

Sustainability, Transportation and Carsharing

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Alamo Group of the Sierra Club

San Antonio, Texas

March 19, 2013

Overview

Sustainability

Transportation

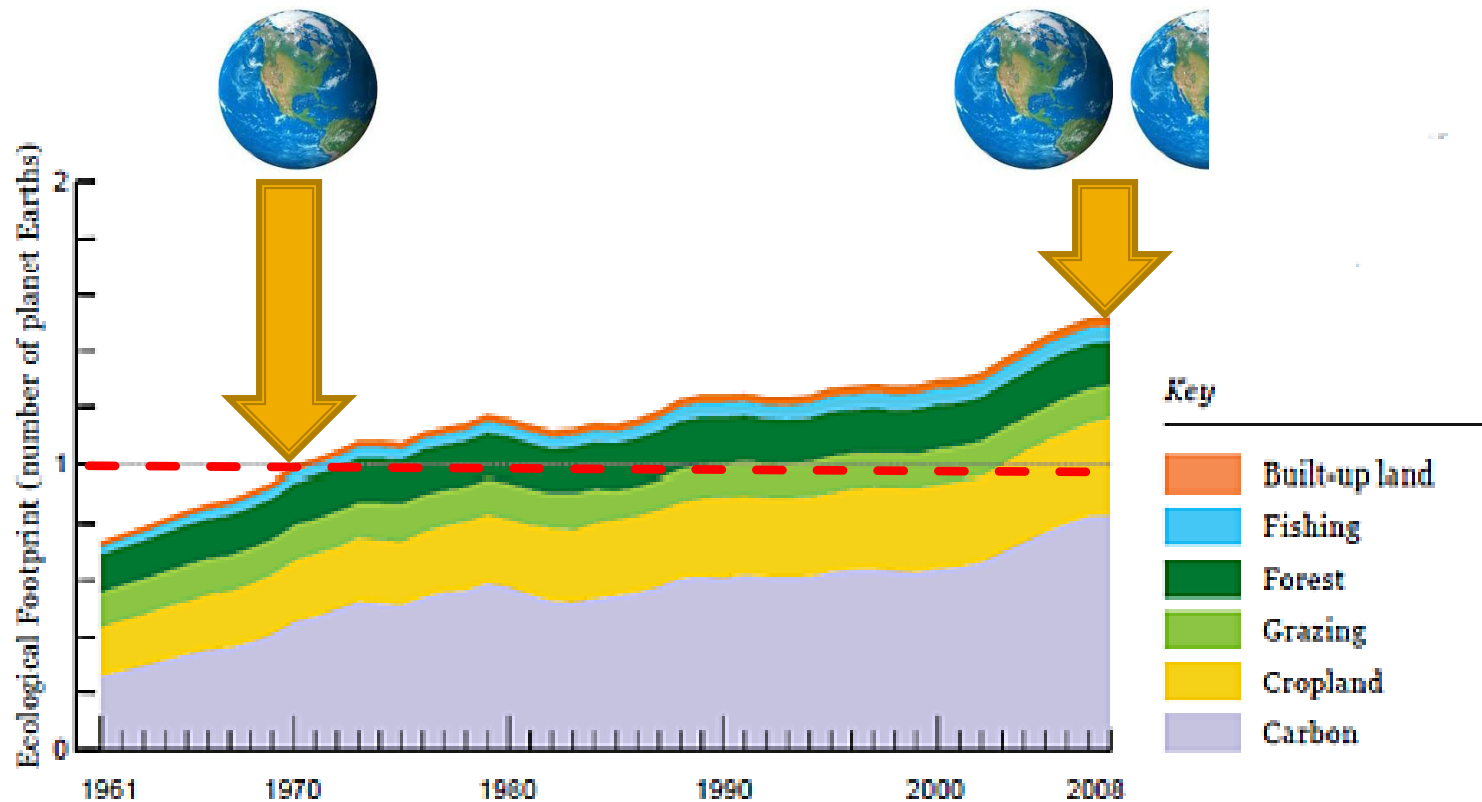
Carsharing

Sustainability



Do onto future generations as you would have them do onto you!

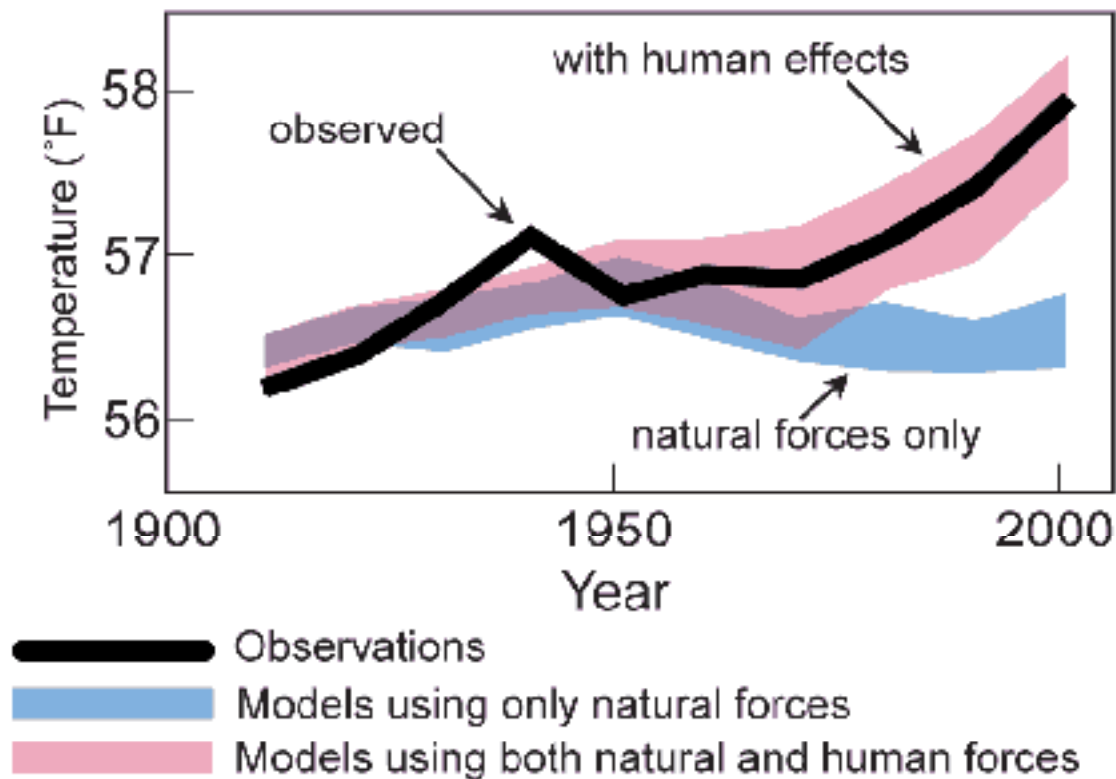
Human ecological footprint overshoots earth's capacity



Source: Footprint network

http://wwf.panda.org/about_our_earth/all_publications/living_planet_report/demands_on_our_planet/

Here's the temperature of an Earth with human + natural influences



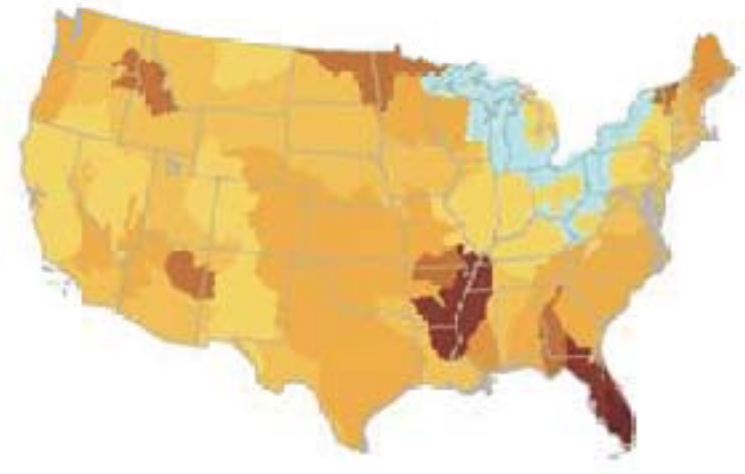
Increasing demand for water

Projected Changes in Water Withdrawals (2005 to 2060)

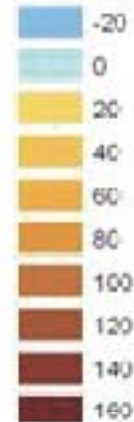
Without Climate Change



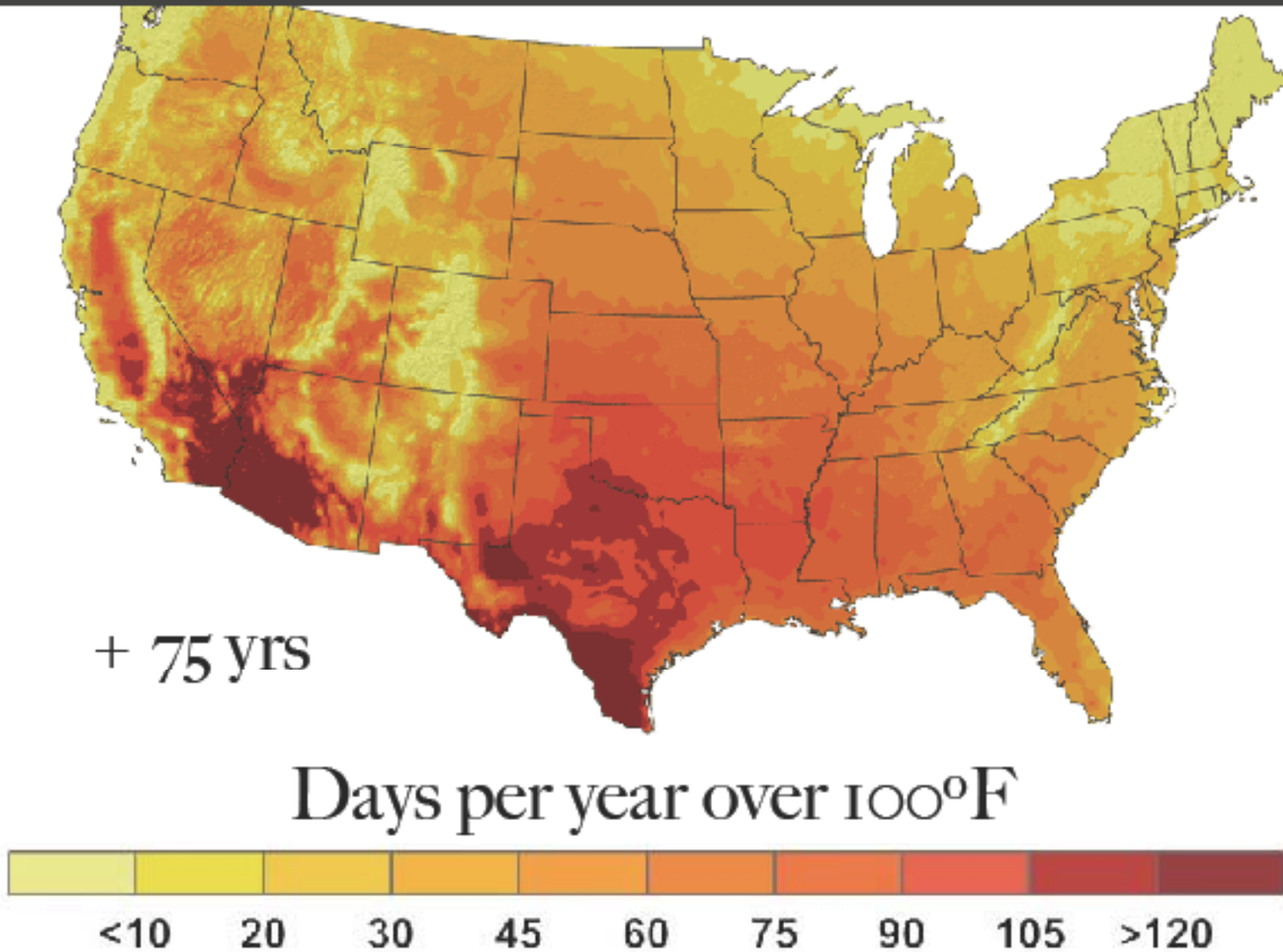
With Continued Climate Change



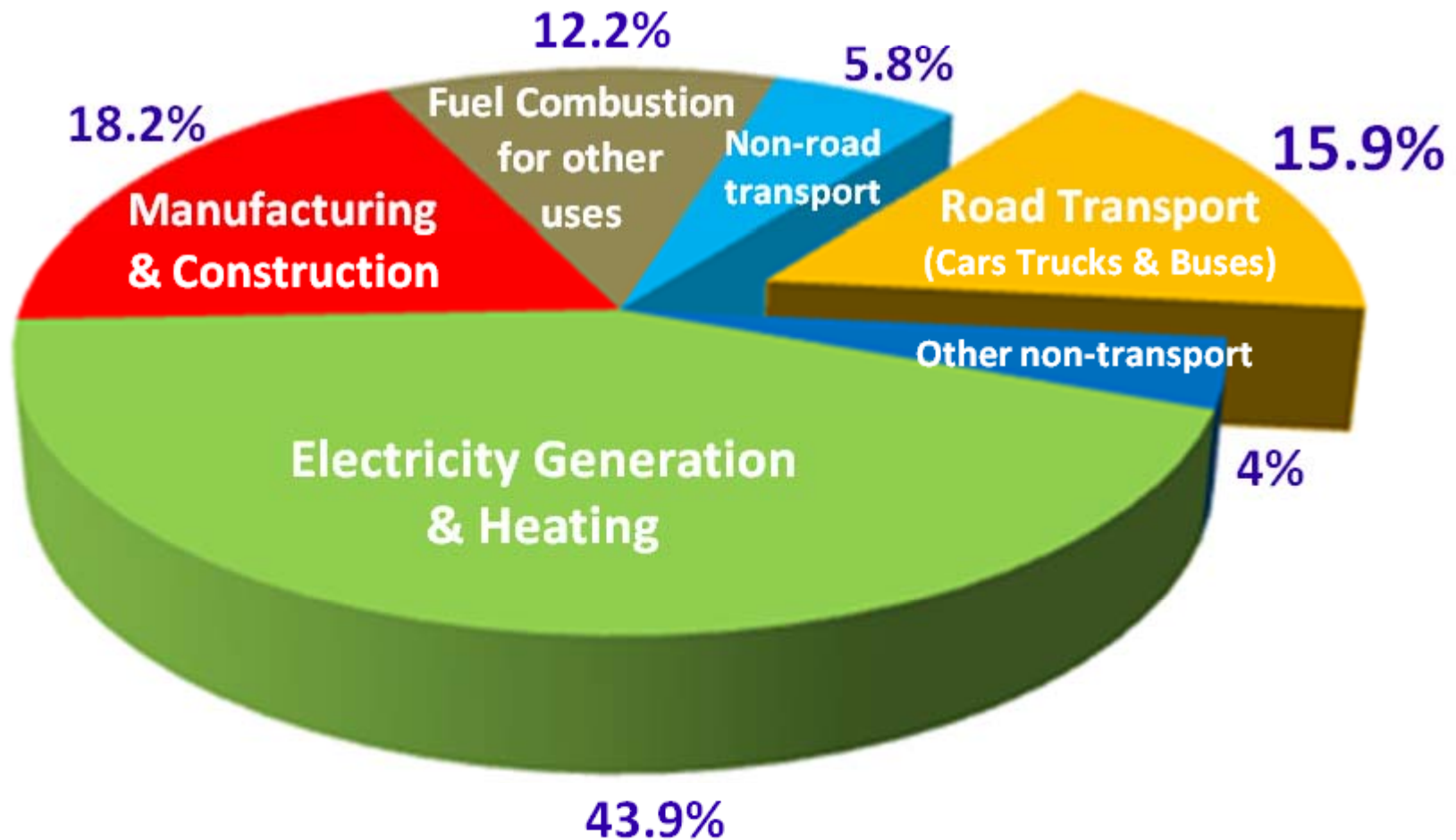
Upper end
of category



Big changes – in extreme heat



Global Sources of Carbon Emissions



Source: <http://oica.net/category/climate-change-and-co2/>

Medina Lake



Bastrop

Bastrop, Texas

BREAKING NEWS

WILDFIRES BURN ACROSS TEXAS

2 dead, hundreds of homes destroyed

Anderson
Cooper
360

CNN

Heat buckles roads

Video



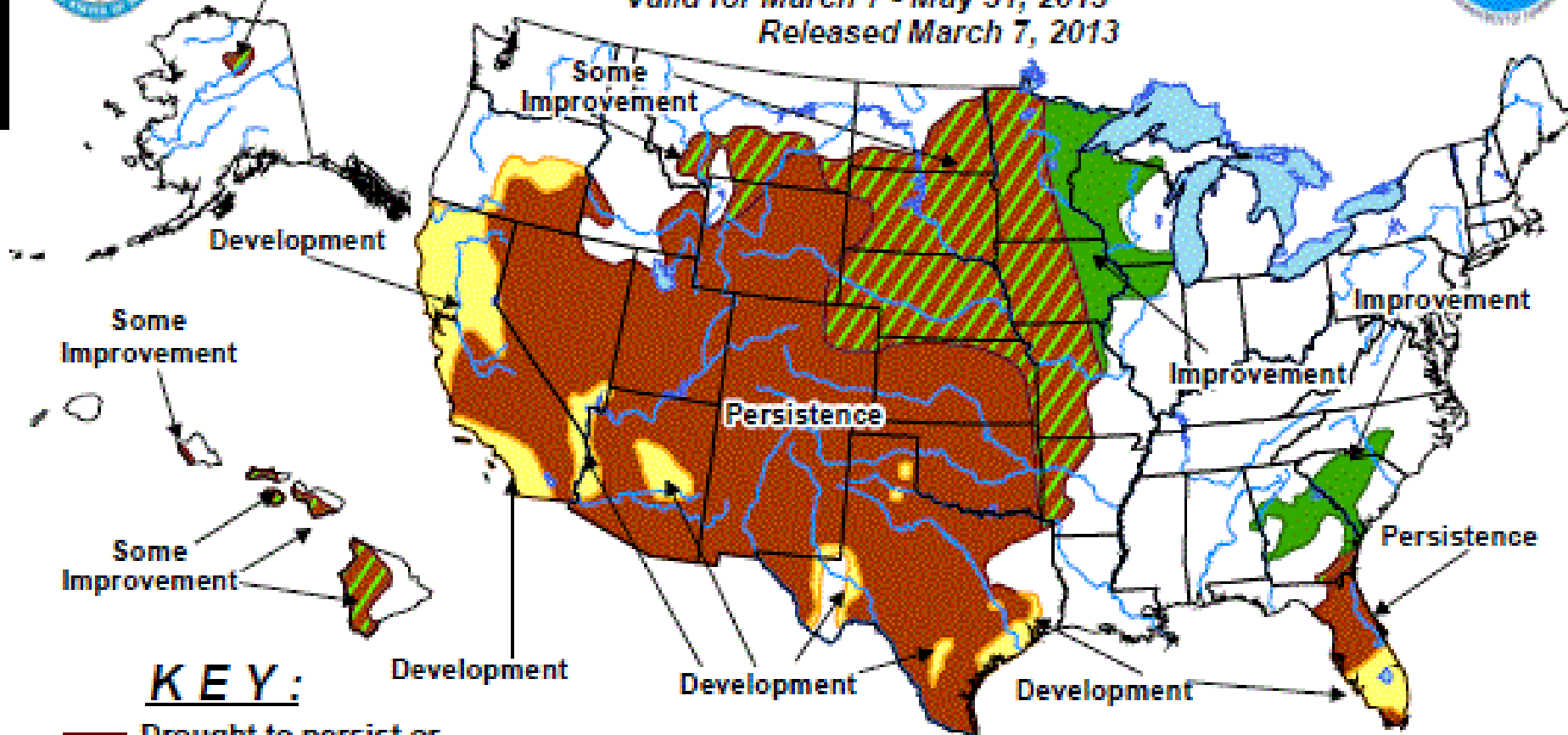
Some Improvement

U.S. Seasonal Drought Outlook





Drought Tendency During the Valid Period

Valid for March 7 - May 31, 2013

Released March 7, 2013



KEY:

-  Drought to persist or intensify
-  Drought ongoing, some improvement
-  Drought likely to improve, impacts ease
-  Drought development likely

No Drought Posted/Predicted

Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events – such as individual storms – cannot be accurately forecast more than a few days in advance. Use caution for applications – such as crops – that can be affected by such events. “Ongoing” drought areas are approximated from the Drought Monitor (D1 to D4 Intensity). For weekly drought updates, see the latest U.S. Drought Monitor. NOTE: the green improvement areas imply at least a 1-category improvement in the Drought Monitor intensity levels, but do not necessarily imply drought elimination.

Overview

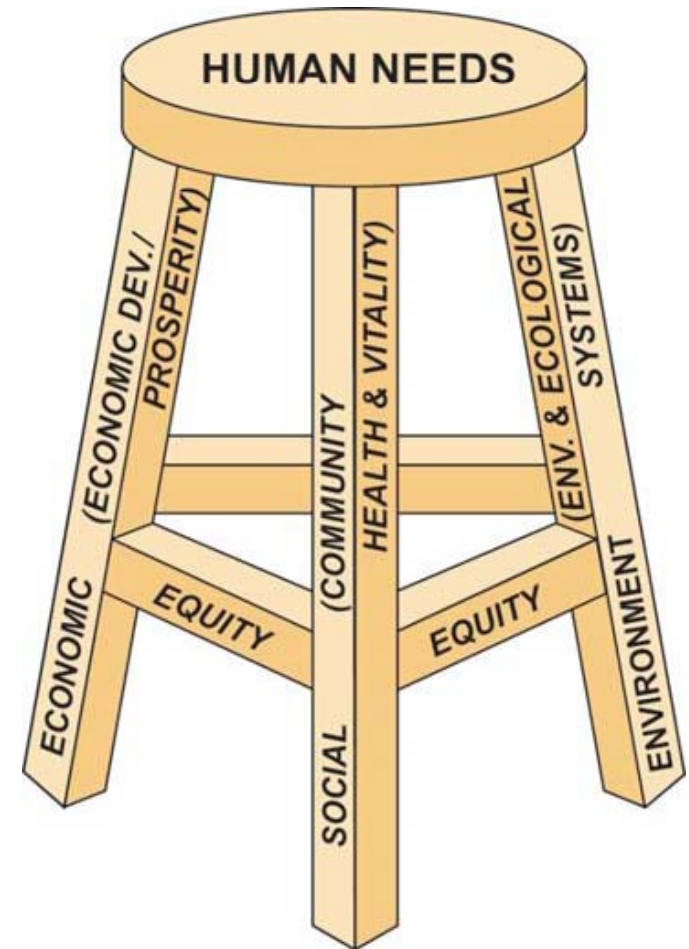
Sustainability

Transportation

Carsharing

Transportation and Sustainability

- There is no such thing as “sustainable transportation” only “sustainable communities”.
- Transportation can play an important role in supporting a community’s sustainability goals.
- “Transportation sustainability extends beyond the organizational boundaries of national, state, and local transportation agencies, and it cuts across the various divisions and departments that are part of a transportation agency.”



SA2020 Transportation Vision

- **Vision**

“In 2020, San Antonio’s transportation system is recognized as a model of efficiency and environmental sustainability. San Antonio is served by an environmentally friendly transportation system where everyone is able to walk, ride, drive or wheel in a safe, convenient, and affordable manner to their desired destinations. Frequent and reliable mass transit services connect communities, and transportation infrastructure meets community needs.”

- **Targets**

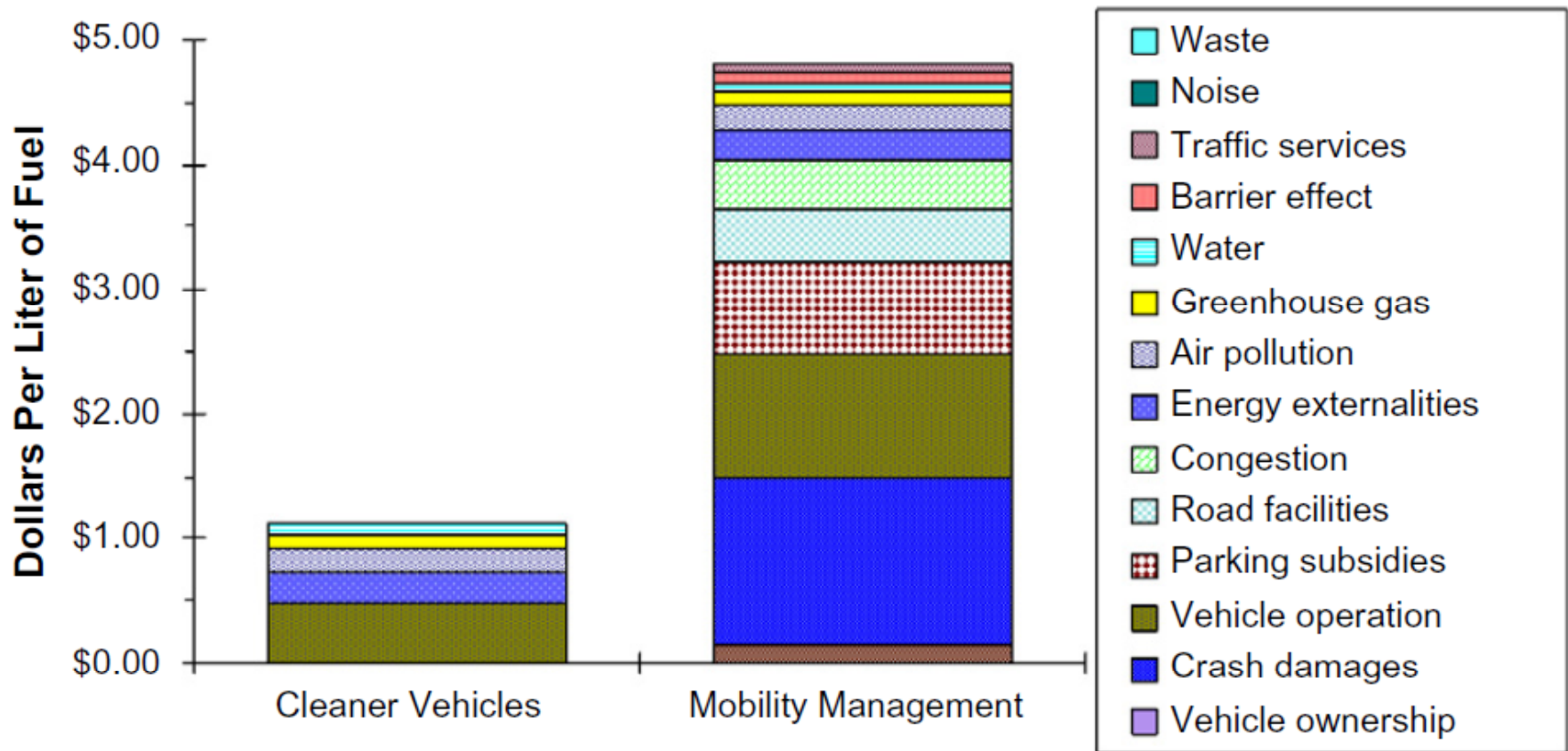
- Triple transit ridership
 - Decrease travel time index to 1.1
 - Increase the number of pedestrian-oriented neighborhoods
- } Transportation

- **Measures**

- 100% compliance with EPA standards
 - Decrease number of accidents by 50%
 - Triple number of miles of complete streets
 - Reduce vehicle miles travelled per person by 10%
 - Increase % workers with commute times less than 25 minutes to 70%
 - Increase walkability score 20%
- } Transportation

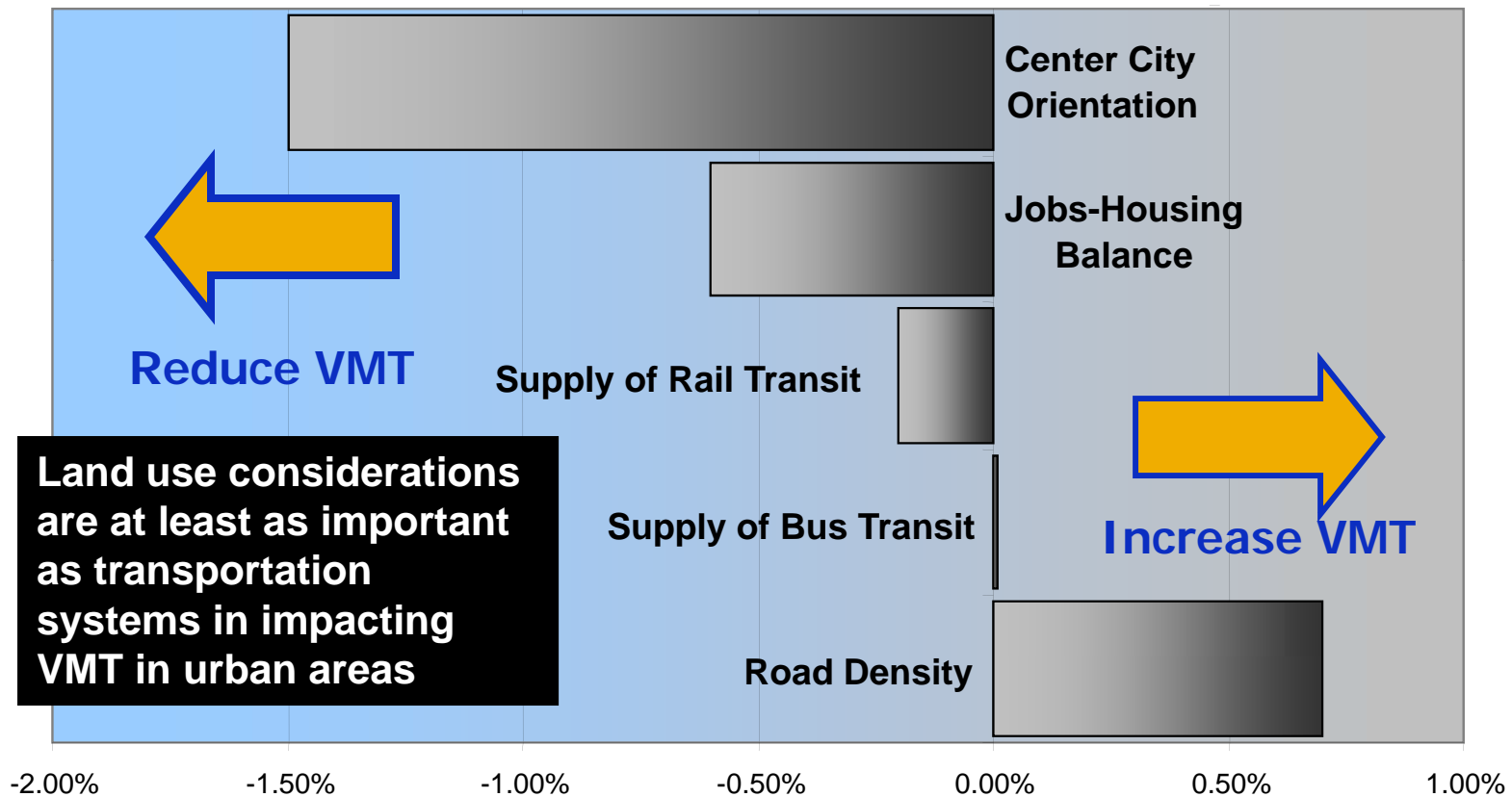
Reducing VMT 5x better than cleaner vehicles

Benefits from Reducing Transportation Fuel Use



Urban VMT Factors

Based on a 10% Increase in the Factor of Interest in 144 U.S. Urbanized Areas



Source: Antonio M. Bento, Maureen L. Cropper, Ahmed Mushfiq Mobarak, Katja Vinha, *The Impact of Urban Spatial Structure on Travel Demand in the United States*, The World Bank Group Working Paper No.: 3007, March 20, 2003

Relative Impact on Urban VMT

Buildings, development patterns, location and transportation



Suburban
8 DU/acre
0.25 FAR

Urban
40 DU/acre
2.5 FAR

CO₂ Lbs/Yr/Household

Buildings	24,000	11,000
Transportation	<u>26,000</u>	<u>9,000</u>
Total	50,000	20,000

Overview

Sustainability

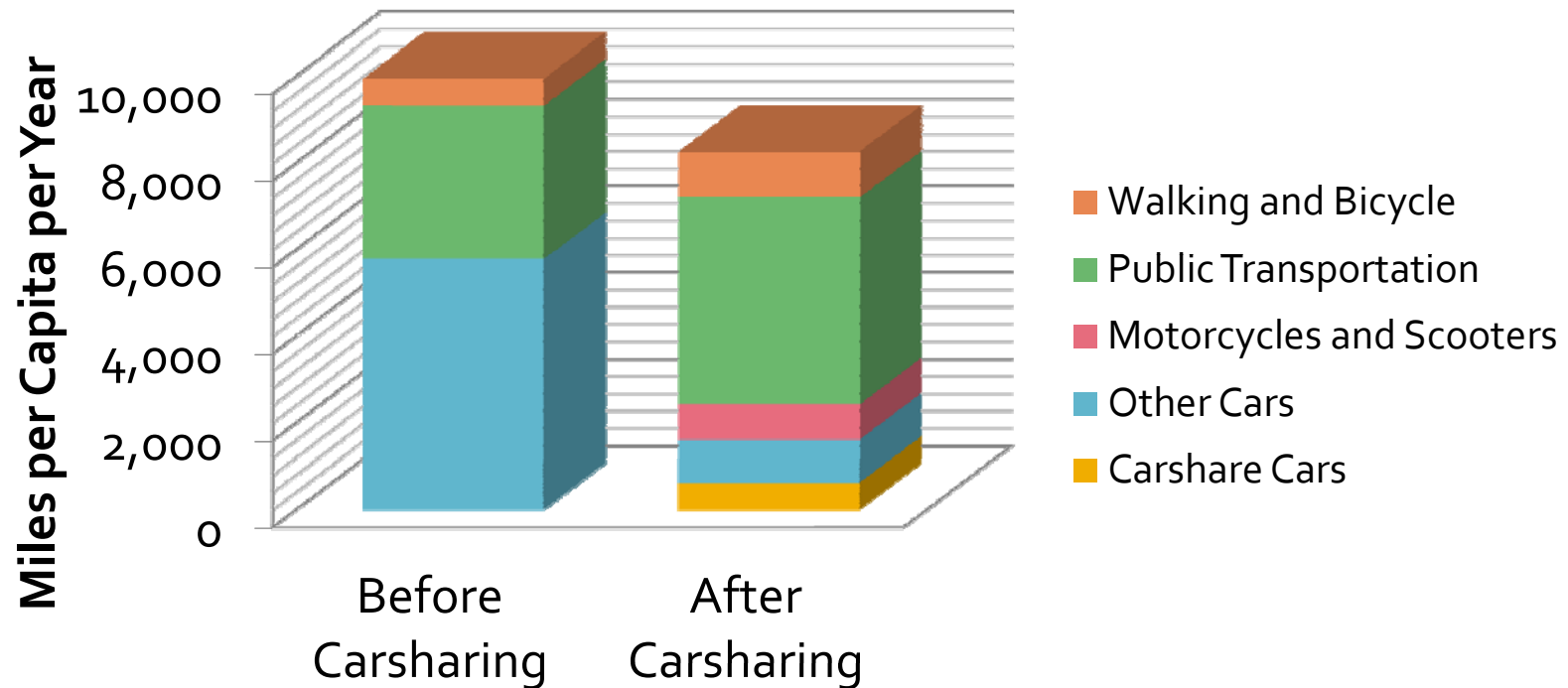
Transportation

Carsharing

A new form of transportation in San Antonio

Video

Carsharing changes travel behavior



- Car miles -72%
- Transit use +26%
- Bicycle and walking +41%

Source: P. Munheim, *Carsharing – the key to combined mobility*, prepared for the Swiss Federal Office of Energy, 1998

VMT impacts of carsharing

Impacts of Carsharing Membership on Vehicle Miles Traveled

<u>Study</u>	<u>Location</u>	<u>% Change in Average VMT (%)</u>
Martin and Shaheen (2011)	North America	-27% ^a
Cervero (2007)	San Francisco	-33%
Price (2006)	Arlington, VA	-43%
Millard-Ball (2005)	North America	-37%
Cervero (2004)	San Francisco	-3

Source: Data from Martin, Elliot and Shaheen, 2011, Cervero, Golub and Nee 2007, 35-36; Price, DeMaio and Hamilton 2006, 9; Millard-Ball, et al. 2005, 4-22; Cervero and Tsai 2004, 123.

^a Martin and Sheen estimate the “observed impact” to be 27% and the “full impact” to be 43%.

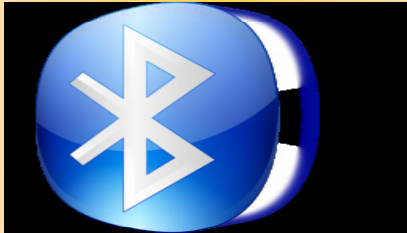
Carsharing in San Antonio



- Hertz On Demand
- Launched 3/29/12
- 21 cars in 12 locations
- 1,535 members
- Free membership
- Minimum one hour rental
- 24/7 availability (keys already in cars)
- \$10-12 per hour rate is all inclusive (fuel, insurance, etc.)
- Rates higher on weekends

THE TECHNOLOGY

BLUETOOTH CONNECTIVITY



Hands free calls

REMOTE LOCK/UNLOCK



Forgot your card? We can open the doors for you

NAVIGATION SYSTEM



GPS in all vehicles

IMMOBILIZER



Anti-theft system; Vehicles fully secured

In-Car Concierge Service



One number to handle all needs, 24/7/365

iPod/iPhone CONNECTIVITY



Your trip, your music

SMART CONTROL SCREEN PAD



Used for extensions, Driver's License verification

Hertz **ON Demand**
Rent Spontaneously™

Best-in-Class Proprietary technology, owned and developed by Hertz



Google "Hertz On Demand"

Hertz

On Demand 24/7

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Vehicles

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Where we are located

It's easy to locate **hourly car rental** near you in the San Antonio area. Enter an address or zip code of the neighborhood you wish to search and click go to receive up to the minute availability of vehicles in your area. Skip the **taxi in San Antonio** and **rent a car** with Hertz On Demand – **Car Sharing**.

Not a member yet? [Join today](#) - membership is free! Yep free... try finding that in San Antonio!

Cities Universities 🔍

< United States [Join](#)

San Antonio, TX

Trinity University
One Trinity Place, San Antonio, TX, 78212, US

12 locations around 203 Convent St, San Antonio, TX, US [View](#)

NTB - San Antonio, TX 6407 W Loop 1604 North
6407 W Loop 1604 North, San Antonio, TX, 78254, US

NTB - San Antonio, TX 5745 NW Loop 410
5745 NW Loop 410, San Antonio, TX, 78238, US

NTB - San Antonio, TX 4650 Walzem Road
4650 Walzem Road, San Antonio, TX, 78218, US

NTB - San Antonio, TX 2939 SW Military Drive
2939 SW Military Drive, San Antonio, TX, 78224, US

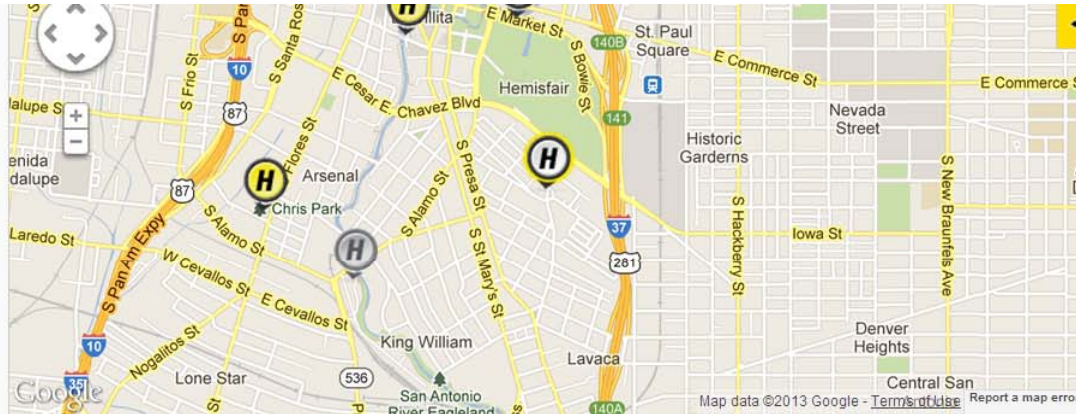
NTB - San Antonio, TX 8161 Agora Parkway
8161 Agora Parkway, San Antonio, TX, 78154, US

Trusted sites

125%

Pick a location, car and time

Pick-Up Date: 03/19/2013
Time: 6:15 pm
Drop-Off Date: 03/19/2013
Time: 9:15 pm
Vehicle Type: None Selected



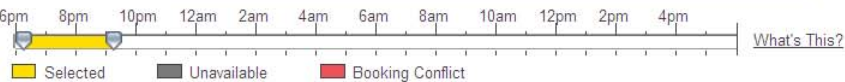
Hertz On Demand 24/7 Locations
No Cars Available for selected times

Vehicle Location: 300 Labor St, San Antonio, TX, US - Distance: 0.80 mi.

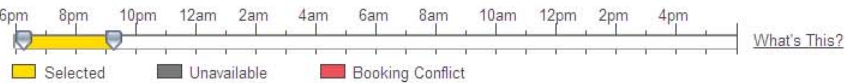
Tip!
Drag the sliders to update your Pick-Up and Drop-Off time.

Close Don't Show Me Again

Toyota Yaris
License Plate: Info ?
Color: Info ?
Pick-Up Time: 03/19/2013 - 6:15pm
Drop-Off Time: 03/19/2013 - 9:15pm
Duration: 03:00 hr(s)
Estimated cost: USD27.60
Book



Chevy Malibu
License Plate: Info ?
Color: Info ?
Pick-Up Time: 03/19/2013 - 6:15pm
Drop-Off Time: 03/19/2013 - 9:15pm
Duration: 03:00 hr(s)
Estimated cost: USD31.15
Book



Carsharing in context

- “Last year, about 800,000 people belonged to car-sharing services in the United States, a 44 percent increase from 2011....” (*NYTimes*)
- **Carsharing save money:** If you drive less than 2.5 hours a day, a car share could save you money.
- **The millennial generation is less interested in car ownership:** “The share of new cars purchased by those aged 18-34 dropped 30% in the last five years, according to the car shopping web site Edmunds.com.” (*CNN Money*)
- **Automakers are taking note:** Ford Motor Company released a report on the rapidly changing auto trends. “Car-sharing services..., carpooling by Gen Yers, bike sharing and ‘multi-mix forms of mobility’ are all explored as signs of how consumers are changing their car habits,” (*Adweek*)
- **Gas prices keep rising:** Aside from disposable income being less than any time in decades, gas prices keep rising, making car ownership costs also rise.

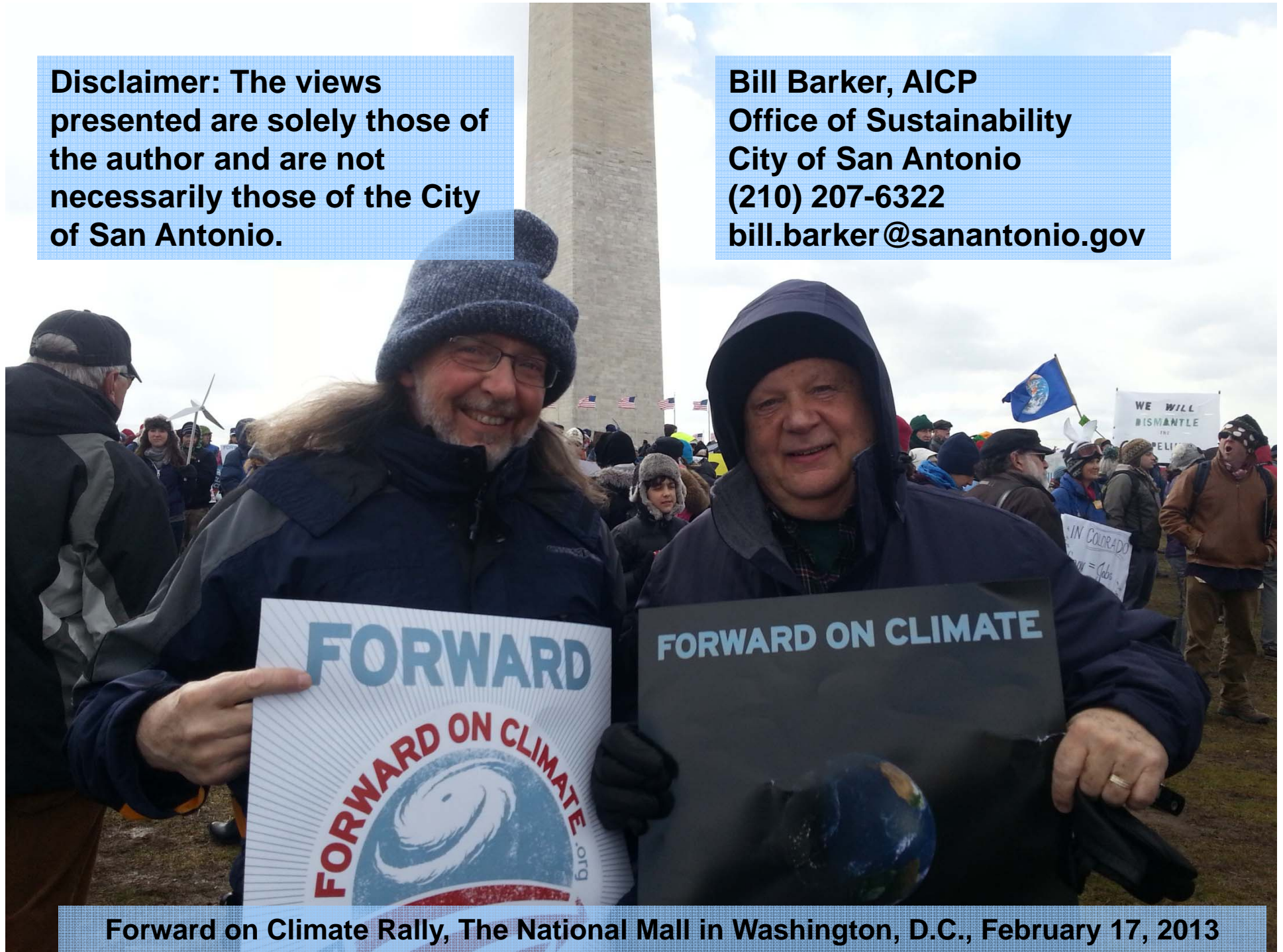
Postscript

“I would like to ask all those who have positions of responsibility in economic, political and social life, and all men and women of goodwill: Let us be protectors of creation, protectors of God’s plan inscribed in nature, protectors of one another and of the environment.”

Pope Francis, March 19, 2013

Disclaimer: The views presented are solely those of the author and are not necessarily those of the City of San Antonio.

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Forward on Climate Rally, The National Mall in Washington, D.C., February 17, 2013