

# Potential Cost of Nonattainment in the San Antonio Metropolitan Area

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The content, finding, opinions and conclusions are the work of the authors and do not necessarily represent findings, opinions or conclusions of the TCEQ.

# Purpose of Study

Purpose: Project the costs of marginal and moderate nonattainment in the eight counties of the San Antonio Metropolitan Area.

This presentation is derived from a draft report that still has open comments from AACOG and TCEQ staff. Cost estimates are subject to change until a final version is issued.

# Overview of Key Assumptions and Methodologies

- Assumptions:
  - Costs for marginal nonattainment measured over 27 year period and costs for moderate nonattainment measured over 30 year period.
  - All dollar values in 2016 dollars.
  - All 8 counties in the MSA are assumed to be designated nonattainment.
  - In order to distribute some costs across counties, the proportion of employment in the county relative to the total MSA population as projected for 2018 was used.
- Methodologies:
  - Costs are estimated in terms of reduced gross regional product
  - IMPLAN input-output model: includes multiplier effects; assumes constant returns to scale and no price changes; an industry will always produce the same mix of commodities regardless of the level of production

## Summary of Annual Potential Costs of Nonattainment in the San Antonio MSA (Millions 2016 \$)

	Marginal		Moderate	
	<i>Low Estimate</i>	<i>High Estimate</i>	<i>Low Estimate</i>	<i>High Estimate</i>
Lost Manufacturing Company Expansion/Relocation*	\$25.917	\$925.445	\$25.917	\$925.445
Cost of Permitting	\$0.894	\$2.234	\$0.894	\$2.234
Cost of Project Delays	\$52.817	\$52.817	\$52.817	\$52.817
TERP	\$0.318	\$0.318	\$0.318	\$0.318
Costs Associated with Commute Solutions	\$0.546	\$0.546	\$1.109	\$1.109
Reductions in GRP due to Inspection Fees			\$112.533	\$181.032
Lost GRP due to Road Construction Delays	\$21.133	\$21.133	\$28.530	\$28.530
Costs of Point Source NOX Reduction	\$15.674	\$16.563	\$15.467	\$16.267
<b>Total</b>	<b>\$117.299</b>	<b>\$1,019.056</b>	<b>\$237.585</b>	<b>\$1,207.752</b>

\*Cost estimates could be subject to overestimation due to uncertainties of the impacts on manufacturing

NOTE: Numbers do not include costs to small businesses and other control strategies that may be implemented beyond what is estimated in this analysis.

## Summary of Annual Potential Hard Costs of Nonattainment for Bexar County (Millions 2016 \$)

	Marginal		Moderate	
	<i>Low Estimate</i>	<i>High Estimate</i>	<i>Low Estimate</i>	<i>High Estimate</i>
Cost of Permitting	\$0.470	\$1.175	\$0.470	\$1.175
Cost of Project Delays	\$33.224	\$33.224	\$33.224	\$33.224
Reductions in GRP due to Inspection Fees	\$0.000	\$0.000	\$89.681	\$144.270
Lost GRP due to Road Construction Delays	\$16.985	\$16.985	\$22.929	\$22.929
<b>Total</b>	<b>\$50.679</b>	<b>\$51.384</b>	<b>\$146.304</b>	<b>\$201.598</b>

NOTE: Numbers do not include costs to small businesses and other control strategies that may be implemented beyond what is estimated in this analysis.

**Summary of Potential Total Annual Costs of Nonattainment by County  
(Millions 2016 \$)**

<i>County</i>	<b>Marginal</b>		<b>Moderate</b>	
	<i>Low Estimate</i>	<i>High Estimate</i>	<i>Low Estimate</i>	<i>High Estimate</i>
Atascosa	\$3.021	\$22.066	\$5.405	\$25.894
Bandera	\$0.302	\$8.553	\$1.338	\$10.216
Bexar	\$79.600	\$797.611	\$175.567	\$948.121
Comal	\$14.659	\$61.940	\$21.564	\$72.357
Guadalupe	\$15.019	\$72.452	\$22.334	\$84.129
Kendall	\$0.843	\$14.974	\$2.698	\$17.904
Medina	\$2.505	\$21.805	\$4.910	\$25.667
Wilson	\$1.350	\$19.655	\$3.769	\$23.464
<b>MSA</b>	<b>\$117.299</b>	<b>\$1,019.056</b>	<b>\$237.585</b>	<b>\$1,207.752</b>

NOTE: Numbers do not include costs to small businesses and other control strategies that may be implemented beyond what is estimated in this analysis.

Questions?