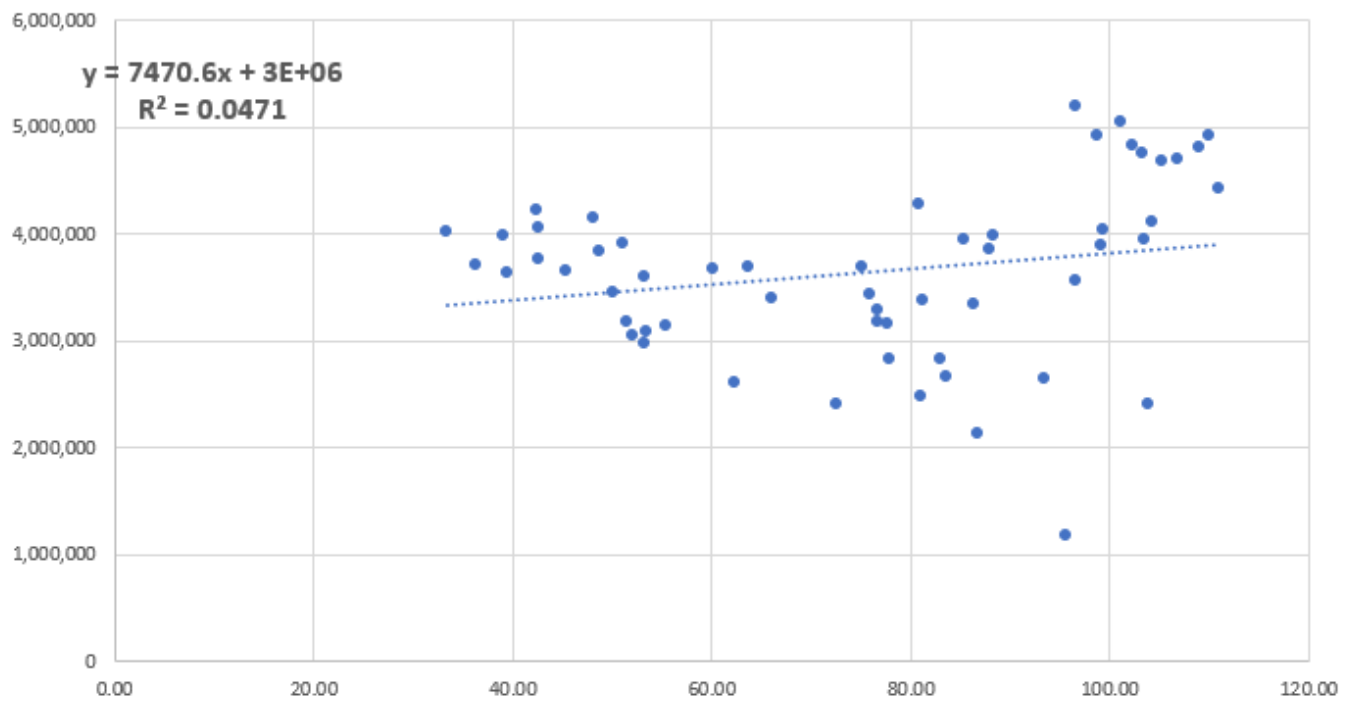
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.100278688	0.000756527	132.5513963	1.21233E-71	0.098763182	0.101794193	0.098763182	0.101794193
X Variable 1	8.63534E-07	1.24658E-05	0.069271971	0.94501990	-2.41086E-05	2.58356E-05	-2.41086E-05	2.58356E-05

R-squared (R2) is a statistical measure that represents the proportion of the variance for a dependent variable that is explained by an independent variable or variables in a regression model.

Sources: EIA, Argus Media

A scatter plot of D4 RIN price against biodiesel **consumption** does not reveal a strong relationship between D4 RIN price and biodiesel consumption.

# Biodiesel Consumption & D4 RIN Price



A regression analysis suggests an R Squared of ~.05 — almost no correlation.

# Regression Analysis

## Biodiesel Consumption & D4 RIN Price

**SUMMARY OUTPUT**

X=RIN Price Y = B100 Consumption

Regression Statistics	
Multiple R	0.217842333
R Squared	0.047455282
Adjusted R Square	0.029815565
Standard Error	23.07053805
Observations	56

R Squared suggests very minimal correlation between Biodiesel Consumption and D4 RIN Price

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	1431.88583	1431.88583	2.690251888	0.106776969
Residual	54	28741.4852	532.2497259		
Total	55	30173.37103			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%	
Intercept	53.06561583	14.29768255	3.711483707	0.000488655	24.40048822	81.73074345	24.40048822	81.73074345	
	3596994	6.27871E-06	3.82802E-06	1.640198734	0.106776969	-1.396E-06	1.39534E-05	-1.396E-06	1.39534E-05

SUMMARY OUTPUT X=Price Y=Production

Regression Statistics	
Multiple R	0.261739884
R Square	0.068507767
Adjusted R Square	0.051571544
Standard Error	23.26536562
Observations	57

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	2189.490307	2189.490307	4.04504412	0.049212282
Residual	55	29770.24806	541.2772374		
Total	56	31959.73836			

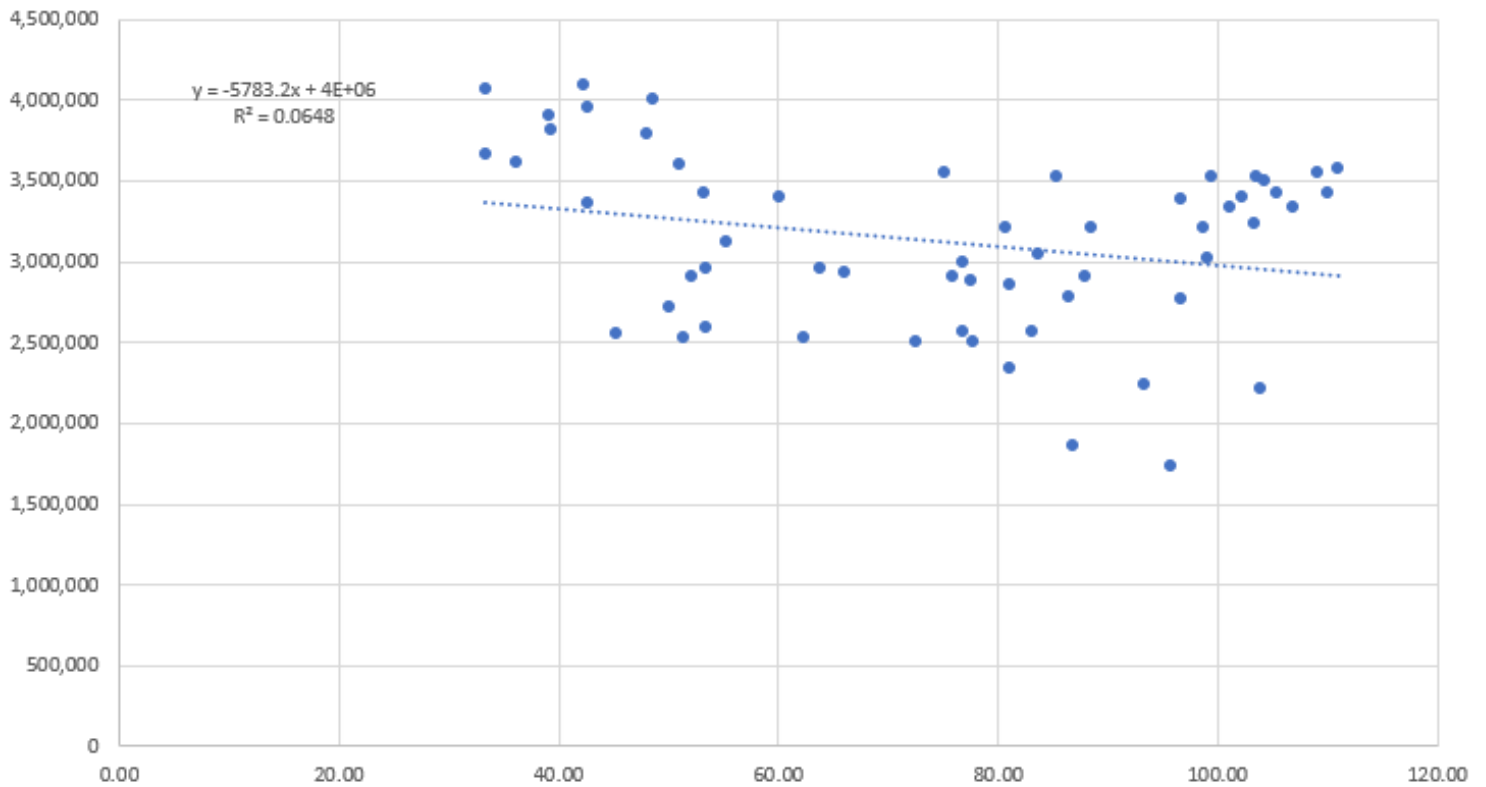
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%	
Intercept	110.9904683	18.05187563	6.148417514	9.25425E-08	74.81370112	147.1672355	74.81370112	147.1672355	
	2952380.952	-1.14479E-05	5.692E-06	-2.011229505	0.049212282	-2.28549E-05	-4.08954E-08	-2.28549E-05	-4.08954E-08

A scatter plot of D4 RIN price against biodiesel **production** does not reveal a strong or consistent correlation between D4 RIN price and biodiesel production.



# Linear Regression

## Biodiesel Production & D4 RIN Price



A regression analysis suggests an R Squared of .06 — a very minimal correlation.

# Regression Analysis

## Biodiesel Production & D4 RIN Price

### SUMMARY OUTPUT

X=Price Y=Production

#### Regression Statistics

Multiple R	0.261739884
R Square	0.068507767
Adjusted R Sq	0.051571544
Standard Error	23.26536562
Observations	57

**R Squared suggests very minimal correlation between Biodiesel Production and D4 RIN Price**

#### ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	2189.49031	2189.49031	4.04504412	0.049212282
Residual	55	29770.2481	541.277237		
Total	56	31959.7384			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	110.9904683	18.0518756	6.14841751	9.2542E-08	74.81370112	147.1672355	74.81370112	147.1672355
2952380.95	-1.14479E-05	5.692E-06	-2.0112295	0.04921228	-2.28549E-05	-4.08954E-08	-2.28549E-05	-4.08954E-08

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