

**KEEPING IT CLEAN: OUR AIR, OUR HEALTH**  
**OPPORTUNITIES FOR SAN ANTONIO LEADERSHIP IN SUSTAINABLE DEVELOPMENT**



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## KEEPING IT CLEAN: OUR AIR, OUR HEALTH

What are the two most critical elements for a healthy life? That's easy – clean air and clean water; resources that many of us take for granted – particularly those who live and work in the San Antonio region. Historically, San Antonians have enjoyed some of the cleanest air and water of any populated area in the world. Big Deal? Most people in the world would say it's beyond a "Big Deal" - it is a matter of life or death.

The World Health Organization reports four out of every 10 people in the world do not have clean water to drink. More than 3.5 million people per year die as a result of water related diseases, making it the leading cause

of disease and death around the world.

Air pollution, including particulate matter and ozone, is a major environmental health problem affecting everyone in developed and developing countries alike. It is estimated to cause 1.3 million deaths worldwide per year. Because air pollution travels the globe, our challenge here is part of a much larger challenge.



It is clear that asthma has suddenly exploded as a major and growing health problem in recent decades. In the U.S. alone, 22 million people now suffer from asthma, including 7 million children. That's an increase of 75 percent among all Americans, and a stunning 160 percent increase among children in just 14 years. It is now the most chronic disabling disease of childhood.

So it should be obvious that maintaining our clean water and clean air is imperative to good health. We should also become more aware that the economic health of our community can be seriously damaged if we don't effectively manage our air quality. Our hope today is to raise awareness of the emerging problems, challenges and solutions relative to the quality of air in our region. We have been given much, it is our responsibility to protect it.

### MIKE BURKE

Chair, Founder - San Antonio Clean Technology Forum

Note: We are most blessed to have in our community Peter Bella, with his unique and very impressive capabilities. Please read his message in our booklet.

## CLEAN AIR FORUM AGENDA KEEPING IT CLEAN: OUR AIR, OUR HEALTH

July 11, 2013 at Rackspace Castle

### EXHIBITS

10:00 am - 2:00 pm

### REGISTRATION

10:00 am - 11:15 am

11:15 am All Audience Seated

### PROGRAM

11:30 am - 1:30 pm

11:30 am Opening Remarks - Judge Nelson Wolff

Moderator: Robert Rivard - Director, Rivard Report

11:45 am Panel Discussion Begins

1:30 pm Adjourn, 2:00 pm Exhibits Close

### PANELISTS

Doyle Beneby, CEO-CPS Energy

Dr. Thomas Schlenker, Director-SA Metropolitan Health District

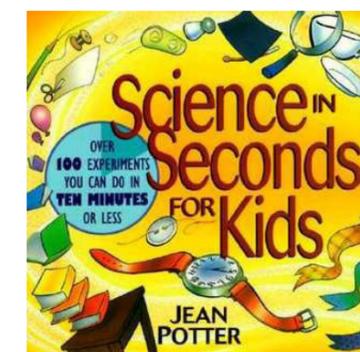
Elena Craft, Health Scientist-Environmental Defense Fund

Peter Bella, Natural Resources Director-AACOG

These five star books will be donated to 15 libraries throughout South Texas in the name of our Clean Air Forum's Speakers, Participants, and Moderator.



*The Prepper's Pocket Guide: 101 Easy Things You Can Do to Ready Your Home for a Disaster*  
Bernie Carr and Evan Wondolowski



*Science in Seconds for Kids*  
Jean Potter



### PETER BELLA

Natural Resources Director, AACOG

Peter Bella is currently the Natural Resource Director for the Alamo Area Council of Governments (AACOG) in San Antonio. He has been with AACOG for nearly fifteen years. As Natural Resource Director he provides strategic planning targeting air quality improvements within the 12-county AACOG region of south central Texas. He is also a member of the AACOG Air Improvement Resources (AIR) Technical Committee. The AIR Committee is responsible for local air quality policy development in the AACOG/Greater San Antonio region as required to meet federal standards for ground-level ozone. In addition, he serves on the San Antonio River Authority's San Antonio River Basin Environmental Advisory Committee and is a member of the Mission Verde Alliance / San

Antonio Clean Technology Forum Advisory Board. He also serves on the Urban and Regional Planning Advisory Council to the College of Architecture at UTSA, is a Board member of imagineSanAntonio. He received a BS in Physics, Magna Cum Laude and a MS in Mathematics, both from the University of Texas at San Antonio.

### DOYLE BENEBY

CEO, CPS Energy

Doyle Beneby is President and Chief Executive Officer of CPS Energy, the largest municipal electric and gas utility in the nation. A veteran of the energy industry with over 25 years of experience, Beneby has expertise in many facets of the electric & gas utility industry including strategic planning, generation & delivery operations and asset acquisition.

Since joining CPS Energy in August of 2010, Beneby has lead the transition to a lower carbon intense generation fleet, utilizing clean coal, natural gas and nuclear combined with targeted renewables such as wind and solar. He has also brokered partnerships with multiple clean technology companies bringing thousands of jobs to the Greater San Antonio area, increasing research and development and enhancing educational investments.

Beneby is a graduate of Montana Technical College, earning a Bachelor's degree in engineering and a Master's in Business Administration from the University of Miami.



### ELENA CRAFT

Health Scientist, Environmental Defense Fund

Dr. Craft's expertise is on air toxics issues, specifically reducing criteria and greenhouse gas emissions from the energy and transportation sectors. She has worked to reduce emissions around port areas and environmental justice communities and to reduce toxics from shale gas drilling practices. She has been an integral strategist in designing and initiating comprehensive clean air measures, as well as in developing standards to measure environmental performance. Her efforts led to the creation of clean truck programs in Houston and other ports around the Southeast. Dr. Craft was appointed to serve a two-year term on the Environmental Protection Agency's SAB Environmental Justice Technical Review Panel, and the University of Texas' School of Public Health recognized her as an adjunct assistant professor of Epidemiology, Human Genetics, and Environmental Sciences.

Dr. Craft works on projects that increase efficiency from goods movement operations. Her strategy includes forming partnerships with retailers and stakeholders, with the ultimate goal of incorporating clean air improvements into a sustainable business model. Dr. Craft advocates for policies that increase efficiency, reduce toxic compounds exposure, and improve health.

Education: BS degree, UNC Chapel Hill; MS degree in toxicology, NC State University; and PhD, Duke University.



### ROBERT RIVARD

Director, The Rivard Report

Robert Rivard retired as editor of the San Antonio Express-News (1997-2011). He recently formed The Arsenal Group, which offers strategic communications consulting services, and publishes The Rivard Report, a media website focused on the progressive growth and development of San Antonio. He is joined by Monika Maeckle, his wife, a retired media executive with Business Wire, a Berkshire Hathaway company. Rivard has moderated a number of public policy forums in San Antonio, many of them broadcast on public television throughout the state.

Rivard is a political science graduate from the University of Texas at San Antonio, and a graduate of Northwestern University's Executive Management Program. He was selected by UTSA, as

"Alumnus of the Year" in September 2000. He's been married for 31 years to Monika Maeckle. They have two sons, Nick, pursuing his graduate degree in urban design at Harvard, and Alex, a senior at Texas State University in San Marcos.

### DR. THOMAS SCHLENKER

Director, SA Metropolitan Health District

Thomas Schlenker is health department director and health authority for San Antonio and Bexar County. Dr. Schlenker received his BA from Antioch College, medical degree from Northwestern, Masters in Public Health from Harvard and trained in pediatrics at Children's Hospital of Wisconsin. He has practiced general and hospital-based pediatrics in Wisconsin, led health departments in Madison, Milwaukee and Salt Lake City and worked in Latin America, including one year as Senior Fulbright Fellow at the National Institute of Public Health in Cuernavaca, Mexico. Subjects of Dr. Schlenker's published research include the epidemiology of measles, hepatitis A, immunizations, childhood lead poisoning, infant mortality and how to influence physician practice. Areas of concentration since becoming director of Metro Health in San Antonio in 2011 have been teen pregnancy, obesity, syphilis and neighborhood health strategies.



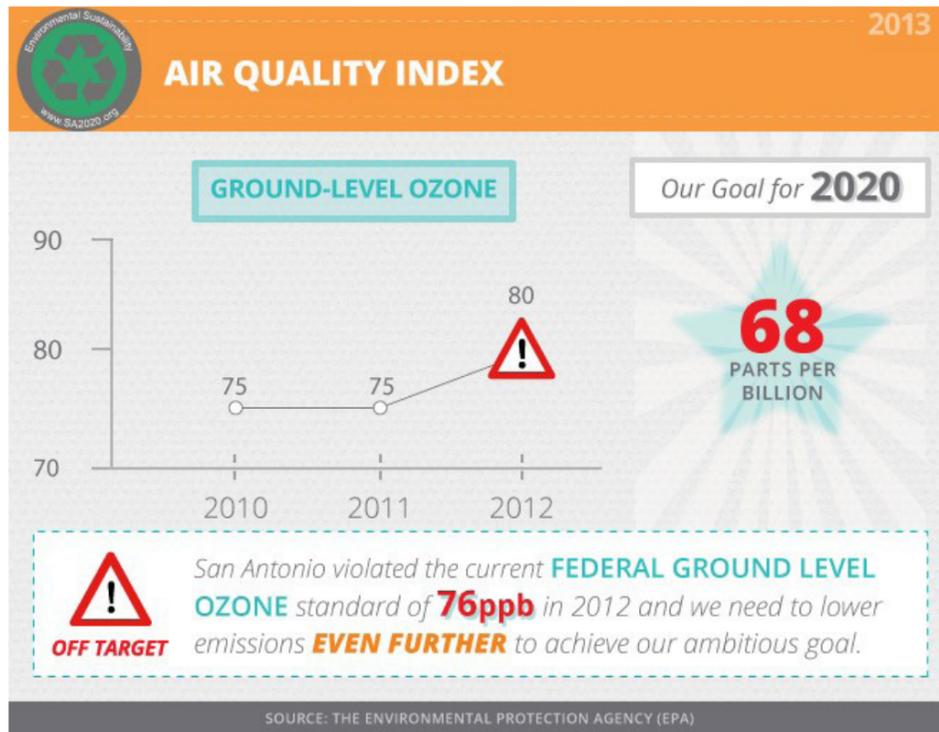
### NELSON W WOLFF

Bexar County Judge

Nelson William Wolff was appointed Bexar County Judge in 2001 and has since been elected to the position in November 2002, 2006, and again in 2010. He is the first County Judge who also served as Mayor of San Antonio in more than 100 years.

Judge Wolff has worked to promote greater economic development in Bexar County, including the successful efforts to lure Toyota Motor Manufacturing and the PGA Village to locate here. In 2007, He led the Commissioners Court approval of a \$500 million, 10-year regional flood control program. He has overseen the construction of up to 13 amateur sports facilities, a dedicated performing arts venue, improvements to the San Antonio River and future improvements to the AT&T Center and a new trauma center.

As Mayor of San Antonio, Wolff oversaw the establishment of the University of Texas at San Antonio Downtown Campus; construction of the Nelson W. Wolff Municipal Stadium, home to the San Antonio Missions.



**ARE YOU AT RISK FROM AIR POLLUTION?**

131.8 MILLION PEOPLE IN U.S. LIVE WHERE AIR GETS AN **F**

24.8 MILLION PEOPLE IN U.S. LIVE WHERE AIR GETS ALL **F**

WHAT CAN BREATHING AIR POLLUTION DO TO YOU?

- PREMATURE DEATH
- ASTHMA ATTACK
- HEART ATTACK, STROKE
- CARDIOVASCULAR HARM
- LUNG CANCER
- LOW BIRTH WEIGHT
- INFANT MORTALITY
- WHEEZING, COUGHING
- SHORTNESS OF BREATH
- SUSCEPTIBILITY OF INFECTION
- LUNG TISSUE REDNESS, SWELLING

AMERICAN LUNG ASSOCIATION

For 14 years, the American Lung Association has analyzed data from air quality monitors to compile the State of the Air report. The more you learn about the air you breathe, the more you can protect your health and take steps to make our air cleaner and healthier.

**If you live in Bexar County, the air you breathe may be putting your health at risk.**



Visit [StateOfTheAir.org](http://StateOfTheAir.org) for more information.

For 14 years, the American Lung Association has analyzed data from air quality monitors to compile the State of the Air report. The more you learn about the air you breathe, the more you can protect your health and take steps to make our air cleaner and healthier.

The State of the Air 2013 report finds that Bexar County has cut year-round particle pollution (soot) levels since the 2012 report, in keeping with a trend seen across the nation. Despite improvements in annual particle pollution, Bexar County has experienced more unhealthy days of high ozone (smog.) Overall, "State of the Air 2013" shows that the air quality in San Antonio, and nationwide, continues the long-term trend to much healthier air.

"The air in San Antonio is certainly cleaner than when we started the 'State of the Air' report 14 years ago," said Sara Dreiling, Chief Executive Officer of the American Lung Association, Plains-Gulf Region. "Even though San Antonio experienced increases in unhealthy days of high ozone, the air quality is still better compared to a decade ago. But the work is not done, and we must set stronger health standards for pollutants and cleanup sources of pollution in San Antonio to protect the health of our citizens."

The American Lung Association in Texas urges the public to join the fight for clean air and to learn how to protect themselves and their families from air pollution by visiting [www.stateoftheair.org](http://www.stateoftheair.org).

Cutting air pollution through the Clean Air Act will prevent at least

**230,000 DEATHS** and save **\$2,000,000,000,000** annually by 2020.

**ENVIRONMENTAL DEFENSE FUND**

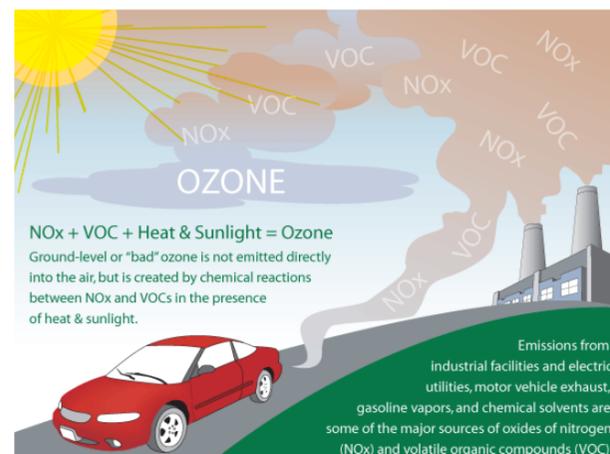
Ground-level ozone is the main component of smog and the single most widespread air pollutant in the country. Ozone is not emitted directly into the air, but rather created through a chemical reaction involving nitrogen oxides (NOx) and volatile organic compounds (VOCs) that combine in the presence of heat and sunlight. Currently, two in five individuals in the U.S. live in an area that has unhealthy levels of either ozone or particulate matter. Ozone is linked to premature deaths, increased asthma attacks and breathing problems, as well as increased emergency room and hospital admissions. This pollutant poses an especially serious risk to children, seniors and those with lung diseases, like asthma and bronchitis. In Texas, there are 23 counties that currently fail to meet the federal health-based air quality standard for ozone, and other counties such as Bexar, that are likely to be designated as non-attainment in the near future.

In collaboration with a vibrant coalition of public health and environmental organizations, Environmental Defense Fund (EDF) advocates for clean air and strong public health policies across the nation. Our national work includes:

- Advocating for national air quality standards that are protective of health as guided by science
- Promoting market based incentives that support a clean energy future
- Advising on climate policies for national scale carbon management strategies

In Texas, experts from our Austin office assist metropolitan planning organizations and local communities in a variety of strategies to address regional issues of concern, including:

- Assisting in development of local emission reduction strategies
- Supporting regional grant opportunities for clean air projects
- Communicating issues of air quality with local communities



## AIR QUALITY IN SAN ANTONIO: OPPORTUNITIES DISGUISED AS CHALLENGES

ORIGINALLY PUBLISHED IN THE RIVARD REPORT - JUNE 11, 2013

One of the most ambitious goals voiced by the citizens of San Antonio and documented for SA2020 in 2011 is also one of the most reasonable: Improve air quality.

Blue skies are as well-known in Texas as bluebonnets. Claims to clean air are as sure a birthright as listening to Willie and Waylon. This is Texas.

So when the great citizens of Texas' last great clean air city take a stand and say we need to make our good air better for breathing, there's nothing wrong and everything right with that demand.

But the fact is, the San Antonio region is perilously close to having the U.S. Environmental Protection Agency (EPA) designate the city as "nonattainment," the name you give to just another dirty air city like LA, or Denver ... or Houston and Dallas.

Do we want to get it right? After all, there is no folding and leaving the game – we live here. The only real answer can be: Get it right and keep it right.

And if we don't? The federal Clean Air Act provides federal enforcement mechanisms and planning requirements they'll impose here if we fail to keep our air clean.

Program Manager Robert Gulley and the Edwards Aquifer Recovery Implementation Plan folks were able to put their heads together and come up with a plan that kept the feds from coming to town to do our water planning work for us. If this kind of strategic governance can be achieved in the realm of water management and conservation, why can't the same be accomplished managing regional air quality?

The real fundamental reason to clean up our air is breathtakingly simple: Breathing this garbage is just bad for our health.

Those are two pretty good reasons.

In the San Antonio area, air quality planners like me only have one serious air pollutant in mind: ground-level ozone.

Ozone doesn't come out of tailpipes or smoke stacks. Instead, our ozone cooks up in the Texas heat and sunlight as a chemical reaction in the atmosphere between oxides of nitrogen (NOx) and volatile organic compounds (VOC).

NOx and VOC are no mystery when you name them by their sources. In our region, most of our oxides of nitrogen

(NOx) come from the exhaust of cars and trucks, from fossil-fuel based power generation, and from cement industrial processes, in that order. Volatile organic compounds (VOCs) come from gasoline vapors, paints and other coatings, dry cleaning processes, solvents, thinners, and other chemicals.



Source: The Houston Clean Air Network  
The Houston Clean Air Network is a collaboration between Air Alliance Houston, the American Lung Association, and the University of Houston Honors College with the goal of protecting public health from air pollution.  
Streamlyne Creative www.streamlynecreative.com

When NOx and VOC combine to make ozone, the trouble starts.

According to the EPA:

*"About 25 million people, including 7 million children, have asthma and over 12 million people report having an asthma attack in the past year. Breathing ozone can trigger a variety of health problems including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground level ozone also can reduce lung function and inflame the linings of the lungs. Repeated exposure may permanently scar lung tissue."*

Some San Antonians already recognize that breathing ozone is a threat. Evidence? The air quality goal supplied voluntarily by our citizenry and recorded in the Natural Resources and Sustainability Vision Area (page 74) of the SA2020 Final Report is:

Target: Maintain EPA Attainment Compliance; Improve Air Quality by 10% (Ground Level Ozone).

I applaud and support their assessment 100 percent.

"Tell me, I forget. Show me, I remember. Involve me, I understand."

Ancient Chinese Proverb

Those same folks need to know that, right now, we are in violation of the federal national ambient air quality standard for ground-level ozone, and that we've got a tough hill to climb to work our way out before we are declared in "nonattainment." Our three-year average (2009 -2012) of ground-level ozone violated the EPA's 76 parts per billion (ppb) standard with a level of 80 ppb in 2012. Now is the time for action.

They also should also know that there is a group of local elected officials working in the Air Improvement Resources Committee that convenes quarterly at the Alamo Area Council of Governments and that has taken on the noble charge of local air quality planning, at least until – or unless – we officially fail and the federals take over the process.

No elected official worth his or her salt is going to stand idly by while we slip into nonattainment, as a public health risk to our citizens, and at the risk of lost economic development. Even if the dead have a long history of voting in Texas, we all want our family and friends alive and on their feet, strong and healthy, not on a respirator.

Did someone say economic development? Here's a salient and supportive tidbit. In a 2003 commentary, Fort Worth Star-Telegram columnist Mitchell Schnurman wrote:

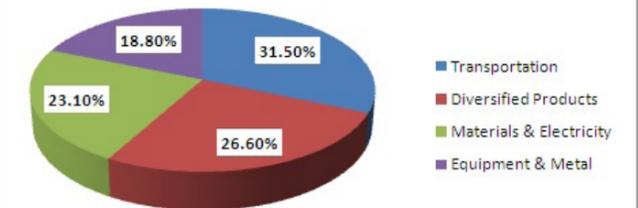
*"Toyota scratched the Metroplex off its shopping list early, the first time we've lost a high-profile project strictly because of air quality, according to several economic development officials. That's ominous, unless we're satisfied with simply growing the service side of the economy."*

In other words, Toyota did not even consider north central Texas as a home for the Toyota plant **that is now in San Antonio** because Dallas-Fort Worth was already in nonattainment for ozone.

Some may contend that even without Toyota, a key and welcome member of our south central Texas family, a sterling Lone Star in the San Antonio constellation, we would still be fine in terms of our resistance to the economic doldrums suffered by the rest of the United States and our outlook would be ever San Antonio Rose-y.

Since the Toyota manufacturing facility and all of Toyota Motor Manufacturing Inc.'s local suppliers opened for business, the transportation segment (aerospace and motor vehicle) grew to provide 31.5 percent of all of San Antonio's manufacturing in 2011. According to a study published in 2012 by the San

### San Antonio Manufacturing in 2011



Source: San Antonio's Manufacturing Industry Economic Impact In 2011  
[http://www.sama-tx.org/images/2012\\_Manufacturing\\_Economic\\_Impact\\_Study\\_Final.pdf](http://www.sama-tx.org/images/2012_Manufacturing_Economic_Impact_Study_Final.pdf)

Antonio Manufacturers' Association and the Greater San Antonio Chamber of Commerce, growth in the transportation segment has helped push manufacturing to become the third largest economic generating sector in San Antonio, contributing some \$22.5 billion to the local economy in 2011.

Look with me to the future, not the past. Look with me to the choices we have before us.

Let's budget pollution to be able to afford growth. We may not be able to get back to the Garden of Eden's pristine air quality, but we sure can't continue business as usual, either, without suffering nonattainment and greater health risks to us all.

If we make adequate and appropriate reductions in pollution, we can both keep our citizens healthy and provide a buffer for industrial and economic growth without violating air quality standards. It's a matter of budgeting, as is required in any other economic consideration.

The question is, do we have the collective will to make adequate pollution reductions in our region, in our state, and in our nation on a voluntary basis, or will we necessarily have to fail first in our own efforts and have the feds do it for us?

Welcome to the San Antonio Clean Technology Forum's discussion on air quality, "Keeping It Clean: Our Air, Our Health." During today's gathering, we'll take the time to consider this question in depth and to explore further the opportunities for San Antonio leadership in sustainable development.

Peter Bella - Director Natural Resources,  
Alamo Area Council of Governments

## MAJOR CONSEQUENCES OF EPA'S AIR QUALITY NON-ATTAINMENT DESIGNATION

A non-attainment designation under the Clean Air Act carries serious repercussions including the loss of federal highway funding and the loss of economic development opportunities.

### Loss of Federal Highway and Transit Funding

One year from the date of a non-attainment designation, federally funded highway and transit projects will not be allowed to proceed unless the region demonstrates there will be no increase in emissions associated with the projects.

### Boutique Fuels

Non-attainment areas are subjected to the Clean Air Act's reformulated gasoline program, which can significantly raise the price of motor vehicle fuels for consumers.

### Enhanced Regulatory Oversight

Once an area is designated as being in non-attainment, EPA has the authority to intervene and revise permitting

### Restrictive Permitting Requirements

New and upgraded facilities in, or near, non-attainment areas are required to install the most effective emissions reduction controls without consideration of cost. Operators of existing facilities may also be required to install more restrictive control technologies than are otherwise required for similar units in areas that are in attainment.

### Mandatory Emissions Offsetting

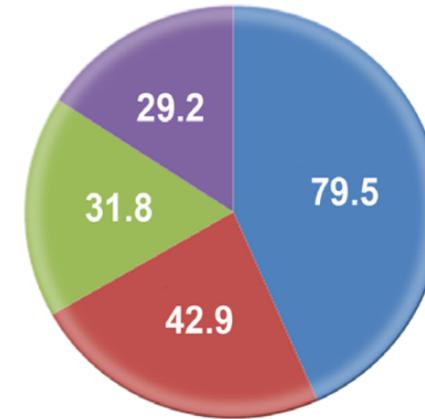
Prior to permitting the construction of new facilities, a region must offset any emissions increases by achieving reductions at existing facilities.

### Loss of Economic Development Opportunities

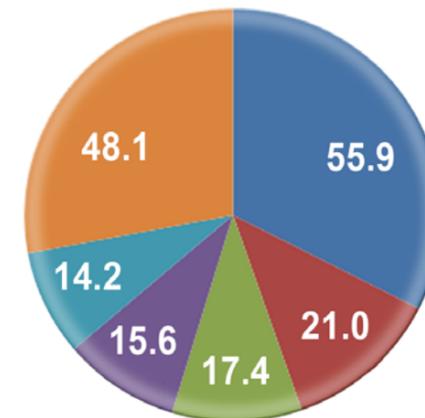
The added regulatory and paperwork burdens, as well as expenses associated with constructing new facilities, or expanding existing ones, limit the amount of economic investment in non-attainment communities.

**Bottom Line:** A Non-Attainment designation can bring tens of millions of dollars of costs and penalties and significantly thwart economic development of an urban region.

## Emissions: SA-NB Metropolitan Statistical Area

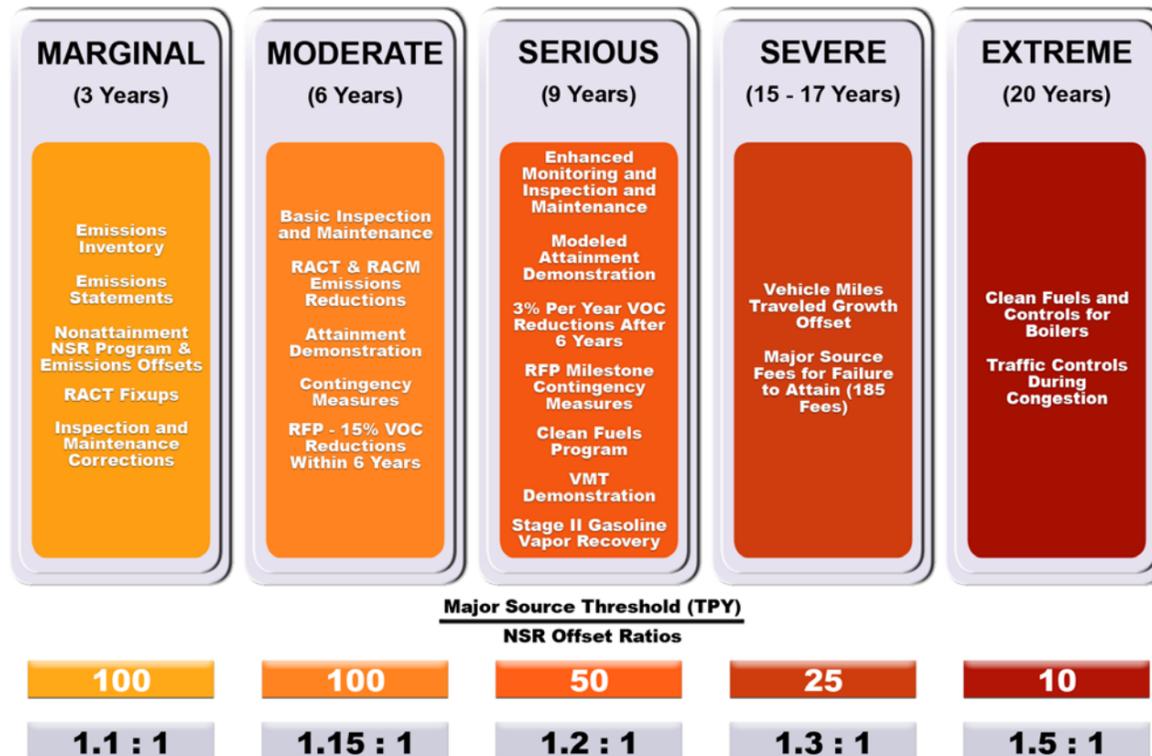


Source	Tons per Day	Percentage
Motor Vehicles On- and Non-Road	79.5	46.8%
Electricity Generation	42.9	23.4%
Cement/Industrial	31.8	17.3%
All Other	29.2	12.5%
<b>Total</b>	<b>183.4</b>	<b>100.0%</b>



Source	Tons per Day	Percentage
Motor Vehicles On- and Non-Road	55.9	35.2%
Coating (Painting) Operations	21.0	12.2%
Dry Cleaning	17.4	10.1%
Consumer/Commercial Solvents	15.6	9.1%
Service Stations	14.2	8.2%
Other Processes	48.1	25.2%
<b>Total</b>	<b>172.2</b>	<b>100.0%</b>

## EPA Requirements for Ozone Nonattainment Areas



**CPS ENERGY 800 MW RIO NOGALES COMBINED CYCLE NATURAL GAS PLANT**

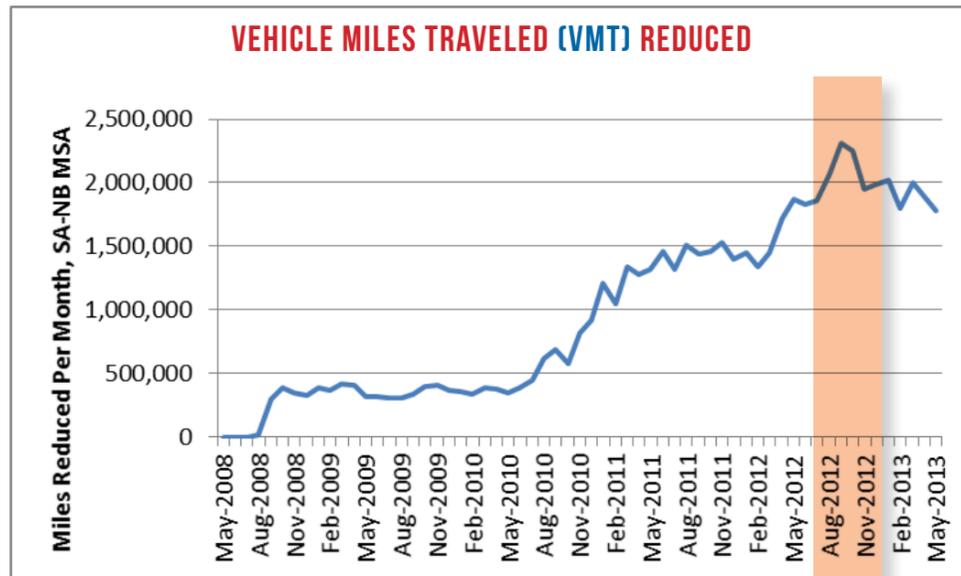
Rio Nogales emits virtually no particulate matter, mercury or sulfur dioxide, while using roughly half the amount of water needed to run the Deely (coal-fired) units.

Source: CPS Energy

## NURIDE AND THE WALK & ROLL CHALLENGE

During September and October of 2012, the last two months of the “ozone season” when air pollution tends to be the worst in the San Antonio area, over **2,700 people** collectively took more than **183,000** walking, biking, busing, or carpooling trips and recorded them on Nuride.com as a part of AACOG’s Walk & Roll Challenge.

These alternative trips saved over **3.4 million vehicle miles** traveled and kept over **5 tons of nitrogen oxides and volatile organic compounds** (the components of ozone or “smog”) from the air. During the same period this year, we will strive to save over 4 million vehicle miles traveled through the 2013 Walk & Roll Challenge.



**AACOG'S WALK & ROLL CHALLENGE 2012**

## SAN ANTONIO MISSIONS NATIONAL HISTORIC PARK AND THE AACC

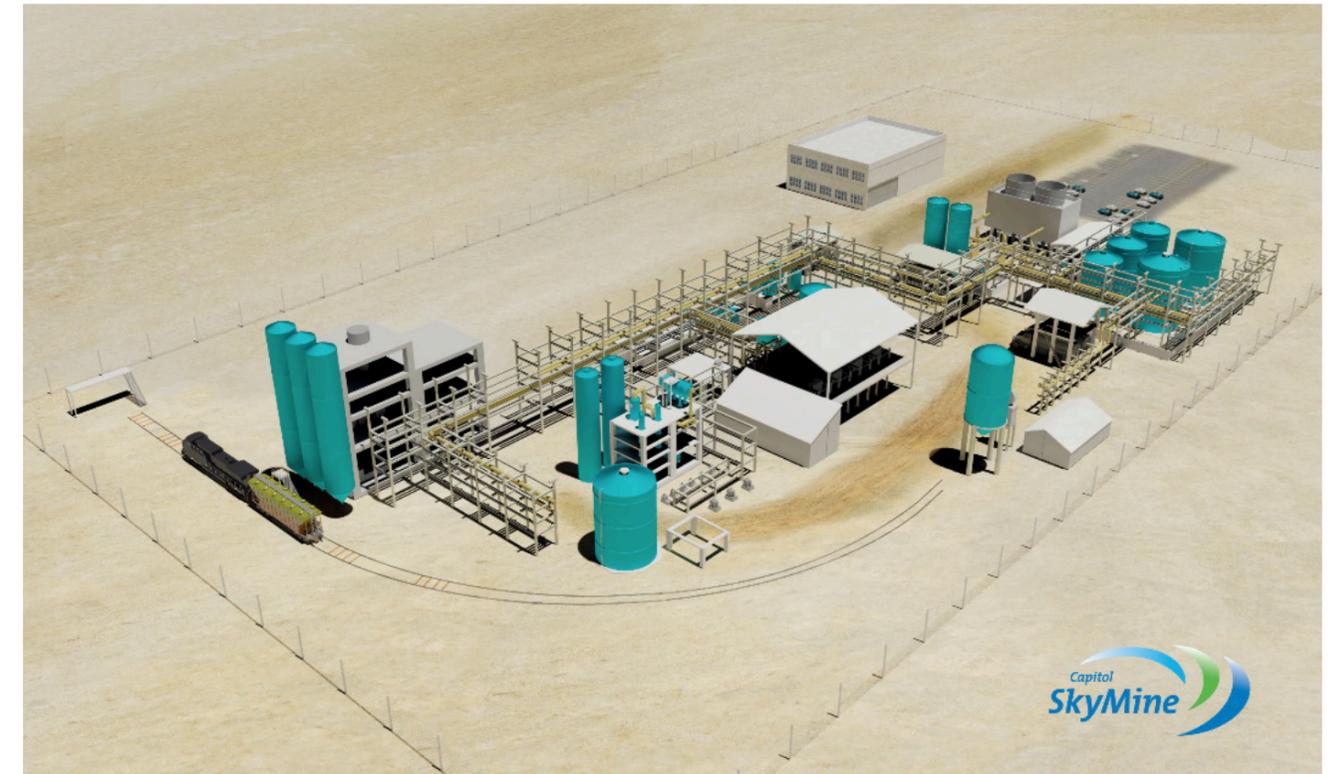
Since 1978, the San Antonio Missions National Historical Park (the Park) has been astounding visitors from around the world with an impressive historic landscape of 826 acres and an array of buildings and structures listed on the National Register of Historic Places.

For over five years, the Park has played an active role in helping the Alamo Area Clean Cities Coalition (AACC) to reduce their greenhouse gas emissions through the pursuit of alternative fuel vehicles and right-sizing of the park fleet. From commercial propane mowers and trucks to hybrids and all electric vehicles, the Park has taken a huge leap forward in reducing greenhouse gas emissions within their fleet. In May 2013, the Park installed their first public electric vehicle charging station at Mission San Jose, making it easy for visitors in electric vehicles to drive right up to the park and charge while touring the grounds. The San Antonio Missions National Historical Park has no plans on slowing down with the goal of one day running their entire fleet on alternative fuel vehicles. In order to reach that goal, the San Antonio Missions National Historical Park continues to work closely with the AACC. For almost 15 years, AACC has built stakeholder relationships within the local fleet community to assist with the implementation of alternative fuel vehicles and technology. **Since its inception, AACC in partnership with its stakeholders has displaced over 19 million gallons of petroleum in the region.**



**“Never believe that a few caring people can’t change the world. For, indeed, that’s all who ever have.”**

Margaret Mead



## SAN ANTONIO'S ZACHRY CORPORATION LEADING THE WAY IN REDUCING EMISSIONS FROM CEMENT PLANTS

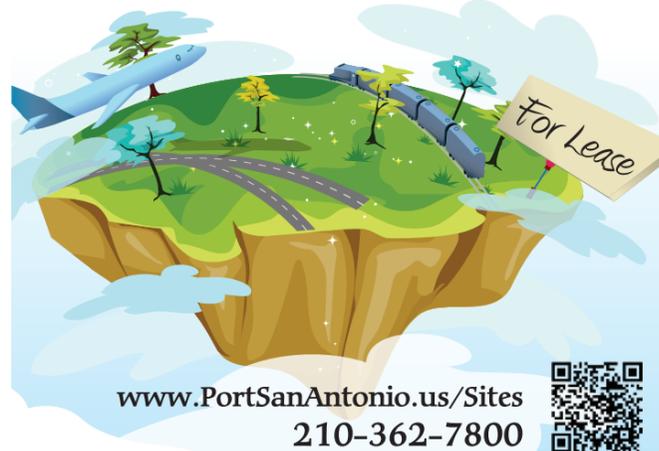
- Capitol SkyMine under construction; fully operational in late 2014.
- Plant owned by Austin-based Skyonic Corporation; inventors of revolutionary SkyMine® technology.
- Capitol SkyMine® to directly capture 83,000 t CO<sub>2</sub>/yr; offset an additional 220,000 t CO<sub>2</sub>/yr.
- Treats SO<sub>x</sub>, NO<sub>2</sub> and mercury from 15% slipstream of Capitol Cement exhaust.
- Capitol SkyMine to sell bicarbonate and byproducts (HCl & bleach) into market, for profitable carbon capture and emissions reduction.

**More hazardous pollutants are discharged into the air each year than are released to surface water, ground water, and land, combined.**





PORT SAN ANTONIO  
*Land of Opportunity...*  
 FOR INDUSTRIAL DEVELOPMENT  
 AIR & RAIL SITES AVAILABLE



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GOLD LEVEL SPONSORS



SILVER LEVEL SPONSORS



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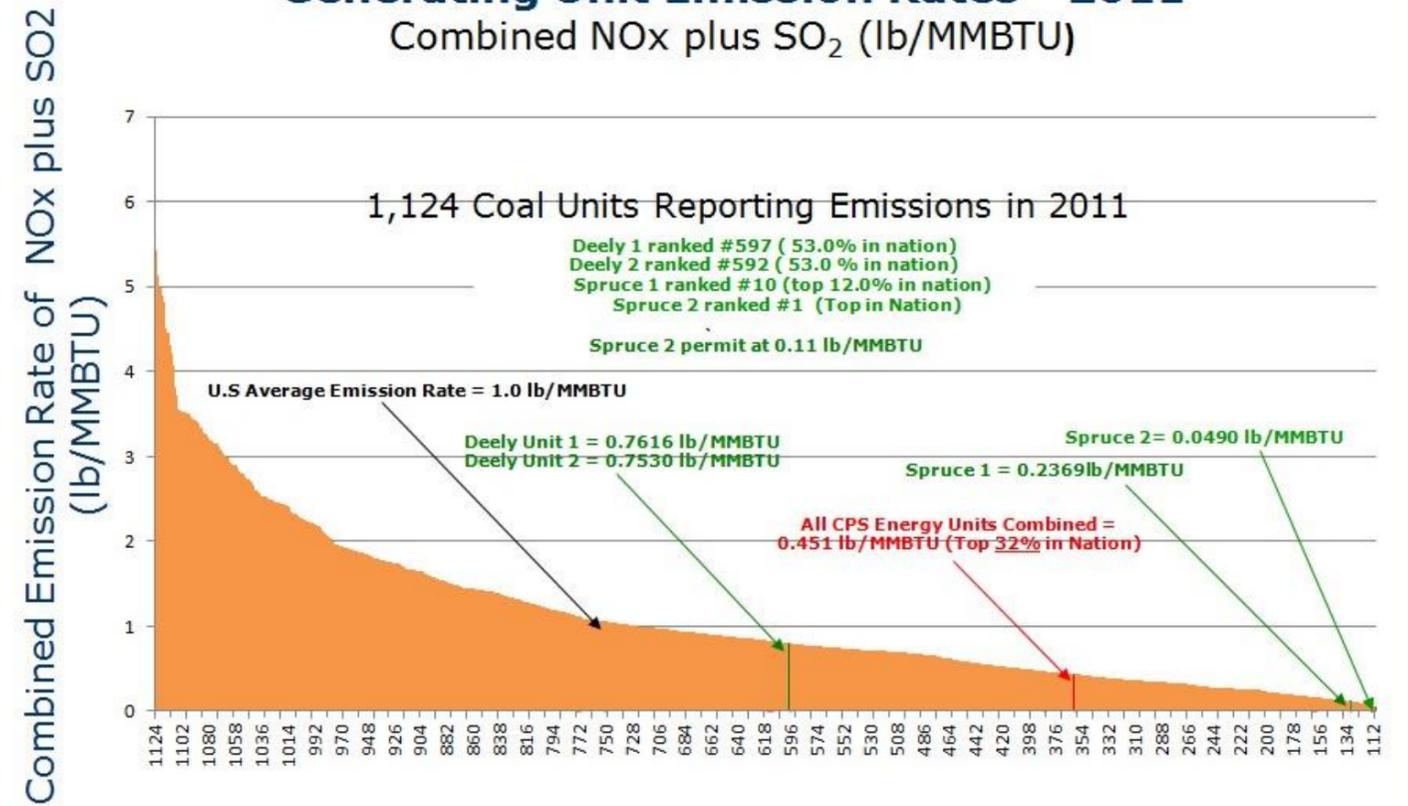
Developing  
 Citizen Leaders  
 for the Global  
 Community



CPS ENERGY IS PROUD TO SUPPORT THE AIR QUALITY FORUM AND OUR ENVIRONMENT



## Generating Unit Emission Rates - 2011 Combined NOx plus SO<sub>2</sub> (lb/MMBTU)



### Numerical Ranking of Units - Worst to Best

### Projected Emissions Reduced by 2020

Technology	CO2 Reductions (tons per year)	NOx Reductions (tons per year)	SOx Reductions (tons per year)	Equivalent Number of Cars Removed
Deactivate Coal (critical boiler, 871MW)	2,391,445	1,245	15,335	434,808
IGCC (200 MW)	1,605,431	525	5,416	291,897
Save for Tomorrow Energy Plan	704,744	293	104	128,135
Utility Scale Solar (444 MW)	596,223	194	0	108,404
LED Streetlights	20,980	9	23	3,814
Solar Rooftop Rebates	20,550	7	0	3,736
<b>Totals</b>	<b>5,339,372</b>	<b>2,273</b>	<b>20,879</b>	<b>970,795</b>

### EXHIBITORS



### ADVERTISING SPONSORS

The San Antonio Clean Tech Forum would like to thank the following companies for sponsoring our Texas Public Radio advertisements.



**“In our every deliberation, we must consider the impact of our decisions on the next seven generations.”**

From The Great Law of The Iroquois Confederacy

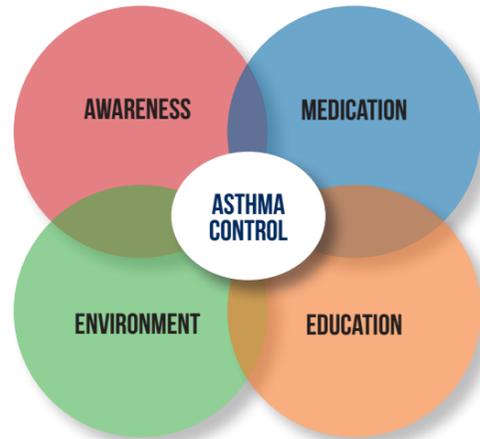
## NEISD RECEIVES EPA NATIONAL AWARD FOR ASTHMA AWARENESS EDUCATION PROGRAM

The North East Independent School District (NEISD) Asthma Awareness Education Program recently received the National Environment Leadership Award in Asthma Management from the U.S. Environmental Protection Agency (EPA).

NEISD is a large urban district that serves 67,000 students, including more than 8,000 with asthma. In 2006, NEISD hired a Registered Respiratory Therapist/Certified Asthma Educator (RRT/AE-C) to launch an asthma management program to improve students' asthma control and school attendance in order to positively contribute to the district's academic performance.

Since 2006, NEISD has demonstrated that comprehensive school-based asthma management programs can reduce symptoms, improve response to poor air quality days, reduce emergency health care utilization, increase school attendance, improve academic performance, and generate a return on investment. Higher school average daily attendance rates are at the foundation of the Texas's formula for distributing school revenue and NEISD recognizes that reality. NEISD's investment in the Asthma Awareness Education Program reflects its leadership's recognition that asthma control is fundamental to student achievement.

Source: EPA press release



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