APPENDIX 1

BEXAR COUNTY REASONABLE FURTHER PROGRESS (RFP) DEMONSTRATION SPREADSHEET

Bexar County Serious Area Reasonable Further Progress State Implementation Plan Revision for the 2015 Eight-Hour Ozone National Ambient Air Quality Standard

Project Number 2024-040-SIP-NR

Appendix 1 - Sheet 1
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar
Reasonable Further Progress Demonstration with MOVES4 Calculation Spreadsheet

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Appendix 1 - Sheet 2
2023 RFP Demonstration Analysis
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

2023 RFP Demonstration Analysis with MOVES4: To determine if the 2023 RFP requirements are met, the 2023 target level of emissions is compared to the 2023 controlled forecast inventory. The 2023 forecast inventory includes growth between the 2017 base year and the 2023 attainment year. The controlled forecast inventory has been reduced by subtracting the RFP control reductions from 2017 to 2023. If the 2023 controlled forecasted RFP EI is less than the 2023 RFP target level of emissions the 2023 RFP requirement is satisfied.

Line #	Description	NO_X (tpd)	VOC (tpd)
Line 1	Uncontrolled or existing controlled 2023 emissions forecast with growth	102.59	166.89
Line 2	Creditable RFP control reductions between 2017 and 2023	26.20	53.46
Line 3	Controlled 2023, RFP emissions forecast (Line 1 minus Line 2)	76.39	113.43
Line 4	Amount of NO_X reduction substitution (see Sheet 3)	0.00	0.00
Line 5	Controlled 2023, accounting for NOx substitution (Line 3 plus Line 4)	76.39	113.43
Line 6	2023 Bexar RFP target level of emissions	88.08	98.45
Line 7	Excess (+) / Shortfall (-) (Line 6 minus Line 5)	11.69	-14.98
Line 8	**Is controlled RFP EI less than target level of emissions?**	**Yes**	**No**

Notes:

1) To calculate the RFP controlled forecast for each milestone/attainment year, the total RFP creditable control strategy reductions to date (total RFP reductions from 2017 to the current RFP milestone year) are subtracted from the total uncontrolled RFP EI.

2) To calculate the final excess or shortfall for each milestone/attainment year, the controlled RFP emissions forecast is subtracted from the RFP target level of emissions. The RFP target level of emissions for all milestone years is calculated on the "Calc Targets" page.

3) Excess emissions reductions (Line 7) may be used to provide a transportation conformity safety margin. The safety margin must be less than or equal to the excess emissions reductions.

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Appendix 1 - Sheet 3
2023 RFP NOX Substitution Analysis
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

The NO_X substitution calculation includes six steps. First, calculate the percent target reduction for both VOC and NO_X by comparing the base year and target inventories. Second, calculate the percent actual reduction by comparing the base year and the actual inventory. Third, compare the percent required reduction to the percent actual reduction. If the percent actual reduction is greater than the percent required, then there are surplus reductions. If the percent actual reduction is less than the percent target, then there is a shortfall of reductions. The difference between the percent actual and the percent target reduction (when there are surplus reductions) is the amount that is available for substitution. For the fourth step, determine the percent NO_X needed for substitution. The minimum base year VOC percentage needed is equal to the percent base year shortfall in VOC plus the smallest increment possible, or 0.01. The respective NO_X percent is calculated using the NO_X base year inventory. The percent base year NO_X transfer should not exceed the percent base year NO_X surplus. The percent NO_X available to transfer is based upon the base year because the base year is the basis for the required reduction calculations. Fifth, convert the percent base year NO_X to a percent target NO_X using the percent base year NO_X from step 5 and the relative values of the base year and target NO_X inventory. The percent NO_X transfer is derived from milestone year target values because those are the values modified by NO_X transfer. The percent NO_X transfer is a percentage of the milestone year target NO_X value that is added back into the NO_X inventory and a percentage of the milestone year target VOC that is subtracted from the VOC inventory. For the sixth step, calculate the resulting tons per day (tpd) associated with the percent NO_X transfer. For NO_X, multiply the NO_X percent transfer and the NO_X milestone year target value. For VOC, multiply the percent NO_X transfer (which is the same as the percentage of the milestone year target VOC that is subtracted from the VOC inventory) and the VOC milestone year target value. The NO_X transfer amount (in tpd) is added to the NO_X actual (in tpd) inventory in the RFP demonstration calculation, and the VOC transfer amount (in tpd) is subtracted from the VOC actual (in tpd) inventory.

Line #	Description	NO_X	VOC
Line 1	2017 base year emissions (tpd)	88.08	115.82
Line 2	2023 controlled RFP EI (tpd)	76.39	113.43
Line 3	Total actual reductions for 2017 to 2023 (Line 1 minus Line 2) (tpd)	11.69	2.39
Line 4	Percent actual reductions for 2017 to 2023 (percent Line 3 is of Line 1) (%)	13.27	2.06
Line 5	2023 target RFP EI (tpd)	88.08	98.45
Line 6	2023 total target reductions for 2017 to 2023 (Line 1 minus Line 5) (tpd)	0.00	17.37
Line 7	Percent target reductions for 2017 to 2023 (percent Line 6 is of Line 1) (%)	0.00	15.00
Line 8	Percent surplus or shortfall (percent actual minus percent target, Line 4 minus Line 7) (%)	13.27	-12.93
Line 9	Percent surplus to transfer (NO_X percentage should be less than Line 8) (%)	0.00	0.00
Line 10	Convert the percent surplus to transfer to tons per day (tpd)	0.00	Only NOx Value Needed
Line 11	Calculate what percentage Line 10 is of target (this is the percentage to transfer) (%)	0.00	0.00
Line 12	**Tons equivalent to percent for transfer [Line 5 times (Line 10 divided by 100)] (tpd)**	**0.00**	**0.00**
Line 13	NO_X substitution amount okay? (Check to assure NO_X substitution does not exceed maximum available: Sheet 02, Line 9 must be greater than zero)	Okay to Substitute	Okay to Substitute

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Appendix 1 - Sheet 4
2026 RFP Demonstration Analysis
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

2026 RFP Demonstration Analysis with MOVES4: To determine if the 2026 RFP requirements are met, the 2026 target level of emissions is compared to the 2026 controlled forecast inventory. The 2026 forecast inventory includes growth between the 2017 base year and the 2026 attainment year. The controlled forecast inventory has been reduced by subtracting the RFP control reductions from 2017 to 2023 and 2023 to 2026. If the 2026 controlled forecasted RFP EI is less than the 2026 RFP target level of emissions the 2026 RFP requirement is satisfied.

Line #	Description	NO_X (tpd)	VOC (tpd)
Line 1	Uncontrolled or existing controlled 2026 emissions forecast with growth	97.15	168.27
Line 2	Creditable RFP control reductions between 2017 and 2023	26.20	53.46
Line 3	Creditable RFP control reductions between 2023 and 2026	0.76	16.42
Line 4	Controlled 2026, RFP emissions forecast (Line 1 minus Line 2 minus Line 3)	70.19	98.39
Line 5	Amount of NO_X reduction substitution (see Sheet 5)	0.00	0.00
Line 6	Controlled 2026, accounting for NOx substitution (Line 4 plus Line 5)	70.19	98.39
Line 7	2026 RFP target level of emissions	80.15	98.45
Line 8	Excess (+) / Shortfall (-) (Line 7 minus Line 6)	9.96	0.06
Line 9	**Is controlled RFP EI less than target level of emissions?**	**Yes**	**Yes**

Notes:

1) To calculate the RFP controlled forecast for each milestone/attainment year, the total RFP creditable control strategy reductions to date (total RFP reductions from 2017 to the current RFP milestone year) are subtracted from the total uncontrolled RFP EI.

2) To calculate the final excess or shortfall for each milestone/attainment year, the controlled RFP emissions forecast is subtracted from the RFP target level of emissions. The RFP target level of emissions for all milestone years is calculated on the "Calc Targets" page.

3) Excess emissions reductions (Line 8) may be used to provide a transportation conformity safety margin. The safety margin must be less than or equal to the excess emissions reductions.

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Appendix 1 - Sheet 5
2026 RFP NOX Substitution Analysis
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

The NO_X substitution calculation includes six steps. First, calculate the percent target reduction for both VOC and NO_X by comparing the base year and target inventories. Second, calculate the percent actual reduction by comparing the base year and the actual inventory. Third, compare the percent required reduction to the percent actual reduction. If the percent actual reduction is greater than the percent required, then there are surplus reductions. If the percent actual reduction is less than the percent target, then there is a shortfall of reductions. The difference between the percent actual and the percent target reduction (when there are surplus reductions) is the amount that is available for substitution. For the fourth step, determine the percent NO_X needed for substitution. The minimum base year VOC percentage needed is equal to the percent base year shortfall in VOC plus the smallest increment possible, or 0.01. The respective NO_X percent is calculated using the NO_X base year inventory. The percent base year NO_X transfer should not exceed the percent base year NO_X surplus. The percent NO_X available to transfer is based upon the base year because the base year is the basis for the required reduction calculations. Fifth, convert the percent base year NO_X to a percent target NO_X using the percent base year NO_X from step 5 and the relative values of the base year and target NO_X inventory. The percent NO_X transfer is derived from milestone year target values because those are the values modified by NO_X transfer. The percent NO_X transfer is a percentage of the milestone year target NO_X value that is added back into the NO_X inventory and a percentage of the milestone year target VOC that is subtracted from the VOC inventory. For the sixth step, calculate the resulting tons per day (tpd) associated with the percent NO_X transfer. For NO_X, multiply the NO_X percent transfer and the NO_X milestone year target value. For VOC, multiply the percent NO_X transfer (which is the same as the percentage of the milestone year target VOC that is subtracted from the VOC inventory) and the VOC milestone year target value. The NO_X transfer amount (in tpd) is added to the NO_X actual (in tpd) inventory in the RFP demonstration calculation, and the VOC transfer amount (in tpd) is subtracted from the VOC actual (in tpd) inventory.

Line #	Description	NO_X	VOC
Line 1	2017 base year emissions (tpd)	88.08	115.82
Line 2	2026 controlled RFP EI (tpd)	70.19	98.39
Line 3	Total actual reductions for 2017 to 2026 (Line 1 minus Line 2) (tpd)	17.89	17.43
Line 4	Percent actual reductions for 2017 to 2026 (percent Line 3 is of Line 1) (%)	20.31	15.05
Line 5	2026 target RFP EI (tpd)	80.15	98.45
Line 6	2026 total target reductions for 2017 to 2026 (Line 1 minus Line 5) (tpd)	7.93	17.37
Line 7	Percent target reductions for 2017 to 2026 (percent Line 6 is of Line 1) (%)	9.00	15.00
Line 8	Percent surplus or shortfall (percent actual minus percent target, Line 4 minus Line 7) (%)	11.31	0.05
Line 9	Percent surplus to transfer (NO_X percentage should be less than Line 8) (%)	0.00	0.00
Line 10	Convert the percent surplus to transfer to tons per day (tpd)	0.00	Only NOx Value Needed
Line 11	Calculate what percentage Line 10 is of target (this is the percentage to transfer) (%)	0.00	0.00
Line 12	**Tons equivalent to percent for transfer [Line 5 times (Line 10 divided by 100)] (tpd)**	**0.00**	**0.00**
Line 13	NO_X substitution amount okay? (Check to assure NO_X substitution does not exceed maximum available: Sheet 02, Line 9 must be greater than zero)	Okay to Substitute	Okay to Substitute

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Appendix 1 - Sheet 6
RFP Milestone Year (MS) Contingency Demonstration
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

Summary Contingency for MS Year

Contingency Element Description	NO_x	VOC
2017 Base Year EI	88.08	115.82
Percent for contingency calculation (total of 3%)	3.00	0.00
Required contingency reductions (BY EI x (contingency percent))	**2.64**	**0.00**
Control reductions to meet contingency requirements		
Excess reductions from 2023 RFP demonstration (not used for contingency in this SIP)		
Subtract 2023 RFP demonstration motor vehicle emissions budget (MVEB) safety margin from excess reductions from 2023 RFP demonstration (not applied if excess reductions are not used)		
2023 to 2024 emissions reductions due to federal Motor Vehicle Control Program (FMVCP), East Texas Regional Low RVP, 2017 Low Sulfur Gasoline Standard, ultra-low sulfur diesel, and on-road TxLED	6.21	-0.81
2023 to 2024 emissions reductions due to federal non-road mobile new vehicle certification standards and non-road TxLED	0.26	1.04
Total contingency reductions	**6.47**	**0.23**
Are contingency reductions greater than or equal to required contingency reductions?	**Yes**	**Yes**
Contingency Excess (+) or Shortfall (-)	**3.83**	**0.23**

If changes are made to the enter reductions page, please ensure the control reduction summary values above are consistent with the table below. The enter reductions page allows for the control reduction for a row to change. The table above adds particular rows from below.

Contingency Element Description	NO_x	VOC
Bexar County 2017 Base Year EI	88.08	115.82
Percent for contingency calculation (total of 3%)	3.00	0.00
2023 to 2024 RFP required contingency reductions (BY EI x (contingency percent))	**2.64**	**0.00**
Calculate available reductions to meet contingency requirements: add excess 2023 control reductions; subtract MVEB safety margin adjustment; and add each 2023 to 2024 control reduction		
Excess reductions from 2023 RFP demonstration (not used for contingency in this SIP)		
Subtract 2023 RFP demonstration motor vehicle emissions budget (MVEB) safety margin from excess reductions from 2023 RFP demonstration (not applied if excess reductions are not used)		
Federal Motor Vehicle Control Program (FMVCP)	6.11	-0.97
Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	0.11	0.16
Inspection and Maintenance (I/M)	0.00	0.00
On-road Texas Low Emissions Diesel (TxLED)	-0.01	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
Tier I and II locomotive NOX standards and TxLED	-0.02	0.00
This row not used for current RFP	0.00	0.00
Non-road TxLED	0.00	0.00
Non-road RFG	0.00	0.00
Small SI (Phase III)	0.03	0.14
Diesel recreational marine	0.00	0.00
Tier 4 non-road diesel engines	0.09	0.03
Large non-road SI & gasoline recreational marine	0.22	0.09
Small non-road SI engines (Phase II)	0.03	0.41
Tiers 2 and 3 non-road diesel engines	-0.03	-0.01
Heavy duty non-road engines	-0.02	0.00
Small non-road spark ignition (SI) engines (Phase I)	-0.04	0.38
Drilling Rigs: Federal Engine Standards	0.00	0.00
Drilling Rigs: TxLED	0.00	0.00
Airport reductions	0.00	0.00
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This row not used for current RFP	0.00	0.00
Chapter 117 NOX controls	0.00	0.00
Chapter 115 VOC Controls	0.00	0.00
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This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
Portable fuel containers	0.00	0.00
Chapter 117 NOX area source engine controls	0.00	0.00
Oil and gas Chapter 115 VOC controls	0.00	0.00
Other Chapter 115 VOC controls	0.00	0.00
This row not used for current RFP	0.00	0.00
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This row not used for current RFP	0.00	0.00
Total 2024 RFP contingency reductions	**6.47**	**0.23**
Contingency Excess (+) or Shortfall (-)	**3.83**	**0.23**
Are contingency reductions equal to or greater than required contingency reduction?	**Yes**	**Yes**

Notes:
1) According to FCAA, §172(c)(9), the RFP contingency plan includes required emissions reductions, calculated as a 3% emissions reduction of the base year inventory, in case of failure to demonstrate progress for a milestone or attainment year.

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Appendix 1 - Sheet 7
RFP Attainment Year (AY) and Attainment Demonstration AY Contingency Demonstration
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

Summary Contingency for Attainment Year

Contingency Element Description	NO_x	VOC
2017 Base Year EI	88.08	115.82
Percent for contingency calculation (total of 3%)	0.40	2.60
Required contingency reductions (BY EI x (contingency percent))	**0.35**	**3.01**
Control reductions to meet contingency requirements		
Excess reductions from 2026 RFP demonstration (not used for contingency in this SIP)		
Subtract 2026 RFP demonstration motor vehicle emissions budget (MVEB) safety margin from excess reductions from 2026 RFP demonstration (not applied if excess reductions are not used)		
2026 to 2027 emissions reductions due to federal Motor Vehicle Control Program (FMVCP), East Texas Regional Low RVP, 2017 Low Sulfur Gasoline Standard, ultra-low sulfur diesel, I/M, and on-road TxLED	3.98	3.60
2026 to 2027 emissions reductions due to federal non-road mobile new vehicle certification standards and non-road TxLED	0.35	1.08
Total contingency reductions	**4.33**	**4.68**
Are contingency reductions greater than or equal to required contingency reductions?	**Yes**	**Yes**
Contingency Excess (+) or Shortfall (-)	**3.98**	**1.67**

If changes are made to the enter reductions page, please ensure the control reduction summary values above are consistent with the table below. The enter reductions page allows for the control reduction for a row to change. The table above adds particular rows from below.

Contingency Element Description	NO_x	VOC
Bexar County 2017 Base Year EI	88.08	115.82
Percent for contingency calculation (total of 3%)	0.40	2.60
2026 to 2027 RFP required contingency reductions (BY EI x (contingency percent))	**0.35**	**3.01**
Calculate available reductions to meet contingency requirements: add excess 2023 control reductions; subtract MVEB safety margin adjustment; and add each 2023 to 2024 control reduction		
Excess reductions from 2026 RFP demonstration (not used for contingency in this SIP)		
Subtract 2026 RFP demonstration motor vehicle emissions budget (MVEB) safety margin from excess reductions from 2026 RFP demonstration (not applied if excess reductions are not used)		
Federal Motor Vehicle Control Program (FMVCP)	3.94	2.42
Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	-0.38	-0.16
Inspection and Maintenance (I/M)	0.42	1.34
On-road Texas Low Emissions Diesel (TxLED)	0.00	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
Tier I and II locomotive NOX standards and TxLED	-0.08	0.00
This row not used for current RFP	0.00	0.00
Non-road TxLED	0.00	0.00
Non-road RFG	0.00	0.00
Small SI (Phase III)	0.03	0.14
Diesel recreational marine	0.00	0.00
Tier 4 non-road diesel engines	0.24	0.05
Large non-road SI & gasoline recreational marine	0.24	0.09
Small non-road SI engines (Phase II)	0.03	0.42
Tiers 2 and 3 non-road diesel engines	-0.05	-0.01
Heavy duty non-road engines	-0.02	0.00
Small non-road spark ignition (SI) engines (Phase I)	-0.04	0.39
Drilling Rigs: Federal Engine Standards	0.00	0.00
Drilling Rigs: TxLED	0.00	0.00
Airport reductions	0.00	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
Chapter 117 NOX controls	0.00	0.00
Chapter 115 VOC Controls	0.00	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
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This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
Portable fuel containers	0.00	0.00
Chapter 117 NOX area source engine controls	0.00	0.00
Oil and gas Chapter 115 VOC controls	0.00	0.00
Other Chapter 115 VOC controls	0.00	0.00
This row not used for current RFP	0.00	0.00
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Total 2024 RFP contingency reductions	**4.33**	**4.68**
Contingency Excess (+) or Shortfall (-)	**3.98**	**1.67**
Are contingency reductions equal to or greater than required contingency reduction?	**Yes**	**Yes**

Notes:
1) According to FCAA, §172(c)(9), the RFP contingency plan includes required emissions reductions, calculated as a 3% emissions reduction of the base year inventory, in case of failure to demonstrate progress for a milestone or attainment year.

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Appendix 1 - Sheet 53
RFP Attainment Year (AY) and Attainment Demonstration AY Contingency Demonstration
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

Summary Contingency for Attainment Year

Contingency Element Description	NO_x	VOC
2017 Base Year EI	88.08	115.82
Percent for contingency calculation (total of 3%)	0.40	2.60
Required contingency reductions (BY EI x (contingency percent))	**0.35**	**3.01**
Control reductions to meet contingency requirements		
Cannot calculate excess reductions from 2026 attainment demonstration		
Cannot calculate 2026 attainment demonstration motor vehicle emissions budget (MVEB) safety margin.		
2026 to 2027 emissions reductions due to federal Motor Vehicle Control Program (FMVCP), East Texas Regional Low RVP, 2017 Low Sulfur Gasoline Standard, ultra-low sulfur diesel, I/M and on-road TxLED	3.98	3.60
2026 to 2027 emissions reductions due to federal non-road mobile new vehicle certification standards and non-road TxLED	0.35	1.08
Total attainment demonstration contingency reductions	**4.33**	**4.68**
Are contingency reductions greater than or equal to required contingency reductions?	**Yes**	**Yes**
Contingency Excess (+) or Shortfall (-)	**3.98**	**1.67**

If changes are made to the enter reductions page, please ensure the control reduction summary values above are consistent with the table below. The enter reductions page allows for the control reduction for a row to change. The table above adds particular rows from below.

Contingency Element Description	NO_x	VOC
Bexar County 2017 Base Year EI	88.08	115.82
Percent for contingency calculation (total of 3%)	0.40	2.60
2026 to 2027 AD required contingency reductions (BY EI x (contingency percent))	**0.35**	**3.01**
Calculate available reductions to meet contingency requirements: each 2026 to 2027 control reduction		
Cannot calculate excess reductions from 2026 attainment demonstration		
Cannot calculate 2026 attainment demonstration motor vehicle emissions budget (MVEB) safety margin		
Federal Motor Vehicle Control Program (FMVCP)	3.94	2.42
Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	-0.38	-0.16
Inspection and Maintenance (I/M)	0.42	1.34
On-road Texas Low Emissions Diesel (TxLED)	0.00	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
Tier I and II locomotive NOX standards and TxLED	-0.08	0.00
This row not used for current RFP	0.00	0.00
Non-road TxLED	0.00	0.00
Non-road RFG	0.00	0.00
Small SI (Phase III)	0.03	0.14
Diesel recreational marine	0.00	0.00
Tier 4 non-road diesel engines	0.24	0.05
Large non-road SI & gasoline recreational marine	0.24	0.09
Small non-road SI engines (Phase II)	0.03	0.42
Tiers 2 and 3 non-road diesel engines	-0.05	-0.01
Heavy duty non-road engines	-0.02	0.00
Small non-road spark ignition (SI) engines (Phase I)	-0.04	0.39
Drilling Rigs: Federal Engine Standards	0.00	0.00
Drilling Rigs: TxLED	0.00	0.00
Airport reductions	0.00	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
Chapter 117 NOX controls	0.00	0.00
Chapter 115 VOC Controls	0.00	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
Portable fuel containers	0.00	0.00
Chapter 117 NOX area source engine controls	0.00	0.00
Oil and gas Chapter 115 VOC controls	0.00	0.00
Other Chapter 115 VOC controls	0.00	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
Total 2024 RFP contingency reductions	**4.33**	**4.68**
Contingency Excess (+) or Shortfall (-)	**3.98**	**1.67**
Are contingency reductions equal to or greater than required contingency reduction?	**Yes**	**Yes**

Notes:
1) According to FCAA, §172(c)(9), the RFP contingency plan includes required emissions reductions, calculated as a 3% emissions reduction of the base year inventory, in case of failure to demonstrate progress for a milestone or attainment year.

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Appendix 1 - Sheet 8
Calculations: 2023 RFP MVEBs with MOVES4
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

Summary 2023 MVEB

Description	NO_X	VOC
2023 uncontrolled on-road emissions projection	31.20	15.36
2023 on-road mobile source RFP control reductions	4.99	2.16
2023 On-road mobile controlled inventory	26.21	13.20
Transportation conformity safety margin	0.00	0.00
Excess emissions reduction for 2023	11.69	-14.98
Is excess emissions enough for safety margin?	N/A; no safety margin	N/A; no safety margin
2023 MVEB with safety margin	**26.21**	**13.20**

Notes:
1) If there are excess RFP control reductions, a transportation conformity safety margin is allowed. The transportation conformity safety margin for this SIP revision is calculated based upon a percentage of excess emissions. Control of the safety margin options and calculation of the NOx and VOC values is done on the "Enter % RFP Cont & Conf SM" sheet of this spreadsheet. If changes are needed for the Safety Margin, go to the "Enter % RFP Cont & Conf SM" sheet.

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Appendix 1 - Sheet 9
Calculations: 2026 RFP MVEBs with MOVES4
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

Summary 2026 MVEB

Description	NO_X	VOC
2026 uncontrolled on-road emissions projection	25.24	12.66
2026 on-road mobile source RFP control reductions	3.93	1.81
2026 On-road mobile controlled inventory	21.31	10.85
Transportation conformity safety margin	2.09	0.00
Excess emissions reduction for 2026	9.96	0.06
Is excess emissions enough for safety margin?	yes	N/A; no safety margin
2026 MVEB with safety margin	**23.40**	**10.85**

Notes:

1) If there are excess RFP control reductions, a transportation conformity safety margin is allowed. The transportation conformity safety margin for this SIP revision is calculated based upon a percentage of excess emissions. Control of the safety margin options and calculation of the NOx and VOC values is done on the "Enter % RFP Cont & Conf SM" sheet of this spreadsheet. If changes are needed for the Safety Margin, go to the "Enter % RFP Cont & Conf SM" sheet.

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Appendix 1 - Sheet 10
Quantify the reductions to meet the initial 15% from 2017 through 2023 and 3% per year for 2024 through 2026
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

The Initial 15% and the 3% per Year Requirements: The FCAA mandates that an initial 15% over the first six years, plus a 3% per year starting in year seven through the attainment year, VOC reduction, net of growth, occur from the baseline year 2017 through the attainment year. The reductions must be demonstrated for the nine-year period following the baseline from 2018 through 2026. NO_X may be substituted for VOC for the counties designated nonattainment under the one-hour, 1997 eight-hour standard, and 2008 eight-hour standards from the baseline 2017 through 2023 and for any county from 2023 through 2026. The division of the percent reductions between VOC and NO_X are entered in the data entry sheet with tab name "Enter % for RFP Cont & Conf SM."

Calculation of Required 15% VOC Reductions and 3% per Year VOC and NO_X Reductions

RFP Analysis Year	Total Percent Reduction Requirement	Percent NO_X	Percent VOC	RFP BY EI NO_X (tpd)	RFP BY EI VOC (tpd)	Required Reductions NO_X (tpd)	Required Reductions VOC (tpd)
2017	N/A	N/A	N/A	88.08	115.82	N/A	N/A
2023	15.0	0.0	15.0	88.08	115.82	0.00	17.37
2026	9.0	9.0	0.0	88.08	115.82	7.93	0.00

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Appendix 1 - Sheet 11
Target Calculations with MOVES4: 2023 and 2026 RFP Target Level of NOX and VOC Emissions
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

Post-2017 target level of NO_X emissions: The NO_X target level is calculated by subtracting the NO_X reductions necessary to meet the initial 15% reduction in NO_X and/or VOC from the baseline 2017 through 2023, and the additional 9% reduction from 2023 through 2026.

RFP Post-2017 Target Level of NOX Emissions			
RFP Milestone Year	**Previous Target**	**Post-2017 Percent Reduction Requirement NO_X (tpd)**	**NO_X Target (tpd)**
2017 Base Year	N/A	N/A	88.08
2023	88.08	0.00	88.08
2026	88.08	7.93	80.15

Post-2017 target level of VOC emissions: The VOC target level is calculated by subtracting the VOC reductions necessary to meet the initial 15% reduction in NO_X and/or VOC from the baseline 2017 through 2023, and the additional 9% reduction from 2023 through 2026.

RFP Post-2017 Target Level of VOC Emissions			
RFP Milestone Year	**Previous Target**	**Post-2017 Percent Reduction Requirement VOC (tpd)**	**VOC Target (tpd)**
2017 Base Year	N/A	N/A	115.82
2023	115.82	17.37	98.45
2026	98.45	0.00	98.45

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Appendix 1 - Sheet 12
Enter RFP NO_X and VOC Percentage Reductions, Contingency Percents and Safety Margin
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

A 15% VOC-only reduction is required for Bexar County for the period from the baseline 2017 through 2023, and an additional 9% of NOx and/or VOC for 2024 through 2026. Input percentage of NO_X and VOC reductions to be used to demonstrate RFP for 2026. Only a NOx value needs to input. The VOC percent will be calculated automatically based upon the total required and the percent NO_X to be used.

RFP NO_X and VOC Percent Reductions for Milestone and Attainment Years			
RFP Milestone Year	NO_X %	VOC %	Total Percent
2023	0	15	15
2026	9	0	9

A 3% contingency is required for the RFP contingency. A 3% contingency is also required for the attainment demonstration. The contingency reductions can be from NOx or VOC. Input only the percent of the contingency reductions that will be from NOx. The VOC value will be calculated automatically as 3 minus the NOx percent.

NO_X and VOC Percent Reductions for Contingency			
Contingency Year	NO_X %	VOC %	Total Percent
Post Milestone Contingency	3	0	3
Post Attainment Contingency	0.4	2.6	3

If there are excess RFP control reductions, a transportation conformity safety margin is allowed. The safety margin for this SIP revision is calculated based upon a percentage of excess emissions. If a safety margin will be used, enter the percentage of excess VOC and NOx emissions to be used below. The safety margin amount must be less than or equal to the excess reductions after demonstrating RFP. The percentage entered must be between 0 and 100. An error message will appear if a value over 100 is entered. Adjusting the safety margin below will automatically update the MVEB calculation to include the percent of excess emissions entered. For reference, the corresponding percent of the MVEB and tons per day are provided.

RFP Milestone Year	**Pollutant**	**Conformity Safety Margin % of Excess RFP Reductions**	**Percent of On-road EI (For Reference)**	**Tons Per Day Change to On-road EI (For Reference)**
2023	NOx	0	0.00	0.00
	VOC	0	0.00	0.00
2026	NOx	21	9.82	2.09
	VOC	0	0.00	0.00

Enter the percent of the NO_X milestone year target that will be transferred to VOC. Only the NO_X percent is entered. The VOC percent is automatically equal to the NO_X percent transfer. These vales are used on Sheet 03 in the NO_X transfer calculations.

NOx Substitution	**Percent of NO_X Reductions to Transfer to Percent VOC Reductions**	**Percent of VOC Reductions Transferred from Percent NO_X Reductions**
2023	0.00	0.00
2026	0.00	0.00

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Appendix 1 - Sheet 13
Enter Airport Emissions Inventory
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

'RFP Analysis Year	Uncontrolled NO_X (tpd)	Controlled NO_X (tpd)	Total Reduction NO_X (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
2017	2.21	2.21	0.00	0.00	0.59	0.59	0.00	0.00
2023	2.31	2.23	0.07	3.24	0.63	0.61	0.02	3.03
2026	2.64	2.55	0.09	3.34	0.68	0.65	0.02	3.16

Notes:

1) The airport emissions inventory includes emissions from: aircraft; aircraft auxiliary power units (APU); and, airport ground support equipment (GSE).

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Appendix 1 - Sheet 14
Enter Area Source Emissions Inventory
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

'RFP Analysis Year	Existing Controlled Emissions (as of 2017) NOX (tpd)	Post-2017 Controlled NOX (tpd)	Total Reduction NO_X (tpd)	Percent Reduction	Existing Controlled Emissions (as of 2017) VOC (tpd)	Post-2017 Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
2017	6.83	6.83	0.00	0.00	81.62	81.62	0.00	0.00
2023	8.02	8.02	0.00	0.00	85.18	82.95	2.23	2.62
2026	7.91	7.91	0.00	0.00	85.50	69.61	15.89	18.58

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Appendix 1 - Sheet 15
Enter Biogenic Emissions Inventory
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

'RFP Analysis Year	Uncontrolled NO_X (tpd)	Controlled NO_X (tpd)	Total Reduction NO_X (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
2017	See Note 1	N/A	N/A	N/A	See Note 1	N/A	N/A	N/A

Notes:

1) Beginning with the Air Emissions Reporting Requirements (December 2008), the emissions required to be reported no longer include emissions from biogenic sources. Therefore, as of the 2017 reporting year, the comprehensive triennial emissions inventory no longer includes emissions from biogenic sources. The RFP demonstrations are based upon the emissions from anthropogenic sources. The guidance for RFP calculations shows the first step is to subtract the emissions from biogenic sources from the total base year emissions to obtain the total anthropogenic emission inventory. As of 2017, under the AERR, the base year emissions do not include biogenic sources and already represent the total anthropogenic emissions. In this case, step one of the RFP process is not needed, and the emissions from biogenic sources is unnecessary. This RFP SIP revision: uses a base year of 2017; does not require subtraction of the biogenic emissions in Step One of the RFP calculation process; and does not include quantification of emissions from biogenic sources.

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Appendix 1 - Sheet 16
Enter Commercial Marine Emissions Inventory
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

'RFP Analysis Year	Uncontrolled NO_X (tpd)	Controlled NO_X (tpd)	Total Reduction NO_X (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
2017	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2023	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2026	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:
Commercial Marine Vessel emissions are zero for Bexar County.
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Appendix 1 - Sheet 17
Enter Oil and Gas Production, Drilling Rigs, Diesel Engines Emissions Inventory
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

'RFP Analysis Year	Uncontrolled NO_X (tpd)	Controlled NO_X (tpd)	Total Reduction NO_X (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
2017	0.01	0.00	0.01	100.00	0.00	0.00	0.00	#DIV/0!
2023	0.00	0.00	0.00	#DIV/0!	0.00	0.00	0.00	#DIV/0!
2026	0.00	0.00	0.00	#DIV/0!	0.00	0.00	0.00	#DIV/0!

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Appendix 1 - Sheet 18
Enter Locomotive Emissions Inventory
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

'RFP Analysis Year	Uncontrolled NO_X (tpd)	Controlled NO_X (tpd)	Total Reduction NO_X (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
2017	2.94	2.90	0.04	1.20	0.15	0.15	0.00	0.07
2023	1.93	1.92	0.02	0.79	0.09	0.09	0.00	0.00
2026	1.63	1.55	0.08	4.73	0.07	0.07	0.00	0.00

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Appendix 1 - Sheet 19
Enter NONROAD Categories Emissions Inventory
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

'RFP Analysis Year	Uncontrolled NO_X (tpd)	Controlled NO_X (tpd)	Total Reduction NO_X (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
2017	23.16	7.79	15.38	66.38	55.74	12.10	43.64	78.30
2023	28.53	7.40	21.12	74.04	61.50	12.45	49.04	79.75
2026	29.13	6.91	22.22	76.29	65.23	13.07	52.16	79.97

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Appendix 1 - Sheet 20
Enter On-road Mobile Emissions Inventory
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

'RFP Analysis Year	Uncontrolled NO_X (tpd)	Controlled NO_X (tpd)	Total Reduction NO_X (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
2017	38.47	38.47	0.00	0.00	17.80	17.80	0.00	0.00
2023	31.20	26.21	4.99	15.99	15.36	13.20	2.16	14.06
2026	25.24	21.31	3.93	15.57	12.66	10.85	1.81	14.30

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Appendix 1 - Sheet 21
Enter Point Source Emissions Inventory
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

'RFP Analysis Year	Existing Controlled Emissions (as of 2017) NOX (tpd)	Post-2017 Controlled NOX (tpd)	Total Reduction NO_x (tpd)	Percent Reduction	Existing Controlled Emissions (as of 2017) VOC (tpd)	Post-2017 Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
2017	29.88	29.88	0.00	0.00	3.56	3.56	0.00	0.00
2023	30.60	30.60	0.00	0.00	4.13	4.13	0.00	0.00
2026	30.60	29.95	0.65	2.12	4.13	4.13	0.00	0.00

Notes:
1) The difference between existing post-2017 Controlled emissions (as of 2017) and Post-2017 Controlled VOC emissions represents noncreditable as well as creditable reductions.

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Appendix 1 - Sheet 22
Enter 2023 Control Measure Reductions
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

RFP Control Strategy Description	Source Category	Total 2017 to 2023 NO_X Emissions Reductions (tpd)	Total 2017 to 2023 VOC Emissions Reductions (tpd)	Use this control for RFP demonstration? (Yes or No)	Is this an on-road mobile control that will change the MVEB? (Yes or No)
Federal Motor Vehicle Control Program (FMVCP)	OR	205.47	61.13	No	No
Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	OR	4.96	2.16	Yes	Yes
Inspection and Maintenance (I/M)	OR	0.00	0.00	No	Yes
On-road Texas Low Emissions Diesel (TxLED)	OR	0.03	0.00	Yes	Yes
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
Tier I and II locomotive NOX standards and TxLED	NR	0.02	0.00	Yes	No
This row not used for current RFP	NR	0.00	0.00	No	No
Non-road TxLED	NR	0.00	0.00	Yes	No
Non-road RFG	NR	0.00	0.00	Yes	No
Small SI (Phase III)	NR	1.35	6.25	Yes	No
Diesel recreational marine	NR	0.00	0.00	Yes	No
Tier 4 non-road diesel engines	NR	13.91	3.28	Yes	No
Large non-road SI & gasoline recreational marine	NR	5.61	2.61	Yes	No
Small non-road SI engines (Phase II)	NR	1.48	18.70	Yes	No
Tiers 2 and 3 non-road diesel engines	NR	0.63	0.13	Yes	No
Heavy duty non-road engines	NR	0.20	0.18	Yes	No
Small non-road spark ignition (SI) engines (Phase I)	NR	-2.06	17.90	Yes	No
Drilling Rigs: Federal Engine Standards	NR	0.00	0.00	Yes	No
Drilling Rigs: TxLED	NR	0.00	0.00	Yes	No
Airport reductions	NR	0.07	0.02	Yes	No
This row not used for current RFP	NR	0.00	0.00	Yes	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
Chapter 117 NOX controls	Point	0.00	0.00	Yes	No
Chapter 115 VOC Controls	Point	0.00	0.00	No	No
This row not used for current RFP	Point	0.00	0.00	No	No
This row not used for current RFP	Point	0.00	0.00	No	No
This row not used for current RFP	Point	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
Portable fuel containers	Area	0.00	0.00	Yes	No
Chapter 117 NOX area source engine controls	Area	0.00	0.00	Yes	No
Oil and gas Chapter 115 VOC controls	Area	0.00	2.23	Yes	No
Other Chapter 115 VOC controls	Area	0.00	0.00	Yes	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
Total used for RFP		26.20	53.45		

Notes

1) "This row not used for current RFP" control rows were created only to allow for planners to easily add controls for alternative scenario analyses.

2) For point sources, the 2017 EI includes the effects of controls for rules with compliance deadlines before 2017 in Bexar County. No additional reductions beyond 2017 are claimed for these. 117 NOx rules with compliance deadlines after 2017 had compliance deadlines after 2023 but before 2026; only 2026 reductions were applied. No reductions were claimed for point sources from 115 VOC rules with compliance deadlines after 2017.

3) These Area source Chapter 117 NOX controls in Bexar County had compliance deadlines before 2017. The 2017 EI includes the effects of the control. No additional control beyond 2017 are claimed.

4) Area source Portable fuel containers controls in Bexar County had compliance deadlines before 2017. The 2017 EI includes the effects of the control. No additional control beyond 2017 are claimed.

5) Bexar County is not under federal RFG requirements, but is in the Texas Low RVP area.

6) The implementation date for the Inspection and Maintenance Program for Bexar County is no later than November 1, 2026. No emissions reductions were applied for the 2023 and 2026 RFP inventories for this program.

7) In Feb 2023, EPA released a new method to determine emissions reductions from TxLED.The new method greatly reduces TxLED emissions reductions.

8) The small SI Phase 1 rule is shown to provide a substantial reduction in VOC emissions. A slight increase in NOX emissions (small negative NOX emissions delta) is due to the engine modifications required to meet the VOC and CO standards of the Small SI Phase 1. There can also be small negative NOX emissions deltas associated with the non-road RFG control strategy due to the MOVES model's fuel effects on NOX for the RFG versus conventional gasoline formulations.

9) FMVCP Reductions are calculated solely for the purpose of determining contingency reductions for milestone and attainment years and are not applied for RFP or MVEB.

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Appendix 1 - Sheet 23
Enter 2026 Control Measure Reductions
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

RFP Control Strategy Description	Source Category	Total 2017 to 2026 NO_x Emissions Reductions (tpd)	Total 2017 to 2026 VOC Emissions Reductions (tpd)	Use this control for RFP demonstration? (Yes or No)	Is this an on-road mobile control that will change the MVEB? (Yes or No)
Federal Motor Vehicle Control Program (FMVCP)	OR	230.44	64.55	No	No
Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	OR	3.92	1.81	Yes	Yes
Inspection and Maintenance (I/M)	OR	0.00	0.00	No	Yes
On-road Texas Low Emissions Diesel (TxLED)	OR	0.01	0.00	Yes	Yes
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
Tier I and II locomotive NOX standards and TxLED	NR	0.08	0.00	Yes	No
This row not used for current RFP	NR	0.00	0.00	No	No
Non-road TxLED	NR	0.00	0.00	Yes	No
Non-road RFG	NR	0.00	0.00	Yes	No
Small SI (Phase III)	NR	1.43	6.67	Yes	No
Diesel recreational marine	NR	0.00	0.00	Yes	No
Tier 4 non-road diesel engines	NR	14.52	3.41	Yes	No
Large non-road SI & gasoline recreational marine	NR	6.28	2.87	Yes	No
Small non-road SI engines (Phase II)	NR	1.56	19.93	Yes	No
Tiers 2 and 3 non-road diesel engines	NR	0.48	0.09	Yes	No
Heavy duty non-road engines	NR	0.12	0.16	Yes	No
Small non-road spark ignition (SI) engines (Phase I)	NR	-2.18	19.02	Yes	No
Drilling Rigs: Federal Engine Standards	NR	0.00	0.00	Yes	No
Drilling Rigs: TxLED	NR	0.00	0.00	Yes	No
Airport reductions	NR	0.09	0.02	Yes	No
This row not used for current RFP	NR	0.00	0.00	Yes	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
Chapter 117 NOX controls	Point	0.65	0.00	Yes	No
Chapter 115 VOC Controls	Point	0.00	0.00	No	No
This row not used for current RFP	Point	0.00	0.00	No	No
This row not used for current RFP	Point	0.00	0.00	No	No
This row not used for current RFP	Point	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
Portable fuel containers	Area	0.00	0.00	Yes	No
Chapter 117 NOX area source engine controls	Area	0.00	0.00	Yes	No
Oil and gas Chapter 115 VOC controls	Area	0.00	1.79	Yes	No
Other Chapter 115 VOC controls	Area	0.00	14.10	Yes	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
Total used for RFP		26.96	69.88		

Notes
Please see notes for the control reductions on:
Sheet 22 Enter Reductions 2023

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Appendix 1 - Sheet 24
Enter RFP Milestone Year (MS) Contingency Measure Control Measure Reductions
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

Note: the Total Milestone 2023 to 2024 contingency reductions are the difference between the 2017 to 2024 reductions less the 2017 to 2023 reductions.
This assures that the reductions used to demonstrate RFP for 2023 are not double counted.

MS Year Control Strategy Description	Source Category	2017 to 2024 Milestone Year NO_X Emissions Reductions (tpd)	2017 to 2024 Milestone Year VOC Emissions Reductions (tpd)	Use this control for milestone contingency? (Yes or No)	Total Milestone 2023 to 2024 Contingency NO_X Emissions Reductions (tpd)	Total Milestone 2023 to 2024 Contingency VOC Emissions Reductions (tpd)
Federal Motor Vehicle Control Program (FMVCP)	OR	211.58	60.16	Yes	6.11	-0.97
Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	OR	5.07	2.32	Yes	0.11	0.16
Inspection and Maintenance (I/M)	OR	0.00	0.00	No	0	0
On-road Texas Low Emissions Diesel (TxLED)	OR	0.02	0.00	Yes	-0.01	0
This row not used for current RFP	N/A	0.00	0.00	No	0	0
This row not used for current RFP	N/A	0.00	0.00	No	0	0
Tier I and II locomotive NOX standards and TxLED	NR	0.00	0.00	Yes	-0.02	0
This row not used for current RFP	NR	0.00	0.00	No	0	0
Non-road TxLED	NR	0.00	0.00	Yes	0	0
Non-road RFG	NR	0.00	0.00	Yes	0	0
Small SI (Phase III)	NR	1.37	6.39	Yes	0.03	0.14
Diesel recreational marine	NR	0.00	0.00	Yes	0	0
Tier 4 non-road diesel engines	NR	14.00	3.31	Yes	0.09	0.03
Large non-road SI & gasoline recreational marine	NR	5.83	2.70	Yes	0.22	0.09
Small non-road SI engines (Phase II)	NR	1.51	19.12	Yes	0.03	0.41
Tiers 2 and 3 non-road diesel engines	NR	0.59	0.12	Yes	-0.03	-0.01
Heavy duty non-road engines	NR	0.18	0.18	Yes	-0.02	0
Small non-road spark ignition (SI) engines (Phase I)	NR	-2.10	18.28	Yes	-0.04	0.38
Drilling Rigs: Federal Engine Standards	NR	0.00	0.00	Yes	0	0
Drilling Rigs: TxLED	NR	0.00	0.00	Yes	0	0
Airport reductions	NR	0.00	0.00	No	0	0
This row not used for current RFP	NR	0.00	0.00	No	0	0
This row not used for current RFP	N/A	0.00	0.00	No	0	0
This row not used for current RFP	N/A	0.00	0.00	No	0	0
This row not used for current RFP	N/A	0.00	0.00	No	0	0
Chapter 117 NOX controls	Point	0.00	0.00	No	0	0
Chapter 115 VOC Controls	Point	0.00	0.00	No	0	0
This row not used for current RFP	Point	0.00	0.00	No	0	0
This row not used for current RFP	Point	0.00	0.00	No	0	0
This row not used for current RFP	Point	0.00	0.00	No	0	0
This row not used for current RFP	N/A	0.00	0.00	No	0	0
This row not used for current RFP	N/A	0.00	0.00	No	0	0
This row not used for current RFP	N/A	0.00	0.00	No	0	0
This row not used for current RFP	N/A	0.00	0.00	No	0	0
Portable fuel containers	Area	0.00	0.00	No	0	0
Chapter 117 NOX area source engine controls	Area	0.00	0.00	No	0	0
Oil and gas Chapter 115 VOC controls	Area	0.00	0.00	No	0	0
Other Chapter 115 VOC controls	Area	0.00	0.00	No	0	0
This row not used for current RFP	N/A	0.00	0.00	No	0	0
This row not used for current RFP	N/A	0.00	0.00	No	0	0
This row not used for current RFP	N/A	0.00	0.00	No	0	0
This row not used for current RFP	N/A	0.00	0.00	No	0	0
This row not used for current RFP	N/A	0.00	0.00	No	0	0
This row not used for current RFP	N/A	0.00	0.00	No	0	0
This row not used for current RFP	N/A	0.00	0.00	No	0	0
This row not used for current RFP	N/A	0.00	0.00	No	0	0
This row not used for current RFP	N/A	0.00	0.00	No	0	0
This row not used for current RFP	N/A	0.00	0.00	No	0	0
This row not used for current RFP	N/A	0.00	0.00	No	0	0
This row not used for current RFP	N/A	0.00	0.00	No	0	0
This row not used for current RFP	N/A	0.00	0.00	No	0	0
This row not used for current RFP	N/A	0.00	0.00	No	0	0
Total					6.47	0.23

Notes
1) Unspecified control rows were created only to allow for planners to easily add controls for alternative scenario analyses.
2): The proposed contingency measures are conditional and prospective (not previously implemented), which follows EPA's interpretation of recent court decisions.
3): According to FCAA, §172(c)(9), the RFP contingency plan includes required emissions reductions, calculated as a 3% emissions reduction of the base year
4) Milestone Year contingency is determined from the difference of 2017 to 2024 reduction less the 2017 to 2023 reduction for each measure

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Appendix 1 - Sheet 25
Enter RFP and Attainment Demonstration (AD) Attainment Year (AY) Contingency Measure Control Measure Reductions
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar
Note: the Total Milestone 2026 to 2027 contingency reductions are the difference between the
2017 to 2027 reductions less the 2017 to 2026 reductions.
This assures that the reductions used to demonstrate RFP for 2026 are not double counted.

MS and AY Control Strategy Description	Source Category	2017 to 2027 Attainment Year NOX Emissions Reductions (tpd)	2017 to 2027 Attainment Year VOC Emissions Reductions (tpd)	Use this control for Attainment contingency? (Yes or No)
Federal Motor Vehicle Control Program (FMVCP)	OR	234.38	66.97	Yes
Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	OR	3.54	1.65	Yes
Inspection and Maintenance (I/M)	OR	0.42	1.34	Yes
On-road Texas Low Emissions Diesel (TxLED)	OR	0.01	0.00	Yes
This row not used for current RFP	N/A	0.00	0.00	No
This row not used for current RFP	N/A	0.00	0.00	No
Tier I and II locomotive NOX standards and TxLED	NR	0.00	0.00	Yes
This row not used for current RFP	NR	0.00	0.00	No
Non-road TxLED	NR	0.00	0.00	Yes
Non-road RFG	NR	0.00	0.00	Yes
Small SI (Phase III)	NR	1.45	6.81	Yes
Diesel recreational marine	NR	0.00	0.00	Yes
Tier 4 non-road diesel engines	NR	14.76	3.46	Yes
Large non-road SI & gasoline recreational marine	NR	6.52	2.96	Yes
Small non-road SI engines (Phase II)	NR	1.59	20.36	Yes
Tiers 2 and 3 non-road diesel engines	NR	0.43	0.08	Yes
Heavy duty non-road engines	NR	0.10	0.16	Yes
Small non-road spark ignition (SI) engines (Phase I)	NR	-2.22	19.41	Yes
Drilling Rigs: Federal Engine Standards	NR	0.00	0.00	No
Drilling Rigs: TxLED	NR	0.00	0.00	No
Airport reductions	NR	0.00	0.00	No
This row not used for current RFP	NR	0.00	0.00	No
This row not used for current RFP	N/A	0.00	0.00	No
This row not used for current RFP	N/A	0.00	0.00	No
This row not used for current RFP	N/A	0.00	0.00	No
Chapter 117 NOX controls	Point	0.00	0.00	No
Chapter 115 VOC Controls	Point	0.00	0.00	No
This row not used for current RFP	Point	0.00	0.00	No
This row not used for current RFP	Point	0.00	0.00	No
This row not used for current RFP	Point	0.00	0.00	No
This row not used for current RFP	N/A	0.00	0.00	No
This row not used for current RFP	N/A	0.00	0.00	No
This row not used for current RFP	N/A	0.00	0.00	No
This row not used for current RFP	N/A	0.00	0.00	No
Portable fuel containers	Area	0.00	0.00	No
Chapter 117 NOX area source engine controls	Area	0.00	0.00	No
Oil and gas Chapter 115 VOC controls	Area	0.00	0.00	No
Other Chapter 115 VOC controls	Area	0.00	0.00	No
This row not used for current RFP	N/A	0.00	0.00	No
This row not used for current RFP	N/A	0.00	0.00	No
This row not used for current RFP	N/A	0.00	0.00	No
This row not used for current RFP	N/A	0.00	0.00	No
This row not used for current RFP	N/A	0.00	0.00	No
This row not used for current RFP	N/A	0.00	0.00	No
This row not used for current RFP	N/A	0.00	0.00	No
This row not used for current RFP	N/A	0.00	0.00	No
This row not used for current RFP	N/A	0.00	0.00	No
This row not used for current RFP	N/A	0.00	0.00	No
This row not used for current RFP	N/A	0.00	0.00	No
This row not used for current RFP	N/A	0.00	0.00	No
This row not used for current RFP	N/A	0.00	0.00	No
This row not used for current RFP	N/A	0.00	0.00	No
Total				

Notes
1) Please see notes for the control reductions on:
24 Enter Cont Reductions MS

2) Unspecified control rows were created only to allow for planners to easily add controls for alternative scenario analyses.

3) Attainment Year contingency is determined from the difference of 2017 to 2027 reduction less the 2017 to 2026 reduction for each measure.

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Appendix 1 - Sheet 26
Calculate 2017 RFP Base Year Emissions Inventory
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

The 2017 Base Year Inventory	NO_X (tons/day)	VOC (tons/day)
Point Source 2017 EI	29.88	3.56
Area Source 2017 EI	6.83	81.62
On-road mobile 2017 EI	38.47	17.80
Non-road mobile 2017 EI	12.90	12.84
Biogenic 2017 EI (see Note 1)	See Note 1	See Note 1
Total 2017 Base Year Inventory	88.08	115.82

Notes:

1) Beginning with the Air Emissions Reporting Requirements (December 2008), the emissions required to be reported no longer include emissions from biogenic sources. Therefore, as of the 2017 reporting year, the comprehensive triennial emissions inventory no longer includes emissions from biogenic sources. The RFP demonstrations are based upon the emissions from anthropogenic sources. The guidance for RFP calculations shows the first step is to subtract the emissions from biogenic sources from the total base year emissions to obtain the total anthropogenic emission inventory. As of 2017, under the AERR, the base year emissions do not include biogenic sources and already represent the total anthropogenic emissions. In this case, step one of the RFP process is not needed, and the emissions from biogenic sources is unnecessary. This RFP SIP revision: uses a base year of 2017; does not require subtraction of the biogenic emissions in Step One of the RFP calculation process; and does not include quantification of emissions from biogenic sources.

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Appendix 1 - Sheet 27
2023 Forecasted Uncontrolled or Existing Control Emissions Inventory with pre-2017 Controls
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

Uncontrolled or Existing Control EI with pre-2017 controls: These calculations add up to the total Uncontrolled or Existing Control NOX and VOC emissions (tpd) for the 2023 RFP milestone year. The totals for each source category used in these calculations were entered on enter EI sheets.

Forecasted 2023 Uncontrolled or Existing Control Emissions Inventory with pre-2017 Controls		
Emissions Description	NO_X (tpd)	VOC (tpd)
Point Source	30.60	4.13
Area Source	8.02	85.18
On-Road Mobile Source	31.20	15.36
Non-Road Mobile Source	32.77	62.22
Total	102.59	166.89

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Appendix 1 - Sheet 28
2026 Forecasted Uncontrolled or Existing Control Emissions Inventory with pre-2017 Controls
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

Uncontrolled or Existing Control EI with pre-2017 controls: These calculations add up to the total Uncontrolled or Existing Control NOX and VOC emissions (tpd) for the 2026 RFP milestone year. The totals for each source category used in these calculations were entered on enter EI sheets.

Forecasted 2026 Uncontrolled or Existing Control Emissions Inventory with pre-2017 Controls		
Emissions Description	NO_X (tpd)	VOC (tpd)
Point Source	30.60	4.13
Area Source	7.91	85.50
On-Road Mobile Source	25.24	12.66
Non-Road Mobile Source	33.40	65.98
Total	97.15	168.27

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Appendix 1 - Sheet 29
Calculations: 2017 to 2023 Control Measures Reductions
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

Explanation: The control strategy name, control reduction amount, status of inclusion of the control in the RFP calculations, and whether or not the control is for on-road mobile sources were all input into the Enter Reductions 2023 sheet. The reduction is the reduction that is creditable from each control between 2017 and 2023. If the control has been turned off by inputting a "No" in the "Use this control for 2023 RFP demonstration?" column, the spreadsheet will put a zero in for the reduction for that control on this sheet, even if a positive value for the control was input into the Enter Reductions 2023 sheet. If it was intended to have a positive reduction for the control but there is a zero, go back to the Enter Reductions 2023 Sheet and change the No to a Yes indicating that the control will be used for RFP demonstration.

Creditable Reductions Control Strategy	Source Category	Total 2017 to 2023 NOX Emissions Reductions (tpd)	Total 2017 to 2023 VOC Emissions Reductions (tpd)	Use this control for RFP demonstration? (Yes or No)	Is this an on-road mobile control that will change the MVEB? (Yes or No)
Federal Motor Vehicle Control Program (FMVCP)	OR	0.00	0.00	No	No
Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	OR	4.96	2.16	Yes	Yes
Inspection and Maintenance (I/M)	OR	0.00	0.00	No	Yes
On-road Texas Low Emissions Diesel (TxLED)	OR	0.03	0.00	Yes	Yes
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
Tier I and II locomotive NOX standards and TxLED	NR	0.02	0.00	Yes	No
This row not used for current RFP	NR	0.00	0.00	No	No
Non-road TxLED	NR	0.00	0.00	Yes	No
Non-road RFG	NR	0.00	0.00	Yes	No
Small SI (Phase III)	NR	1.35	6.25	Yes	No
Diesel recreational marine	NR	0.00	0.00	Yes	No
Tier 4 non-road diesel engines	NR	13.91	3.28	Yes	No
Large non-road SI & gasoline recreational marine	NR	5.61	2.61	Yes	No
Small non-road SI engines (Phase II)	NR	1.48	18.70	Yes	No
Tiers 2 and 3 non-road diesel engines	NR	0.63	0.13	Yes	No
Heavy duty non-road engines	NR	0.20	0.18	Yes	No
Small non-road spark ignition (SI) engines (Phase I)	NR	-2.06	17.90	Yes	No
Drilling Rigs: Federal Engine Standards	NR	0.00	0.00	Yes	No
Drilling Rigs: TxLED	NR	0.00	0.00	Yes	No
Airport reductions	NR	0.07	0.02	Yes	No
This row not used for current RFP	NR	0.00	0.00	Yes	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
Chapter 117 NOX controls	Point	0.00	0.00	Yes	No
Chapter 115 VOC Controls	Point	0.00	0.00	No	No
This row not used for current RFP	Point	0.00	0.00	No	No
This row not used for current RFP	Point	0.00	0.00	No	No
This row not used for current RFP	Point	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
Portable fuel containers	Area	0.00	0.00	Yes	No
Chapter 117 NOX area source engine controls	Area	0.00	0.00	Yes	No
Oil and gas Chapter 115 VOC controls	Area	0.00	2.23	Yes	No
Other Chapter 115 VOC controls	Area	0.00	0.00	Yes	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
Total 2023 RFP Control Reductions		26.20	53.46		

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Appendix 1 - Sheet 30
Calculations: 2023 to 2026 Control Measures Reductions
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

Explanation: The control strategy name, control reduction amount, status of inclusion of the control in the RFP calculations, and whether or not the control is for on-road mobile sources were all input into the Enter Reductions 2026 sheet. The reduction is the reduction that is creditable from each control between 2023 and 2026. If the control has been turned off by inputting a "No" in the "Use this control for 2026 RFP demonstration?" column, the spreadsheet will put a zero in for the reduction for that control on this sheet, even if a positive value for the control was input into the Enter Reductions 2026 sheet. If it was intended to have a positive reduction for the control but there is a zero, go back to the Enter Reductions 2026 Sheet and change the No to a Yes indicating that the control will be used for RFP demonstration.

Creditable Reductions Control Strategy	Source Category	Total 2023 to 2026 NOX Emissions Reductions (tpd)	Total 2023 to 2026 VOC Emissions Reductions (tpd)	Use this control for RFP demonstration? (Yes or No)	Is this an on-road mobile control that will change the MVEB? (Yes or No)
Federal Motor Vehicle Control Program (FMVCP)	OR	0.00	0.00	No	No
Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	OR	-1.04	-0.35	Yes	Yes
Inspection and Maintenance (I/M)	OR	0.00	0.00	No	Yes
On-road Texas Low Emissions Diesel (TxLED)	OR	-0.02	0.00	Yes	Yes
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
Tier I and II locomotive NOX standards and TxLED	NR	0.06	0.00	Yes	No
This row not used for current RFP	NR	0.00	0.00	No	No
Non-road TxLED	NR	0.00	0.00	Yes	No
Non-road RFG	NR	0.00	0.00	Yes	No
Small SI (Phase III)	NR	0.08	0.42	Yes	No
Diesel recreational marine	NR	0.00	0.00	Yes	No
Tier 4 non-road diesel engines	NR	0.61	0.13	Yes	No
Large non-road SI & gasoline recreational marine	NR	0.67	0.26	Yes	No
Small non-road SI engines (Phase II)	NR	0.08	1.23	Yes	No
Tiers 2 and 3 non-road diesel engines	NR	-0.15	-0.03	Yes	No
Heavy duty non-road engines	NR	-0.08	-0.02	Yes	No
Small non-road spark ignition (SI) engines (Phase I)	NR	-0.12	1.12	Yes	No
Drilling Rigs: Federal Engine Standards	NR	0.00	0.00	Yes	No
Drilling Rigs: TxLED	NR	0.00	0.00	Yes	No
Airport reductions	NR	0.02	0.00	Yes	No
This row not used for current RFP	NR	0.00	0.00	Yes	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
Chapter 117 NOX controls	Point	0.65	0.00	Yes	No
Chapter 115 VOC Controls	Point	0.00	0.00	No	No
This row not used for current RFP	Point	0.00	0.00	No	No
This row not used for current RFP	Point	0.00	0.00	No	No
This row not used for current RFP	Point	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
Portable fuel containers	Area	0.00	0.00	Yes	No
Chapter 117 NOX area source engine controls	Area	0.00	0.00	Yes	No
Oil and gas Chapter 115 VOC controls	Area	0.00	-0.44	Yes	No
Other Chapter 115 VOC controls	Area	0.00	14.10	Yes	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
Total 2026 RFP Control Reductions		0.76	16.42		

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Appendix 1 - Sheet 31
Calculations: 2017 to 2023 On-road Control Measures Reductions
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

Creditable Reductions Control Strategy	Control Used for RFP Demonstration?	On-road Mobile Source Control?	Total 2017 - 2023 'On-road Mobile NO_x Emissions Reductions (tpd)	Total 2017 - 2023 'On-road Mobile VOC Emissions Reductions (tpd)
Federal Motor Vehicle Control Program (FMVCP)	No	No	0.00	0.00
Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	Yes	Yes	4.96	2.16
Inspection and Maintenance (I/M)	No	Yes	0.00	0.00
On-road Texas Low Emissions Diesel (TxLED)	Yes	Yes	0.03	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
Tier I and II locomotive NOX standards and TxLED	Yes	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
Non-road TxLED	Yes	No	0.00	0.00
Non-road RFG	Yes	No	0.00	0.00
Small SI (Phase III)	Yes	No	0.00	0.00
Diesel recreational marine	Yes	No	0.00	0.00
Tier 4 non-road diesel engines	Yes	No	0.00	0.00
Large non-road SI & gasoline recreational marine	Yes	No	0.00	0.00
Small non-road SI engines (Phase II)	Yes	No	0.00	0.00
Tiers 2 and 3 non-road diesel engines	Yes	No	0.00	0.00
Heavy duty non-road engines	Yes	No	0.00	0.00
Small non-road spark ignition (SI) engines (Phase I)	Yes	No	0.00	0.00
Drilling Rigs: Federal Engine Standards	Yes	No	0.00	0.00
Drilling Rigs: TxLED	Yes	No	0.00	0.00
Airport reductions	Yes	No	0.00	0.00
This row not used for current RFP	Yes	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
Chapter 117 NOX controls	Yes	No	0.00	0.00
Chapter 115 VOC Controls	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
Portable fuel containers	Yes	No	0.00	0.00
Chapter 117 NOX area source engine controls	Yes	No	0.00	0.00
Oil and gas Chapter 115 VOC controls	Yes	No	0.00	0.00
Other Chapter 115 VOC controls	Yes	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
Total On-road Mobile Source RFP Control Reductions			**4.99**	**2.16**

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Appendix 1 - Sheet 32
Calculations: 2017 to 2026 On-road Control Measures Reductions
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

Creditable Reductions Control Strategy	Control Used for RFP Demonstration?	On-road Mobile Source Control?	Total 2017 - 2026 'On-road Mobile NO_x Emissions Reductions (tpd)	Total 2017 - 2026 'On-road Mobile VOC Emissions Reductions (tpd)
Federal Motor Vehicle Control Program (FMVCP)	No	No	0.00	0.00
Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	Yes	Yes	3.92	1.81
Inspection and Maintenance (I/M)	No	Yes	0.00	0.00
On-road Texas Low Emissions Diesel (TxLED)	Yes	Yes	0.01	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
Tier I and II locomotive NOX standards and TxLED	Yes	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
Non-road TxLED	Yes	No	0.00	0.00
Non-road RFG	Yes	No	0.00	0.00
Small SI (Phase III)	Yes	No	0.00	0.00
Diesel recreational marine	Yes	No	0.00	0.00
Tier 4 non-road diesel engines	Yes	No	0.00	0.00
Large non-road SI & gasoline recreational marine	Yes	No	0.00	0.00
Small non-road SI engines (Phase II)	Yes	No	0.00	0.00
Tiers 2 and 3 non-road diesel engines	Yes	No	0.00	0.00
Heavy duty non-road engines	Yes	No	0.00	0.00
Small non-road spark ignition (SI) engines (Phase I)	Yes	No	0.00	0.00
Drilling Rigs: Federal Engine Standards	Yes	No	0.00	0.00
Drilling Rigs: TxLED	Yes	No	0.00	0.00
Airport reductions	Yes	No	0.00	0.00
This row not used for current RFP	Yes	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
Chapter 117 NOX controls	Yes	No	0.00	0.00
Chapter 115 VOC Controls	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
Portable fuel containers	Yes	No	0.00	0.00
Chapter 117 NOX area source engine controls	Yes	No	0.00	0.00
Oil and gas Chapter 115 VOC controls	Yes	No	0.00	0.00
Other Chapter 115 VOC controls	Yes	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
Total On-road Mobile Source RFP Control Reductions			**3.93**	**1.81**

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Appendix 1 - Sheet 33
Summary Sheet: Uncontrolled or Existing Control NOX Emissions Inventory
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

2017 Uncontrolled or Existing Control NOX (tons per day)

RFP Analysis Year	Bexar
Area Sources	6.83
Non-Road Mobile Sources	28.32
On-Road Mobile Sources	38.47
Point Sources	29.88
Total	103.50

2023 Uncontrolled or Existing Control NOX (tons per day)

RFP Analysis Year	Bexar
Area Sources	8.02
Non-Road Mobile Sources	32.77
On-Road Mobile Sources	31.20
Point Sources	30.60
Total	102.59

2026 Uncontrolled or Existing Control NOX (tons per day)

RFP Analysis Year	Bexar
Area Sources	7.91
Non-Road Mobile Sources	33.40
On-Road Mobile Sources	25.24
Point Sources	30.60
Total	97.15

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Appendix 1 - Sheet 34
Summary Sheet: Controlled or Post-2017 Controlled NOX Emissions Inventory
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

Controlled or Post-2017 Controlled NOX for 2017 (tons per day)

RFP Analysis Year	Bexar
Area Sources	6.83
Non-Road Mobile Sources	12.90
On-Road Mobile Sources	38.47
Point Sources	29.88
Total	88.08

Controlled or Post-2017 Controlled NOX for 2023 (tons per day)

RFP Analysis Year	Bexar
Area Sources	8.02
Non-Road Mobile Sources	11.55
On-Road Mobile Sources	26.21
Point Sources	30.60
Total	76.38

Controlled or Post-2017 Controlled NOX for 2026 (tons per day)

RFP Analysis Year	Bexar
Area Sources	7.91
Non-Road Mobile Sources	11.01
On-Road Mobile Sources	21.31
Point Sources	29.95
Total	70.18

Note: The controlled inventory shown here includes all controls. The controlled RFP inventory may not include all controls and may therefore be a higher value than shown here.

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Appendix 1 - Sheet 35
Summary Sheet: Uncontrolled or Existing Control VOC Emissions Inventory
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

2017 Uncontrolled or Existing Control VOC (tons per day)

RFP Analysis Year	Bexar
Area Sources	81.62
Non-Road Mobile Sources	56.48
On-Road Mobile Sources	17.80
Point Sources	3.56
Total	159.46

2023 Uncontrolled or Existing Control VOC (tons per day)

RFP Analysis Year	Bexar
Area Sources	85.18
Non-Road Mobile Sources	62.22
On-Road Mobile Sources	15.36
Point Sources	4.13
Total	166.89

2026 Uncontrolled or Existing Control VOC (tons per day)

RFP Analysis Year	Bexar
Area Sources	85.50
Non-Road Mobile Sources	65.98
On-Road Mobile Sources	12.66
Point Sources	4.13
Total	168.27

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Appendix 1 - Sheet 36
Summary Sheet: Controlled or Post-2017 Controlled VOC Emissions Inventory
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

Controlled or Post-2017 Controlled VOC for 2017 (tons per day)

RFP Analysis Year	Bexar
Area Sources	81.62
Non-Road Mobile Sources	12.84
On-Road Mobile Sources	17.80
Point Sources	3.56
Total	115.82

Controlled or Post-2017 Controlled VOC for 2023 (tons per day)

RFP Analysis Year	Bexar
Area Sources	82.95
Non-Road Mobile Sources	13.15
On-Road Mobile Sources	13.20
Point Sources	4.13
Total	113.43

Controlled or Post-2017 Controlled VOC for 2026 (tons per day)

RFP Analysis Year	Bexar
Area Sources	69.61
Non-Road Mobile Sources	13.79
On-Road Mobile Sources	10.85
Point Sources	4.13
Total	98.38

Note: The controlled inventory shown here includes all controls. The controlled RFP inventory may not include all controls and may therefore be a higher value than shown here.

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Appendix 1 - Sheet 37
Summary Sheet: 2017 Emissions Inventory By Category
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

2017 (tons per day)

Emissions Inventory Source	Uncontrolled or Existing Control NOx	Controlled or Post-2017 Controlled NOx	Uncontrolled or Existing Control VOC	Controlled or Post-2017 Controlled VOC
Area Sources	6.83	6.83	81.62	81.62
Non-Road Mobile Sources	28.32	12.90	56.48	12.84
On-Road Mobile Sources	38.47	38.47	17.80	17.80
Point Sources	29.88	29.88	3.56	3.56
Total	103.50	88.08	159.46	115.82

Note: The controlled inventory shown here includes all controls. The controlled RFP inventory may not include all controls and may therefore be a higher value than shown here.

Table 2 2: Bexar RFP Summary of the 2017 Base Year Average Summer Weekday NOX and VO

Emissions Inventory Source	Uncontrolled or Existing Controlled NO_X	Controlled NO_X	Uncontrolled or Existing VOC	Controlled VOC
Area Sources	6.83	6.83	81.62	81.62
Non-Road Mobile Sources	28.32	12.90	56.48	12.84
On-Road Mobile Sources	38.47	38.47	17.80	17.80
Point Sources	29.88	29.88	3.56	3.56
Total of All Sources	103.50	88.08	159.46	115.82

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Appendix 1 - Sheet 38
Summary Sheet: 2023 Emissions Inventory By Category
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

2023 (tons per day)

Emissons Inventory Source	Uncontrolled or Existing Control NOx	Controlled or Post-2017 Controlled NOx	Uncontrolled or Existing Control VOC	Controlled or Post-2017 Controlled VOC
Area Sources	8.02	8.02	85.18	82.95
Non-Road Mobile Sources	32.77	11.55	62.22	13.15
On-Road Mobile Sources	31.20	26.21	15.36	13.20
Point Sources	30.60	30.60	4.13	4.13
Total	102.59	76.38	166.89	113.43

Note: The controlled inventory shown here includes all controls. The controlled RFP inventory may not include all controls and may therefore be a higher value than shown here.

Table 2-3: Bexar RFP Summary of the 2023 Milestone Year Average Summer Weekday NOX and VOC

Emissions Inventory Source	Uncontrolled or Existing Controlled NO_X	Controlled NO_X	Uncontrolled or Existing VOC	Controlled VOC
Area Sources	8.02	8.02	85.18	82.95
Non-Road Mobile Sources	32.77	11.55	62.22	13.15
On-Road Mobile Sources	31.20	26.21	15.36	13.20
Point Sources	30.60	30.60	4.13	4.13
Total of All Sources	102.59	76.38	166.89	113.43

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Appendix 1 - Sheet 39
Summary Sheet: 2026 Emissions Inventory By Category
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

2026 (tons per day)

Emissons Inventory Source	Uncontrolled or Existing Control NOx	Controlled or Post-2017 Controlled NOx	Uncontrolled or Existing Control VOC	Controlled or Post-2017 Controlled VOC
Area Sources	7.91	7.91	85.50	69.61
Non-Road Mobile Sources	33.40	11.01	65.98	13.79
On-Road Mobile Sources	25.24	21.31	12.66	10.85
Point Sources	30.60	29.95	4.13	4.13
Total	97.15	70.18	168.27	98.38

Note: The controlled inventory shown here includes all controls. The controlled RFP inventory may not include all controls and may therefore be a higher value than shown here.

Table 2-4: Bexar RFP Summary of the 2026 Attainment Year Average Summer Weekday NOX and VC

Emissions Inventory Source	Uncontrolled or Existing Controlled NO_X	Controlled NO_X	Uncontrolled or Existing VOC	Controlled VOC
Area Sources	7.91	7.91	85.50	69.61
Non-Road Mobile Sources	33.40	11.01	65.98	13.79
On-Road Mobile Sources	25.24	21.31	12.66	10.85
Point Sources	30.60	29.95	4.13	4.13
Total of All Sources	97.15	70.18	168.27	98.38

Appendix 1 - Sheet 40
Summary Total Non-Road Emissions Inventory
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

Total Non-road: All Non-road Categories

'RFP Analysis Year	Uncontrolled NO_X (tpd)	Controlled NO_X (tpd)	Total Reduction NO_X (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
2017	28.32	12.90	15.42	54.45	56.48	12.84	43.64	77.27
2023	32.77	11.55	21.22	64.75	62.22	13.15	49.07	78.87
2026	33.400	11.010	22.390	67.0	65.980	13.790	52.190	79.1

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Appendix 1 - Sheet 41
Summary Sheet: 2017 Non-Road Summary by Category
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

2017 (tons per day)

Emissons Inventory Source	Uncontrolled NOx	Controlled NOx	Uncontrolled VOC	Controlled VOC
Airport	2.21	2.21	0.59	0.59
Locomotive	2.94	2.90	0.15	0.15
Marine	0.00	0.00	0.00	0.00
NONROAD Model	23.16	7.79	55.74	12.10
Drilling Rigs	0.01	0.00	0.00	0.00
Total ALM	5.15	5.11	0.74	0.74
ALM Plus Drilling Rigs (Off-road)	5.16	5.11	0.74	0.74
Total All	28.32	12.90	56.48	12.84

Note: The controlled inventory shown here includes all controls. The controlled RFP inventory may not include all controls and may therefore be a higher value than shown here.

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Appendix 1 - Sheet 42
Summary Sheet: 2023 Non-Road Summary by Category
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

2023 (tons per day)

Emissons Inventory Source	Uncontrolled NOx	Controlled NOx	Uncontrolled VOC	Controlled VOC
Airport	2.31	2.23	0.63	0.61
Locomotive	1.93	1.92	0.09	0.09
Marine	0.00	0.00	0.00	0.00
NONROAD Model	28.53	7.40	61.50	12.45
Drilling Rigs	0.00	0.00	0.00	0.00
Total ALM	4.24	4.15	0.72	0.70
ALM Plus Drilling Rigs (Off-road)	4.24	4.15	0.72	0.70
Total All	32.77	11.55	62.22	13.15

Note: The controlled inventory shown here includes all controls. The controlled RFP inventory may not include all controls and may therefore be a higher value than shown here.

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Appendix 1 - Sheet 43
Summary Sheet: 2026 Non-Road Summary by Category
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

2026 (tons per day)

Emissons Inventory Source	Uncontrolled NOx	Controlled NOx	Uncontrolled VOC	Controlled VOC
Airport	2.64	2.55	0.68	0.65
Locomotive	1.63	1.55	0.07	0.07
Marine	0.00	0.00	0.00	0.00
NONROAD Model	29.13	6.91	65.23	13.07
Drilling Rigs	0.00	0.00	0.00	0.00
Total ALM	4.27	4.10	0.75	0.72
ALM Plus Drilling Rigs (Off-road)	4.27	4.10	0.75	0.72
Total All	33.40	11.01	65.98	13.79

Note: The controlled inventory shown here includes all controls. The controlled RFP inventory may not include all controls and may therefore be a higher value than shown here.

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Appendix 1 - Sheet 44
Summary Sheet: 2017, 2023, and 2026 On-Road Summaries
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

Bexar County RFP Ozone Season Weekday On-Road Mobile Source NOx Emissions

RFP Analysis Year Inventory	Uncontrolled NOX (tons per day)	Controlled NOX (tons per day)
2017 Base Year	38.47	38.47
2023 Analyis Year	31.20	26.21
2026 Attainment Year	25.24	21.31

Bexar County RFP Ozone Season Weekday On-Road Mobile Source VOC Emissions

RFP Analysis Year Inventory	Uncontrolled VOC (tons per day)	Controlled VOC (tons per day)
2017 Base Year	17.80	17.80
2023 Analyis Year	15.36	13.20
2026 Attainment Year	12.66	10.85

2023 Bexar County RFP Ozone Season Weekday On-Road Mobile Source NOx and VOC Emissions and Control Strategy Reductions

RFP Analysis Year and Inventory of On-Road Mobile Emissions Inventory Strategies	NOx (tons per day)	VOC (tons per day)
2023 Uncontrolled Inventory	31.20	15.36
Federal Motor Vehicle Control Program (FMVCP)	0.00	0.00
Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	4.96	2.16
Inspection and Maintenance (I/M)	0.00	0.00
On-road Texas Low Emissions Diesel (TxLED)	0.03	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
2023 Uncontrolled Inventory less RFP reductions	**26.21**	**13.20**
Compare to 2023 Controlled Inventory	26.21	13.20

2026 Bexar County RFP Ozone Season Weekday On-Road Mobile Source NOX and VOC Emissions and Control Strategy Reductions

RFP Analysis Year and Inventory of On-Road Mobile Emissions Inventory Strategies	NOx (tons per day)	VOC (tons per day)
2026 Uncontrolled Inventory	25.24	12.66
Federal Motor Vehicle Control Program (FMVCP)	0.00	0.00
Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	3.92	1.81
Inspection and Maintenance (I/M)	0.00	0.00
On-road Texas Low Emissions Diesel (TxLED)	0.01	0.00
This row not used for current RFP	0.00	0.00
This row not used for current RFP	0.00	0.00
2026 Uncontrolled Inventory less RFP reductions	**21.31**	**10.85**
Compare to 2026 Controlled Inventory	21.31	10.85

Note: On-road emissions inventories developed using MOVES4 include FMVCP emissions reductions; however, MOVES4 does not include an option for quantifying FMVCP reductions separately from the overall emissions inventory. For continuity with previous state implementation plan (SIP) revisions, FMVCP is still included as a control strategy, but the reductions are set to zero.

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Appendix 1 - Sheet 45
Summary Sheet: Calculation Process for 2023 Target Levels of Emissions
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

Calculation Process for 2023 Bexar RFP Target Levels

Line	Description	NO_X	VOC
Line 1	2017 base year emissions inventory	88.08	115.82
Line 2	Percent of NO_X (PN) and VOC (PV) to meet 15% reduction requirement from 2018 through 2023 (PN plus PV = 15)	0.00%	15.00%
Line 3	Calculate the total NO_X and VOC reduction requirement between 2018 and 2023 **(Line 1 Multiplied by Line 2)**	0.00	17.37
Line 4	Calculate the 2023 target level of emissions **(Line 1 minus Line 3)**	88.08	98.45

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Appendix 1 - Sheet 46
Summary Sheet: Calculation Process for 2026 Target Levels of Emissions
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

Calculation Process for 2026 Bexar RFP Target Levels

Line	Description	NO_X	VOC
Line 1	2017 base year emissions inventory	88.08	115.82
Line 2	Percent of NO_X (PN) and VOC (PV) to meet 15% reduction requirement from 2017 through 2023 (PN plus PV = 15)	0.00%	15.00%
Line 3	Percent of NO_X (PN) and VOC (PV) to meet 9% reduction requirement from 2024 through 2026 (PN plus PV = 9)	9.00%	0.00%
Line 4	Total percent of NOX (PN) and VOC (PV) to meet the 2026 reduction requirement (Line 2+ Line 3)	9.00%	15.00%
Line 5	Calculate the total NO_X and VOC reduction requirement between 2018 and 2026 **(Line 1 Multiplied by Line 4)**	7.93	17.37
Line 6	Calculate the 2026 target level of emissions **(Line 1 minus Line 5)**	80.15	98.45

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Appendix 1 - Sheet 47
Summary Sheet: 2017 to 2023 Total RFP Emissions Reductions
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar
Table 4-1:

Control Strategy Description	Source Category	NO_X Reductions	VOC Reductions
Federal Motor Vehicle Control Program (FMVCP)	OR	0.00	0.00
Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	OR	4.96	2.16
Inspection and Maintenance (I/M)	OR	0.00	0.00
On-road Texas Low Emissions Diesel (TxLED)	OR	0.03	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
Tier I and II locomotive NOX standards and TxLED	NR	0.02	0.00
This row not used for current RFP	NR	0.00	0.00
Non-road TxLED	NR	0.00	0.00
Non-road RFG	NR	0.00	0.00
Small SI (Phase III)	NR	1.35	6.25
Diesel recreational marine	NR	0.00	0.00
Tier 4 non-road diesel engines	NR	13.91	3.28
Large non-road SI & gasoline recreational marine	NR	5.61	2.61
Small non-road SI engines (Phase II)	NR	1.48	18.70
Tiers 2 and 3 non-road diesel engines	NR	0.63	0.13
Heavy duty non-road engines	NR	0.20	0.18
Small non-road spark ignition (SI) engines (Phase I)	NR	-2.06	17.90
Drilling Rigs: Federal Engine Standards	NR	0.00	0.00
Drilling Rigs: TxLED	NR	0.00	0.00
Airport reductions	NR	0.07	0.02
This row not used for current RFP	NR	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
Chapter 117 NOX controls	Point	0.00	0.00
Chapter 115 VOC Controls	Point	0.00	0.00
This row not used for current RFP	Point	0.00	0.00
This row not used for current RFP	Point	0.00	0.00
This row not used for current RFP	Point	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
Portable fuel containers	Area	0.00	0.00
Chapter 117 NOX area source engine controls	Area	0.00	0.00
Oil and gas Chapter 115 VOC controls	Area	0.00	2.23
Other Chapter 115 VOC controls	Area	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
Total:		26.20	53.46

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Appendix 1 - Sheet 48
Summary Sheet: 2017 to 2026 Total RFP Emissions Reductions
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar
Table 4-2:

Control Strategy Description	Source Category	NO_X Reductions	VOC Reductions
Federal Motor Vehicle Control Program (FMVCP)	OR	0.00	0.00
Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	OR	3.92	1.81
Inspection and Maintenance (I/M)	OR	0.00	0.00
On-road Texas Low Emissions Diesel (TxLED)	OR	0.01	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
Tier I and II locomotive NOX standards and TxLED	NR	0.08	0.00
This row not used for current RFP	NR	0.00	0.00
Non-road TxLED	NR	0.00	0.00
Non-road RFG	NR	0.00	0.00
Small SI (Phase III)	NR	1.43	6.67
Diesel recreational marine	NR	0.00	0.00
Tier 4 non-road diesel engines	NR	14.52	3.41
Large non-road SI & gasoline recreational marine	NR	6.28	2.87
Small non-road SI engines (Phase II)	NR	1.56	19.93
Tiers 2 and 3 non-road diesel engines	NR	0.48	0.10
Heavy duty non-road engines	NR	0.12	0.16
Small non-road spark ignition (SI) engines (Phase I)	NR	-2.18	19.02
Drilling Rigs: Federal Engine Standards	NR	0.00	0.00
Drilling Rigs: TxLED	NR	0.00	0.00
Airport reductions	NR	0.09	0.02
This row not used for current RFP	NR	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
Chapter 117 NOX controls	Point	0.65	0.00
Chapter 115 VOC Controls	Point	0.00	0.00
This row not used for current RFP	Point	0.00	0.00
This row not used for current RFP	Point	0.00	0.00
This row not used for current RFP	Point	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
Portable fuel containers	Area	0.00	0.00
Chapter 117 NOX area source engine controls	Area	0.00	0.00
Oil and gas Chapter 115 VOC controls	Area	0.00	1.79
Other Chapter 115 VOC controls	Area	0.00	14.10
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
This row not used for current RFP	N/A	0.00	0.00
Total:		26.96	69.88

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Appendix 1 - Sheet 49
Summary Sheet: Point Source RFP Emissions Reductions
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

2023

Emissions	NO_X	VOC
Existing Controlled Emissions (as of 2017)	30.60	4.13
RFP Point Source Reductions	0.00	0.00
RFP Post-2017 Controlled Emissions	30.60	4.13

2026

Emissions	NO_X	VOC
Existing Controlled Emissions (as of 2017)	30.60	4.13
RFP Point Source Reductions	0.65	0.00
RFP Post-2017 Controlled Emissions	29.95	4.13

Note: The post-controlled point source inventory maybe lower than the existing controlled emissions subtracting the point source reductions due to reductions that are not quantifiable.

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Appendix 1 - Sheet 50
Summary Sheet: Area Source RFP Emissions Reductions
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

2023

Emissions	NO_X	VOC
Existing Controlled Emissions (as of 2017)	8.02	85.18
RFP Area Source Reductions	0.00	2.23
RFP Post-2017 Controlled Emissions	8.02	82.95

2026

Emissions	NO_X	VOC
Existing Controlled Emissions (as of 2017)	7.91	85.50
RFP Area Source Reductions	0.00	15.89
RFP Post-2017 Controlled Emissions	7.91	69.61

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Appendix 1 - Sheet 51

Summary Sheet: Non-Road Source RFP Emissions Reductions

Bexar County 2015 NAAQS Ozone Nonattainment Area

One Nonattainment County: Bexar

2023 Reductions

Emissions	NO_X	VOC
Uncontrolled	32.77	62.21
RFP Non-Road Source Reductions	21.21	49.07
RFP Post-2017 Controlled Emissions	11.56	13.14

2026 Reductions

Emissions	NO_X	VOC
Uncontrolled	33.40	65.97
RFP Non-Road Source Reductions	22.38	52.18
RFP Post-2017 Controlled Emissions	11.02	13.79

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Appendix 1 - Sheet 52
Summary Sheet: On-Road Source RFP Emissions Reductions
Bexar County 2015 NAAQS Ozone Nonattainment Area
One Nonattainment County: Bexar

2023

Emissions	NO_X	VOC
Uncontrolled	31.20	15.36
RFP On-Road Source Reductions	4.99	2.16
RFP Post-2017 Controlled Emissions	26.21	13.20

2026

Emissions	NOX	VOC
Uncontrolled	25.24	12.66
RFP On-Road Source Reductions	3.93	1.81
RFP Post-2017 Controlled Emissions	21.31	10.85

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