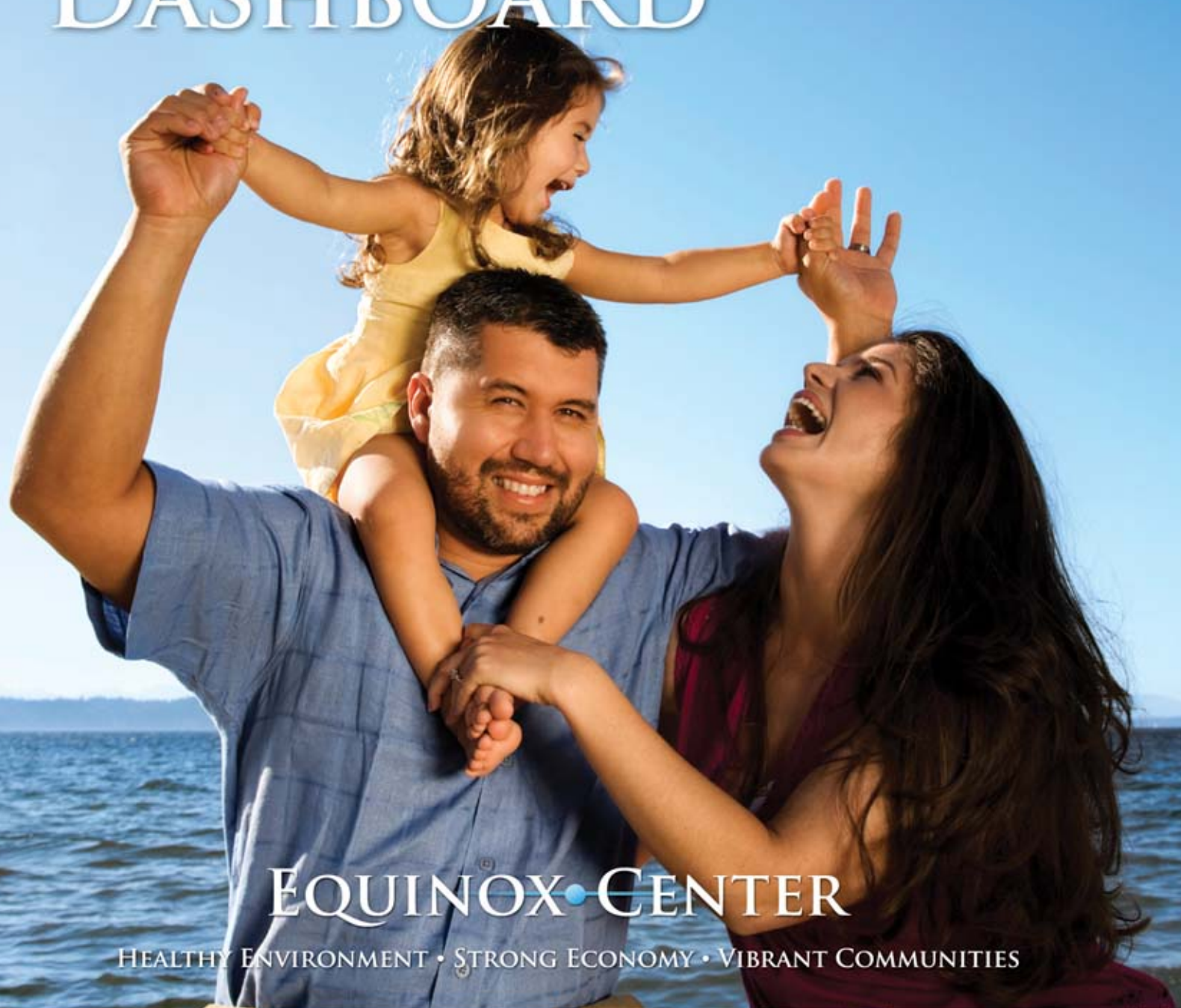


# THE 2011 SAN DIEGO REGIONAL QUALITY OF LIFE DASHBOARD



EQUINOX•CENTER

HEALTHY ENVIRONMENT • STRONG ECONOMY • VIBRANT COMMUNITIES



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The San Diego  
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A foundation for your passion

The San Diego Foundation is pleased to partner with Equinox Center to support this publication. The Foundation's Environment Working Group oversees grant making and donor engagement strategies to meet the most critical needs of San Diego's environmental nonprofits, and creates partnerships and initiatives to support those strategies.



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👍: moving in the right direction    👎: moving in wrong direction    🚩: needs attention    ★: new indicator



## ABOUT THE 2011 DASHBOARD

San Diego County's *world-class attractions, climate, recreational opportunities and innovation economy* are the foundations for a thriving, entrepreneurial region. From Borrego Springs to Chula Vista, our communities and neighborhoods are inviting to residents and visitors alike. It's no wonder that 85% of residents rate our quality of life as good or excellent (SANDAG, 2010).

Yet recent growth projections indicate we will need to accommodate another 650,000 people by 2030, which raises questions about how to maintain the region's quality of life in the future. What actions can we take today to ensure that our children and grandchildren will have enough water, be able to breathe clean air, and find good paying jobs in the next 20 years?

*Equinox Center is dedicated to helping the San Diego region craft an intelligent and sustainable path forward, through the lens of our three core values: healthy environment, strong economy, and vibrant communities.*

## THE 2011 DASHBOARD MEASURES WHAT MATTERS

The San Diego Regional Quality of Life Dashboard (Dashboard) is a tool to stimulate community dialogue around new solutions for our sustainability challenges. By monitoring and comparing our progress on critical issues such as water consumption, access to parks, climate change, transportation, and green jobs, the region can make informed and balanced policy decisions.

The 2011 Dashboard is Equinox Center's second quality of life report to the region. Based on community feedback, we added new features this year:

- *More data from local jurisdictions*, so cities can learn from each other
- *Bright spots* in the region, so we can see what is working well
- Additional *economic indicators*
- *Policy options* that include ideas we can start implementing today to move the indicator needles in the right directions

## A REGION REELING FROM THE RECESSION

Although our economy fared better than many other regions of California, the economic recession cost San Diego County 70,000 jobs, leaving many families and businesses struggling. If there is any bright spot from the economic downturn, perhaps it is that businesses and households were more careful with their budgets and moved toward more efficient use of resources, with a resulting drop in driving, waste disposal and greenhouse gas emissions. Many Dashboard indicators this year reflect these changes, but it will take time to determine the longer-term trends as the economy recovers.

### POSITIVE TRENDS

- **Energy:** By using energy more efficiently, residents kept personal energy consumption in their homes relatively flat. The region is moving steadily ahead toward the target of having 33% of total electricity supply generated from renewable resources by 2020.
- **Water Consumption:** Water usage has declined noticeably and there is optimism that trends toward a more conscientious and efficient use of water will become permanent.
- **Air Quality:** The number of unhealthy air quality days declined from 2008-2009.
- **Conserved Lands:** In the last few decades, the County has made remarkable gains in creating parks and conserving special natural areas and wildlife habitat.



## WHERE WE CAN IMPROVE

Despite the positive trends, there are some areas where San Diego County still lags behind other California regions.

- **Housing affordability:** More than half of county renters and 54% of homeowners pay more than 35% of their income on housing, putting them at financial risk.
- **Public transportation:** 76% of people still drive alone to work, mostly because of the lack of convenient, affordable public transportation options.
- **Equal access to our quality of life:** Lower income neighborhoods fared worse in air quality and access to parks.
- **Job creation in industries with a living wage:** San Diego is losing jobs in high paying industries and gaining in lower-paying jobs.
- **Energy and water consumption:** Despite the recent decrease in consumption, the region has a long way to go to use our resources more efficiently.

Many *San Diegans care deeply about these issues* and are willing to do their part to sustain our quality of life as evidenced by the thousands of residents that have turned out for public hearings, for example on the widening of the I-5 or on the County's new land use plan. *Decision makers are being asked to give careful consideration to implementing policies that will provide sustainability, and a full understanding of the links between these issues is critical.* When we implement new policies to address one issue or to resolve one community's problem, it often has consequences, both positive and negative, in other areas.

*With an informed, integrated approach and committed leadership, together we can chart a more sustainable future for the region.*



# WATER

## WATER CONSUMPTION

### WHAT IS THE MEASURE?

The *average amount of water consumed per person each day in San Diego County* (Municipal and Industrial\*). This number includes residential, commercial and industrial consumption divided by the population of the water district's service area.

### WHY IS IT IMPORTANT?

- San Diego's semi-arid climate and geography results in relatively little rainfall and a scarcity of local sources of water.
- The region imports more than 80% of its water supply from Northern California and the Colorado River, but extended droughts, crumbling infrastructure, legal concerns, climate change and the potential of earthquakes put these sources at risk.
- Using water more efficiently and thoughtfully is the most cost effective and environmentally friendly way to ensure the region has enough water to meet its needs now and in the future.

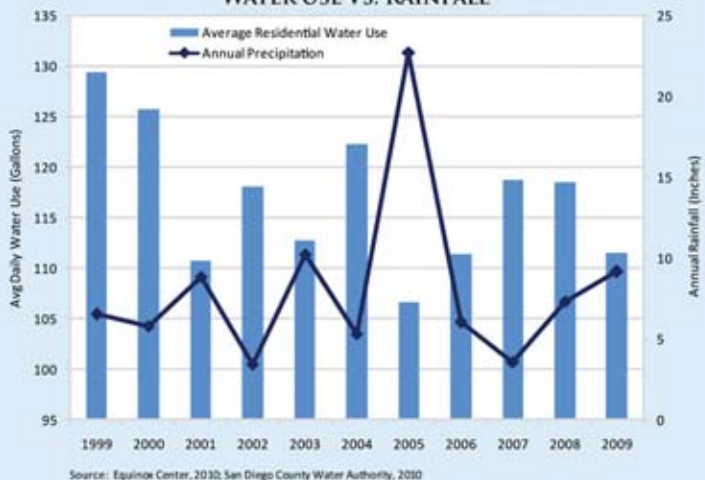
\* The M&I data includes recycled water usage, but does not include certified agricultural water usage. Some district customers use non-certified water for agriculture which may increase a district's M&I usage.

## HOW ARE WE DOING?

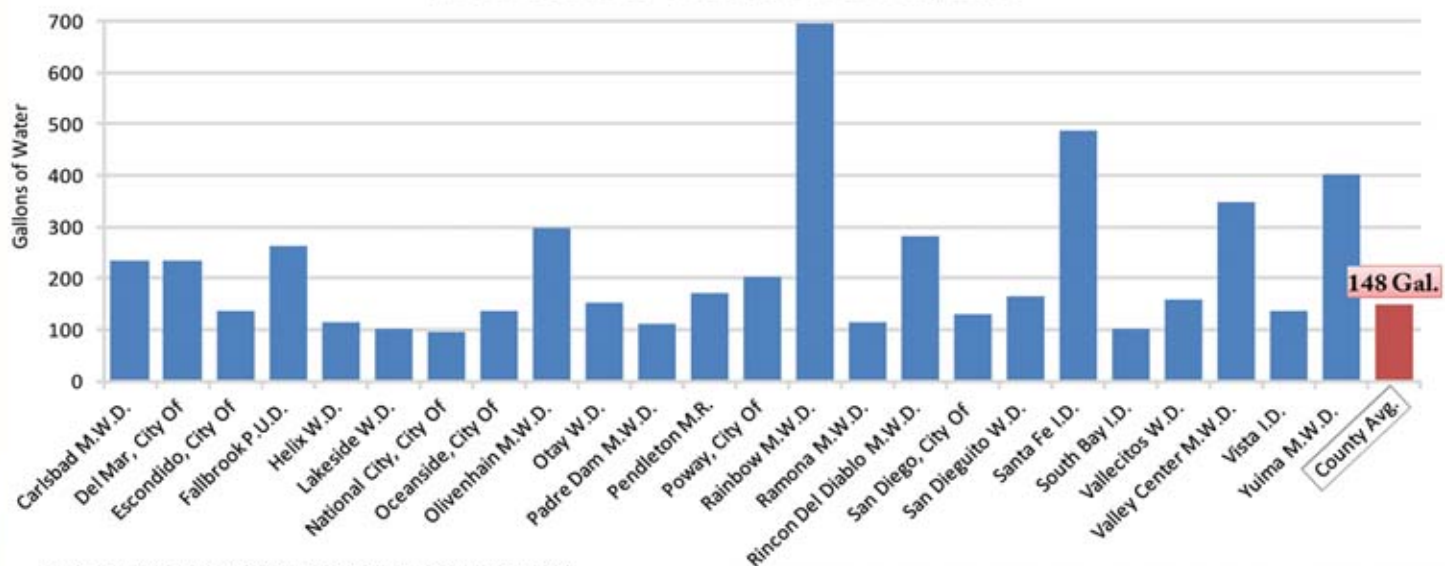
On average residents of the county used about 148 gallons of water each day, which is about a 9% decrease from water usage in 2009.

Usage among water districts varies significantly. Areas with more extensive lots generally use more water for landscaping, but other factors play a role such as the average temperature and the number and type of businesses in the community. Education campaigns, price increases and mandatory conservation measures implemented in June 2009 have resulted in reduced consumption, *but given the vulnerability of the region's imported water supply, a more comprehensive and aggressive vision on how to reduce demand in the region, particularly in high use areas, is needed.*

DAILY PER CAPITA RESIDENTIAL WATER USE VS. RAINFALL



DAILY PER PERSON MUNICIPAL & INDUSTRIAL WATER USE BY WATER DISTRICT, 2010



### POLICY OPTIONS:

- Create a Regional Water Conservation Plan similar to the successful one developed by the Southern Nevada Water Authority and its member agencies.
- Implement pricing structures that accurately reflect the value of water and the cost of replacing wasted water, and reward those who conserve.
- Provide incentives or low interest loans to homeowners who transition to low water landscapes or retrofit homes with more efficient plumbing.
- Install sub-meters in new multifamily residences and commercial buildings so water users become more aware of how much water is being consumed.

Photo: www.greenstockmedia.com



# WATER

## BEACH CLOSURES & ADVISORIES

Photo: Ocean Discovery Institute

### WHAT IS THE MEASURE?

The *number of days San Diego beaches were closed or posted with advisories because of health risks* on contact with water, as measured in beach mile days.

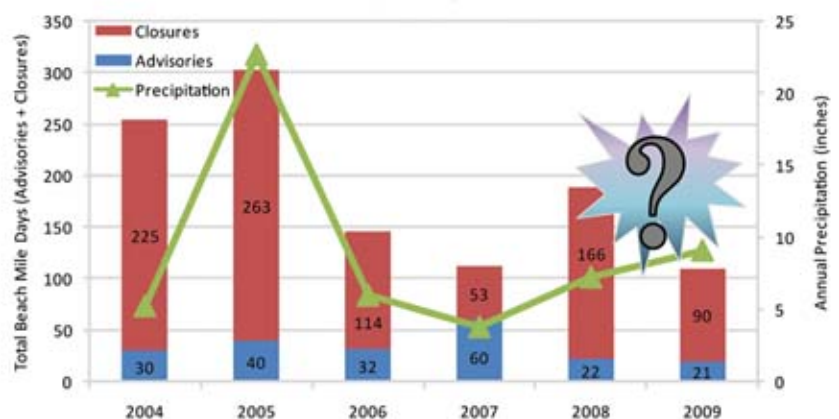
(Beach Mile Days = # of days X length of beach posted with an advisory or closed)

### WHY IS IT IMPORTANT?

- Sparkling beaches with healthy water quality are an important contributor to our quality of life and our economy.
- Activities upstream such as the use of pesticides on lawns, improper handling of pet waste, and inadequate maintenance of sewer infrastructure can degrade water quality in rivers and streams, eventually forcing the closure of beaches for swimming, fishing or other activities.

#### BEACH ADVISORIES & CLOSURES IN BEACH MILE DAYS (BMDs)

SAN DIEGO COUNTY, 2000-2009



Source: Equinox Center, 2010; County of San Diego, 2008, 2009; San Diego County Water Authority, 2010

## HOW ARE WE DOING?

Although the data indicates that beach closures and advisories increased in 2008 and were lower in 2009, the accuracy of this data is in question. 📊 *Due to State budget cuts and financial constraints, some monitoring sites have been eliminated, while others are now monitored inconsistently at best.*

Given how important the water quality of our region's beaches and bays are to the health of our residents, visitors, oceans and tourist industry, 📊 *the lack of meaningful water quality data is a troubling development.*



### POLICY OPTIONS:

- Identify funding to support adequate, consistent monitoring of our rivers, streams, bays and beaches.
- Replace broken or outdated sewage infrastructure to reduce sewage spills and support recycled water projects.
- Support the implementation of "green infrastructure", such as natural water filtration, which helps purify urban runoff before it reaches beaches and bays.
- Encourage a reduction in application of fertilizers and pesticides on farmland and other landscapes.



### BRIGHT SPOT:

**Nature's Infrastructure: Low Impact Development (LID) in National City.** LID mimics the earth's natural topography to control the amount of sediment runoff (and pollutants) flowing into our waterways. Groundwork San Diego, in conjunction with community residents and students, is restoring the Chollas Creek Watershed in National City to reduce runoff, allow better filtration of pollutants as they pass through the creek, and to provide better access for residents to enjoy and maintain the natural area.

### TOTAL NUMBER OF CLOSURES AND ADVISORIES IN 2009





## WHAT ARE THE MEASURES?

- 1) Number of acres of conserved land per 1000 residents.
- 2) Number of acres of park (including parks, schoolyards, beaches, forests, mountains and canyons) per 1000 residents.
- 3) Number of feet of existing trails vs. number of feet of planned or proposed trails in the county.

### STATUS OF TRAILS IN SAN DIEGO COUNTY, 2010



Source: Equinox Center, 2010; GreenInfo Network, 2010

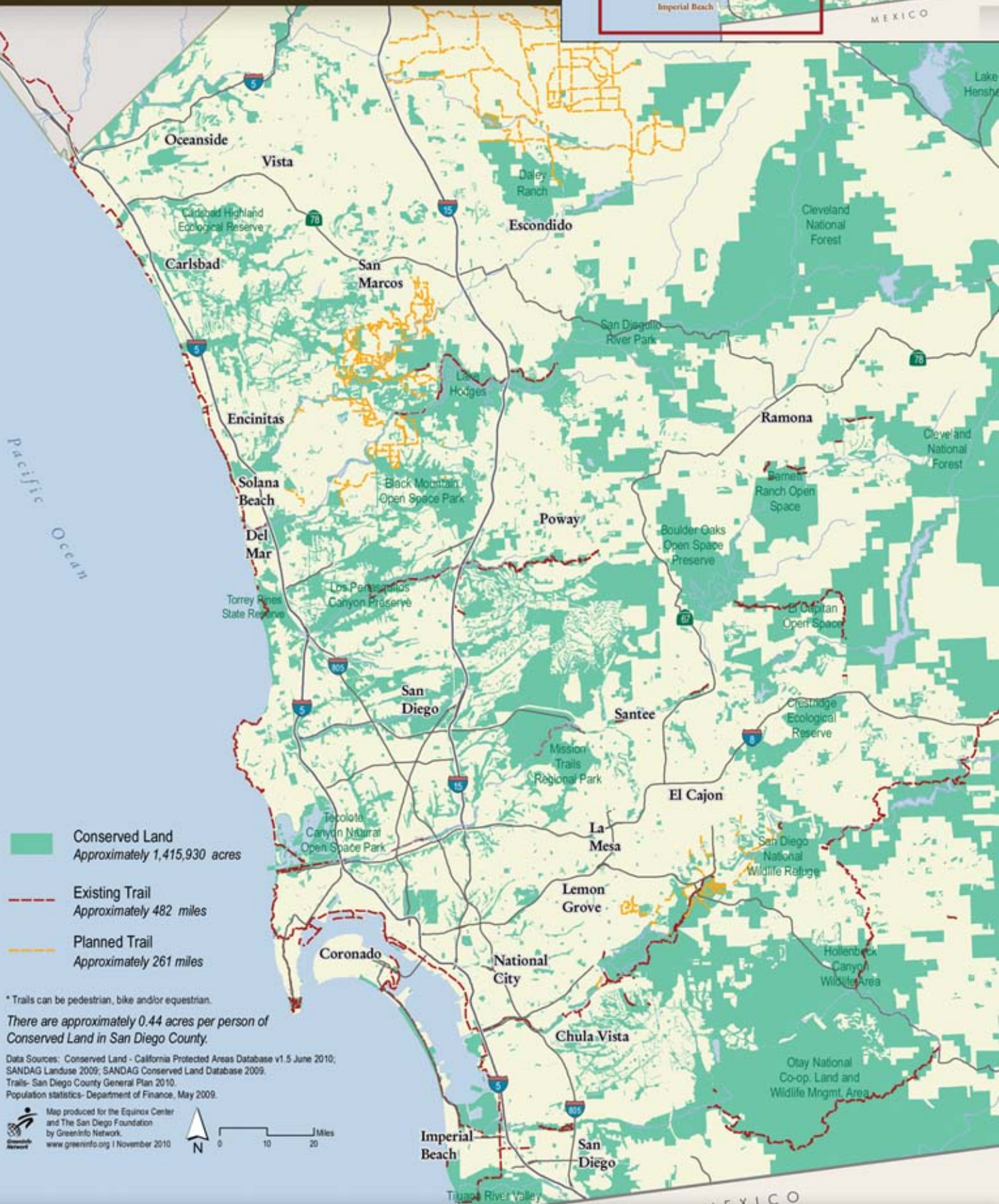
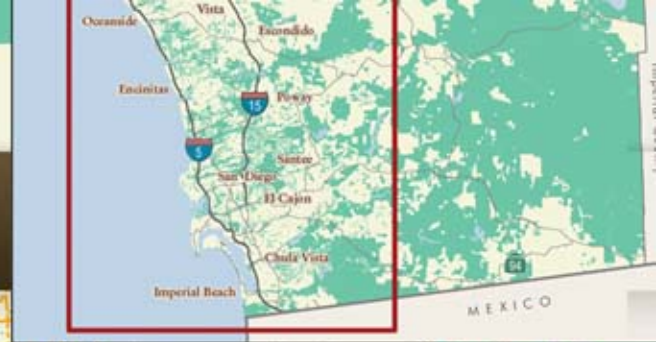
## WHY ARE THEY IMPORTANT?

- San Diego County has the largest variety of plants and animals of any county in the U.S. but also is considered a biodiversity hotspot because of the significant numbers of threatened species.
- Parks and natural areas provide venues for physical activity and places for residents and visitors to connect with nature. Children who spend time in nature are healthier and perform better in school.
- Green spaces such as Balboa Park, Mission Bay and Anza Borrego State Park attract tourists and increase nearby property values, thereby contributing to our regional economy.
- In addition to providing habitat for wildlife, natural areas provide other important environmental benefits such as flood control, water pollution control, and climate change mitigation.

## HOW ARE WE DOING?

- 45% of the county's land mass is protected - on average, about 440 acres per thousand residents - thanks in part to San Diego County's conservation planning programs and an active group of nonprofit organizations.
- Many lower income neighborhoods (see Park Access map on p.12) are considered "park poor" (i.e. less than 3 acres of green space/1000 residents). These communities would benefit significantly from increased investments to create or protect park areas and green space.
- The region is making progress on trail development. 482 miles of trails exist, while 2,140 remain in the proposed or planning phase.
- More information and policy options to increase green access can be found in The San Diego Foundation's "Parks for Everyone" report.

# SAN DIEGO COUNTY TRAILS & CONSERVED LANDS



# SAN DIEGO COUNTY PARK ACCESS



## POLICY OPTIONS

- Make targeted park investments in neighborhoods that are “park poor”.
- Continue to support the use of TransNet funds (voter-passed sales tax) to conserve wildlands in the backcountry.
- Support trail development and the restoration of canyons so natural areas can be used as park space in urban neighborhoods.
- Ensure existing parks are safe for children to play in and establish crime watches near parks if necessary.
- Develop transportation options that make it easy to walk, bike or take public transit to parks.

- 
- Less than 3 acres parkland per 1000 people
  - More than 3 acres parkland per 1000 people
  - Below \$47,331 Median Household Income

Data Sources: Demographics mapped by census blockgroup using 2000 census data, Existing Park/Green Space - California Protected Areas Database v1.2 March 2009, [www.calands.org](http://www.calands.org).



Map produced for the Equinox Center and The San Diego Foundation by GreenInfo Network.  
[www.greeninfo.org](http://www.greeninfo.org) 1 November 2010



0 10 20 Miles



# LAND USE

## RESIDENTIAL DEVELOPMENT

### WHAT IS THE MEASURE?

The *number of acres developed or zoned for residential use for every additional 100 persons* in San Diego County.

### HOW ARE WE DOING?

The number of acres of land consumed for residential development has declined from the 2004-2008 average of 14 acres/100 residents to 9.4 acres/100 new residents. Though some of the decline is the result of a stagnant housing market, the numbers also reflect a trend toward more multifamily homes being built in the region.



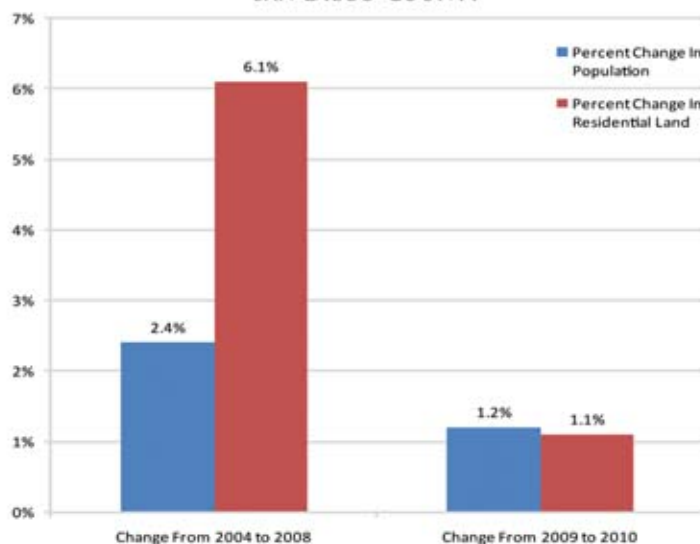
#### BRIGHT SPOT:

*El Cajon's Downtown Revitalization.* The Community Development Corporation and the El Cajon Redevelopment Authority have taken the lead on revitalizing the downtown area, adding over 125 new businesses, 600 new jobs and increasing property values by 180%. The city is prepared to add 13,000 new housing units in its downtown district, resulting in a better jobs/housing balance and increasing revenues to the city.

### WHY IS IT IMPORTANT?

- SANDAG estimates that we will need approximately 300,000 new housing units in the county in the next 20 years to accommodate our families and new residents. If we do nothing to address the way we accommodate growth, we risk consuming farmland, wildlife habitat and natural areas.
- Employing more compact development patterns can reduce water and electricity consumption, save residents money in fuel costs by reducing vehicle miles traveled, improve air quality and ensure that future generations will have access to open space.

CHANGE IN POPULATION VS.  
CHANGE IN RESIDENTIAL LAND  
SAN DIEGO COUNTY



Source: Equinox Center, 2010; SANDAG 2010; California Dept. of Finance, 2010



#### POLICY OPTIONS:

- Encourage "infill" development in urban or village areas by creating master neighborhood plans which allow for streamlined permitting and revised zoning ordinances.
- Reduce or allow flexibility in parking requirements if residential development is in walking distance to transit.
- Ensure implementation of Senate Bill 375 (2008) at the local level to ensure better land use and transportation planning.

# HOUSING AFFORDABILITY

INCOME ALLOCATION TOWARDS HOUSING

## WHAT IS THE MEASURE?

*The percent of residents who spend more than 35% of gross income on housing in the San Diego region.*

## WHY IS IT IMPORTANT?

- The cost of housing affects how much income residents will have available to spend on other basic needs. Spending more than 35% of income on housing is believed by financial institutions and regulators to put consumers at financial risk.
- Housing costs influence how competitive our region is against other metropolitan areas in attracting or retaining businesses and employees.
- Housing affordability affects transportation patterns. When there is not enough affordable housing in core areas, people seek residences in less expensive areas, often farther away from jobs and services. This results in higher regional vehicle miles traveled, increased gasoline consumption and air pollution, and higher transportation costs and commute times for residents.



## BRIGHT SPOTS:

### Using the Sun to Make Housing More Affordable.

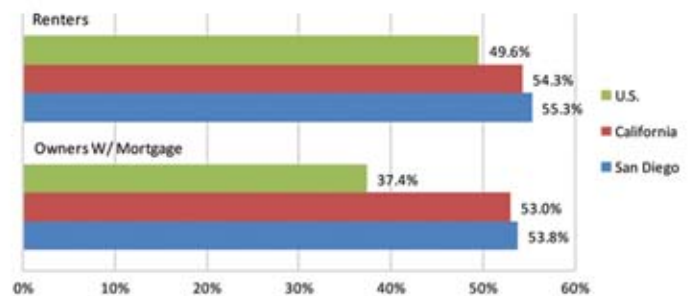
SOLARA is the first affordable housing complex in the nation that is almost entirely solar powered, saving residents money on their utility bills. Located in the City of Poway, it was created through a partnership between Community Housing Works, and the Poway Redevelopment Agency. Another partnership that includes SDG&E, the California Center for Sustainable Energy and the San Diego Community Housing Corporation will help another 1,330 families in San Diego County by installing solar power in fourteen affordable housing complexes.

## HOW ARE WE DOING?

About half of San Diego's housing units are rentals and 55% of all renters in the region spend more than 35% of their income on rent. Homeowners also suffer from high housing prices: *San Diego's median house price is the 10th highest of the 50 largest metro areas, and rents are the fourth highest.*

### PERCENT OF OCCUPANTS SPENDING MORE THAN 35% OF THEIR INCOME ON HOUSING

SELECT REGIONS, 2008



Source: Equinix Center, 2010; U.S. Census Bureau, 2008

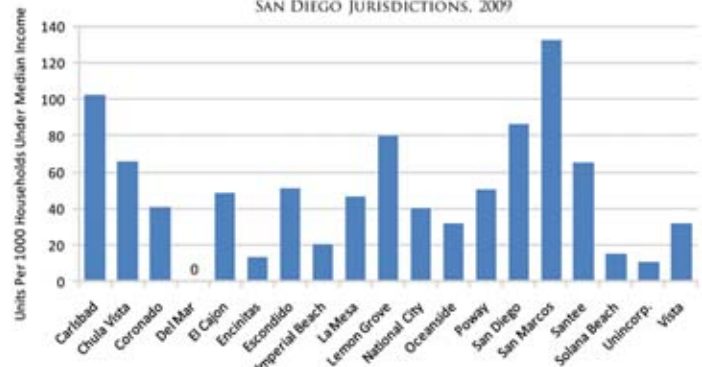


## POLICY OPTIONS:

- Consider forming a regional affordable housing trust, similar to one developed in the Silicon Valley by employers, local and regional governments, nonprofits and foundations, which provides loans to affordable housing developers and first-time homebuyers.
- Encourage cost reduction of new housing through expedited permitting and streamlined financing.
- Support infrastructure investments (i.e. transit, water and sewer) in areas where denser, affordable housing can be built.
- Provide incentives to market rate builders for production of affordable housing.

## DESIGNATED AFFORDABLE HOUSING UNITS

SAN DIEGO JURISDICTIONS, 2009



Source: Equinix Center, 2010; San Diego Housing Federation, 2009; SANDAG, 2010

# GREEN JOBS

## JOB CREATION

### WHAT IS THE MEASURE?

Percent of new *green technology jobs* out of the total number of new technology jobs created in the county.

### WHY IS IT IMPORTANT?

- A recent San Diego Foundation survey found that more than 70% of voters believe we can have both a prosperous economy and a healthy environment.
- Green jobs help improve our local and global environment.
- The technology and services produced by green technology companies save consumers and businesses money.
- Forward-looking federal, state and local policies that stimulate green jobs in San Diego County can also help our region be more competitive in the global clean tech market.

### HOW ARE WE DOING?

Out of all the new technology jobs created in the San Diego region in 2009, about 15% (155) were focused on environmental services and technology. Technology jobs were created in almost every jurisdiction in the county, although the vast majority of green tech jobs were established in the City of San Diego, with Vista having the 2nd highest number.

For more information about green jobs in the region, see The San Diego Foundation's "Economic Vitality" report released in December 2010.



### POLICY OPTIONS:

- Develop public-private partnerships to create training programs and career pathways for all levels of workers to benefit from the green economy.
- Incentivize or encourage green tech incubators and business development in the region to attract new environmental technology companies and green jobs.

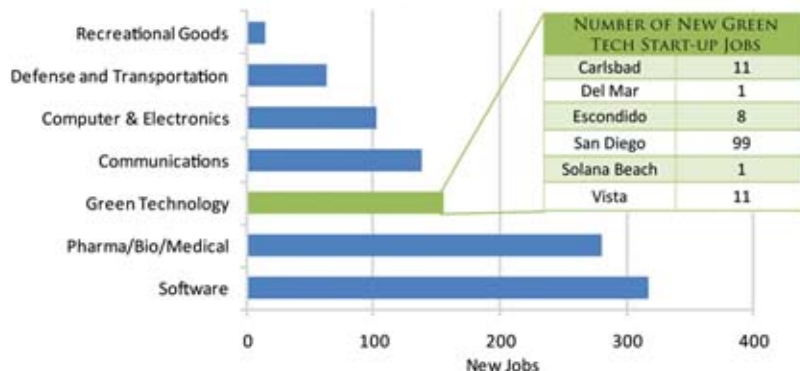


### BRIGHT SPOT:

**On the Cutting EDGE.** Educating and Developing Workers for the Green Economy (EDGE) was initiated in 2010 by a coalition that includes CleanTECH San Diego, BIOCOM, San Diego Regional EDC, San Diego Center for Algae Biotechnology (SD-CAB) and the San Diego Workforce Partnership. The project creates opportunities for unemployed and dislocated workers and ensures that the biofuels industry has a trained workforce as companies continue to grow in this region.

### SAN DIEGO COUNTY TECHNOLOGY START-UPS

NEW JOBS, 2009



Source: Equinox Center, 2010; CONNECT, 2010

# FOCUS ON ECONOMIC PROSPERITY

## EMPLOYMENT AND WAGES

### WHAT IS THE MEASURE?

The number of persons employed annually in San Diego County compared to the working age population.

### WHY IS IT IMPORTANT?

- Employment is a fundamental determinant of our region's economic prosperity. An adequate supply of jobs that pay enough to support a stable quality of life ensures our region's well-being.
- The health of the business community is reflected in the number of new jobs generated.
- A sustainable economy offers a diversified mix of jobs to community members of all skills and backgrounds.

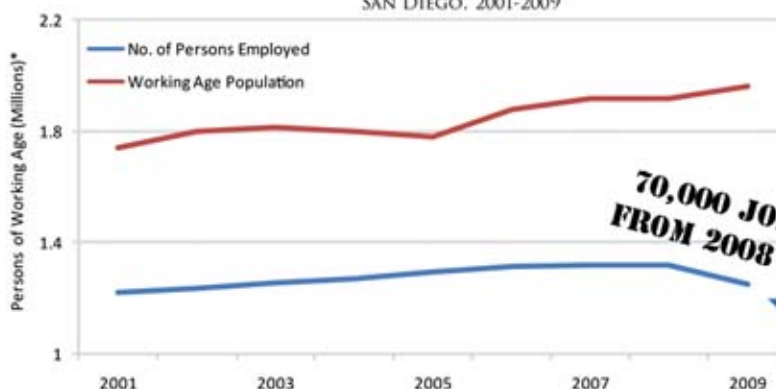
#### CHANGES IN EMPLOYMENT SELECT CA REGIONS 2001-2009

SAN DIEGO	<b>+3%</b>
CALIFORNIA AVERAGE	-2%
LOS ANGELES	-4%
SAN FRANCISCO	-6%
SANTA CLARA	<b>-16%</b>

Source: Equinox Center; Bureau of Labor Statistics 2010

#### NUMBER OF PERSONS EMPLOYED & WORKING AGE POPULATION

SAN DIEGO, 2001-2009



\*Civilians aged 16 to 64 are considered "Persons of Working Age"

Source: Equinox Center, 2010; Bureau of Labor Statistics, 2009; U.S. Census Bureau, 2001-2009

# HOW ARE WE DOING?

San Diego County has been profoundly impacted by the economic recession gripping the entire nation, losing 70,000 jobs from 2008-2009. However, we have fared better than other regions in the state when considering the total change in employment over the last decade.

Job growth or losses concentrated in particular industries can make the region's economy particularly vulnerable. Since 2000, the region has lost jobs in some higher and mid-paying sectors such as information, manufacturing and construction and gained in lower paying fields such as leisure and hospitality.

**A recent study conducted by the Center on Policy Initiatives indicates that 30% of San Diego County households don't earn enough to live self-sufficiently.** This puts pressure on the government safety net, and causes people to choose to live in less expensive areas, for example Riverside County or Baja California, Mexico, increasing commute times, traffic congestion and vehicle emissions.

## POLICY OPTIONS:

- Promote workforce training programs and support business development in sectors that pay livable wages, such as green jobs, technology and communications.
- Provide tax incentives for companies that reuse currently developed areas, are located next to public transit, and are aligned with smart growth planning.
- Encourage business adoption of cost-saving practices such as energy and water efficiency and recycling and reuse programs. Reduced costs will keep businesses healthy and help retain jobs in the region.

**AVERAGE ANNUAL WAGE AND % CHANGE IN EMPLOYMENT**  
SAN DIEGO COUNTY, 2000-2009



\*Other Services include the following industries: home/auto/machinery repair, personal/pet care, nonprofits and membership organizations  
Source: Equinox Center, 2010; Bureau of Labor Statistics, 2010; City of San Diego, 2010

# TRANSPORTATION VEHICLE MILES TRAVELED

## WHAT IS THE MEASURE?

*Per capita vehicle miles traveled (VMT) is an estimate (based on actual data) of the average number of freeway miles driven by an individual in San Diego County on a daily basis.*

## WHY IS IT IMPORTANT?

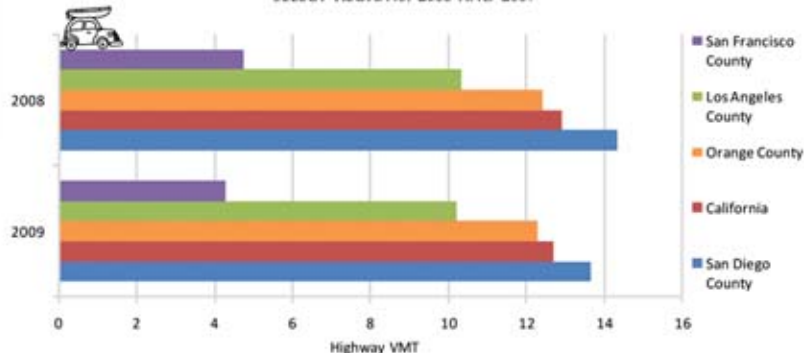
- Vehicle Miles Traveled (VMT) contributes to congestion and traffic delays, thereby affecting fuel consumption, air quality and health care costs.
- Through Senate Bill 375 (2008), the California Air Resources Board (CARB) has established targets for San Diego County to reduce per capita greenhouse gas emissions from cars and light trucks, which will require a significant reduction in VMT in the region.

## HOW ARE WE DOING?

On average, San Diego County residents drove about 13.6 highway miles per day in 2009, a decline of about 0.7 miles per person from 2008. While the decrease moves us in the right direction, *our region's per capita VMT is still significantly above other regions of the state.* San Diego can become much more proactive in reducing VMT. In Los Angeles, for example, a coalition of business, environmental and community organizations have developed the "30/10 Initiative" which will construct 30 years of public transit projects in 10 years, reducing VMT by 191 million miles annually.

Jurisdictions in the county that are job, service or population centers such as San Diego, Escondido or Chula Vista tend to have the highest aggregate vehicle miles traveled, creating an opportunity for targeted investments in alternative modes of transportation.

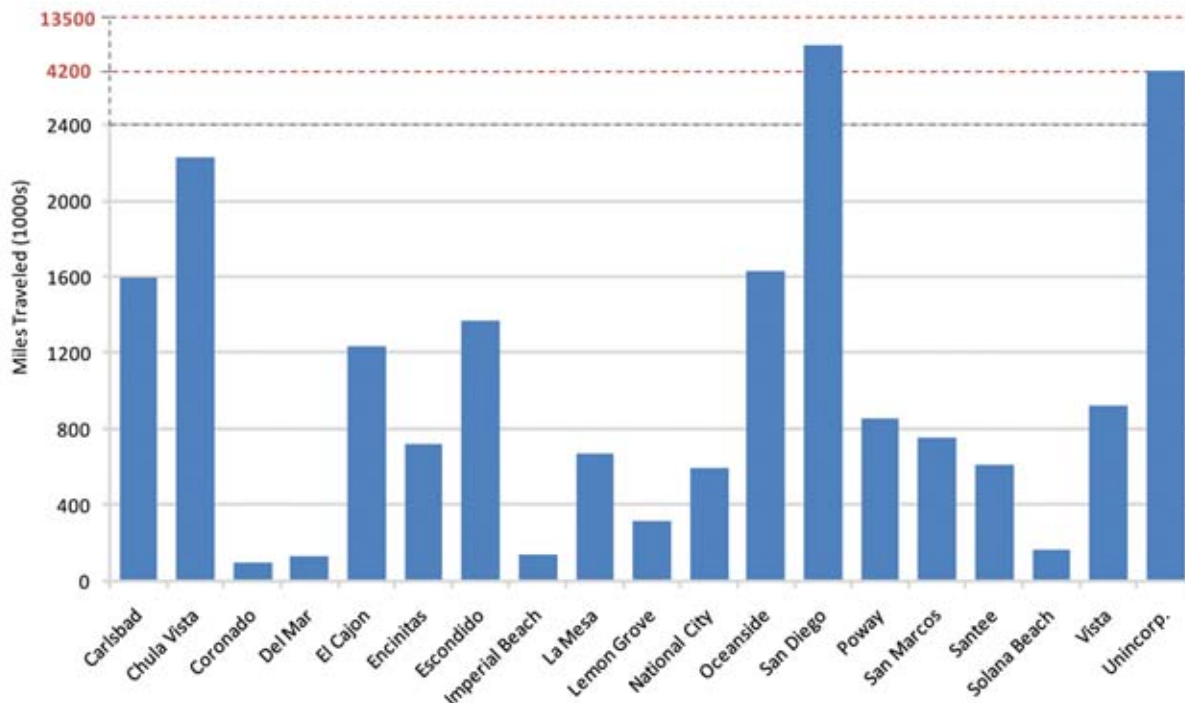
HIGHWAY VEHICLE MILES TRAVELED (VMT)  
PER CAPITA PER DAY  
SELECT REGIONS, 2008 AND 2009



Source: Equinox Center, 2010; California Department of Transportation, 2008, 2009

## TOTAL VEHICLE MILES TRAVELED—ALL ROADS AND FREEWAYS

SAN DIEGO COUNTY JURISDICTIONS, 2009



Source: Equinox Center, 2010; California Department of Transportation, 2010



### POLICY OPTIONS:

- Focus on increasing transit ridership in areas with high VMT and dense populations (e.g. urban cores like San Diego and Chula Vista) by providing incentives for travelers to shift from driving to public transit, including commute trip reduction programs, employee transit subsidies, parking pricing and cash out.
- Cluster residential development in neighborhood centers and villages in the more suburban and rural areas of the county.
- Coordinate economic development, transportation and land use planning to encourage more walkable or bikable communities.
- Encourage telecommuting and downtown or home-based businesses.

Photo: [www.greenstockmedia.com](http://www.greenstockmedia.com)



# TRANSPORTATION TRANSIT RIDERSHIP

## WHAT IS THE MEASURE?


The percent of the population that commutes to work via public transit.

Photo: SANDAG

## WHY IS IT IMPORTANT?

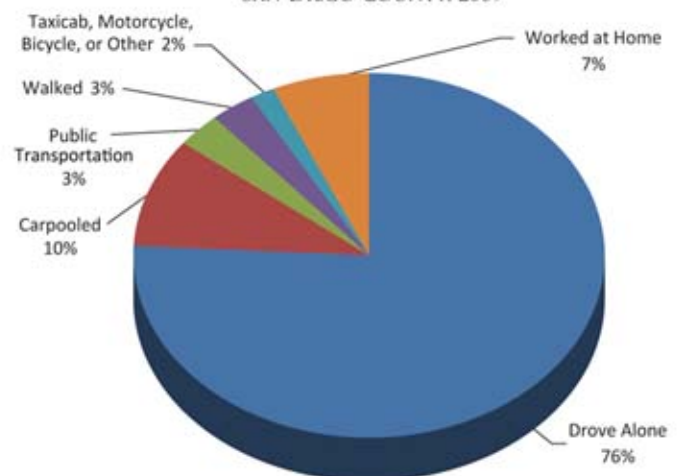
- A recent SANDAG survey indicated that when it comes to solutions to our traffic congestion issues, the single highest priority for San Diego residents is to improve public transit.
- Public transit can help achieve the goals set by Senate Bill 375 (2008) which require regions of the State to reduce vehicle miles traveled and corresponding greenhouse gas emissions.
- Increasing transit ridership and unclogging highways will support the local economy by making goods movement on the roadways more efficient.
- Recent studies show that transit projects generate more jobs per dollar spent than other transportation projects.
- Public transit also serves those who can't afford to own a car or who can't drive because of a disability, and is also one of the more cost effective ways to achieve public health objectives.

## HOW ARE WE DOING?

 76% of commuters choose to drive to work alone while only a small percentage choose public transit, resulting in major traffic delays, especially during peak travel periods.

### TRANSPORTATION TO WORK

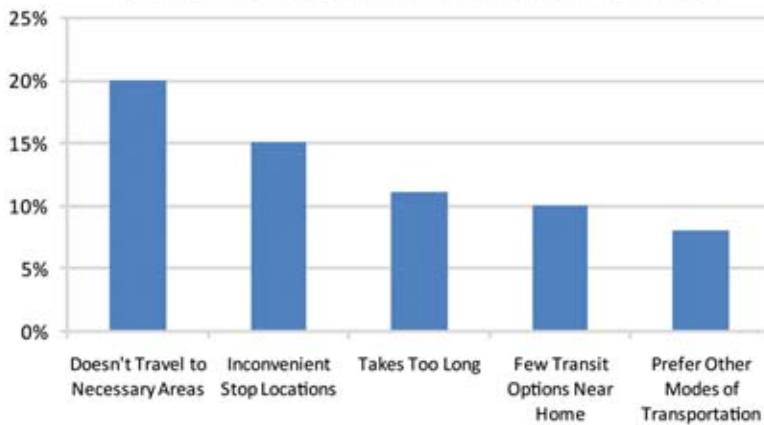
SAN DIEGO COUNTY, 2009



Source: Equinox Center, 2010; American Community Survey, 2009 (Table C08301)

In mid-2011, SANDAG will approve an updated Regional Transportation Plan which is an opportunity to set serious goals for transit ridership, remove the barriers to public transit and encourage other alternative means of transportation as well.

### PRIMARY BARRIERS TO INCREASED PUBLIC TRANSIT RIDERSHIP IN SAN DIEGO COUNTY



Source: Equinox Center, 2010; San Diego Regional Transportation Public Opinion Study, 2008 (Fig. 21)



### POLICY OPTIONS:

- Advocate for shifting some federal highway transportation funds to public transit projects and prioritizing transit projects locally.
- Improve public transit service quality, including increased service frequency and speed, and improved comfort and security.
- Consider fare free zones or transit malls in core areas.
- Expand SANDAG's Smart Growth Incentive Program, which leverages private dollars for communities to invest in compact, mixed use development focused around public transit.

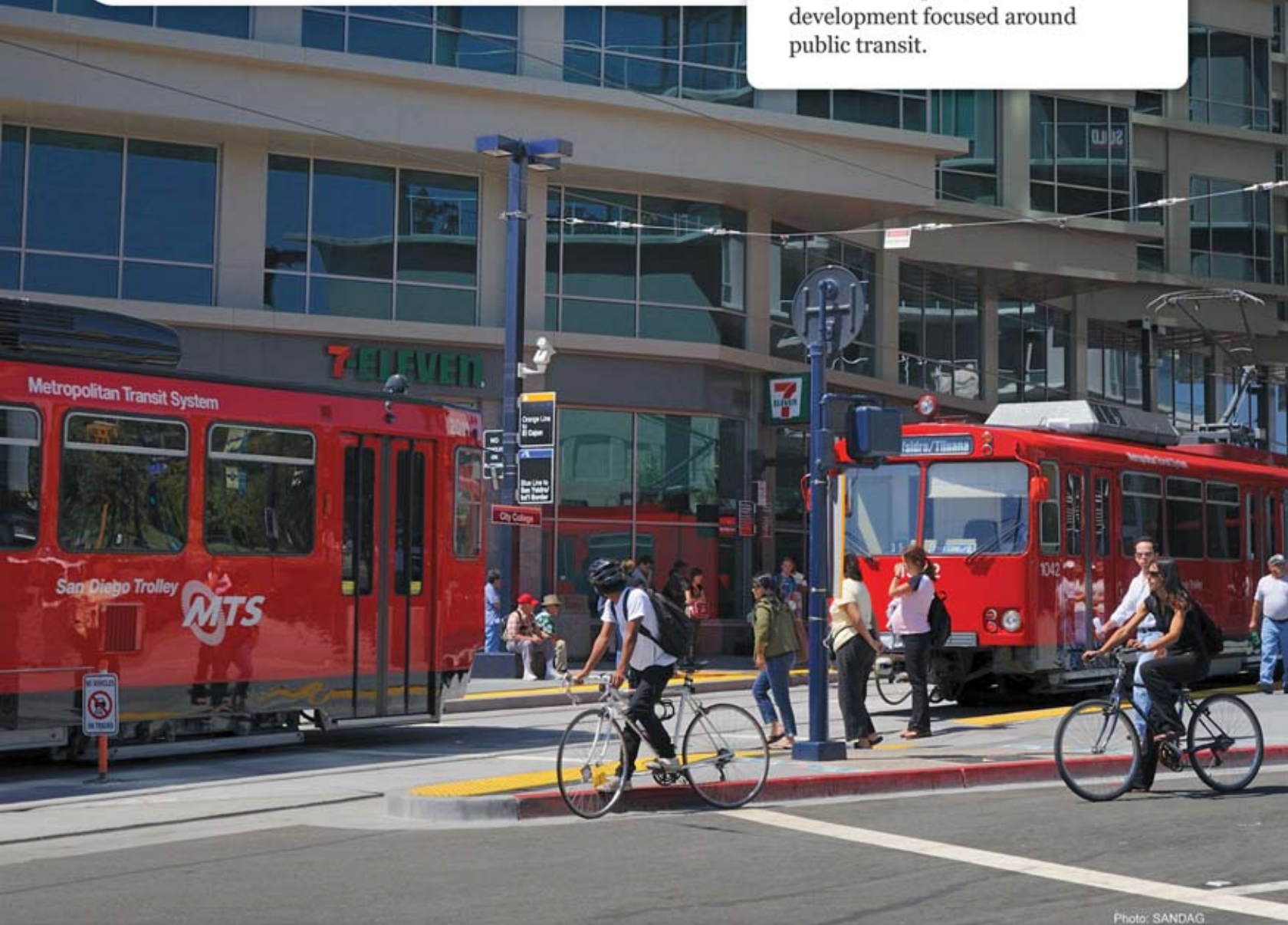


Photo: SANDAG

# ENERGY

## RENEWABLE ENERGY

### WHAT IS THE MEASURE?

*Percent of total* electricity supply generated from renewable resources for SDG&E's service area.

### WHY IS IT IMPORTANT?

- More than half of San Diego County's electricity is currently sourced from fossil fuels—primarily natural gas.
- Although much cleaner than other fossil fuels, burning natural gas produces greenhouse gas and other emissions, especially in older, less efficient plants.
- Studies from University of California, Berkeley have found that renewable energy technologies provide more local jobs than a fossil fuel-based economy. They also build on San Diego's clean tech assets.
- Increasing renewable energy improves air quality, reduces public health costs, and increases energy security for the region by diversifying our energy portfolio.
- The State of California's Renewable Portfolio Standard (RPS) required electric utilities to increase procurement from eligible renewable energy resources to 20% of their retail sales by 2010.
- In 2008, Governor Schwarzenegger issued an Executive Order with a target of 33% renewables by 2020 and SANDAG aims for a 45% renewable target for San Diego County by 2030.

### HOW ARE WE DOING?

SDG&E made significant gains in its renewable energy portfolio between 2008 and 2009, almost doubling its supply. The region also saw substantial increases in residential solar (not counted in SDG&E's Renewable Portfolio supply, or RPS).

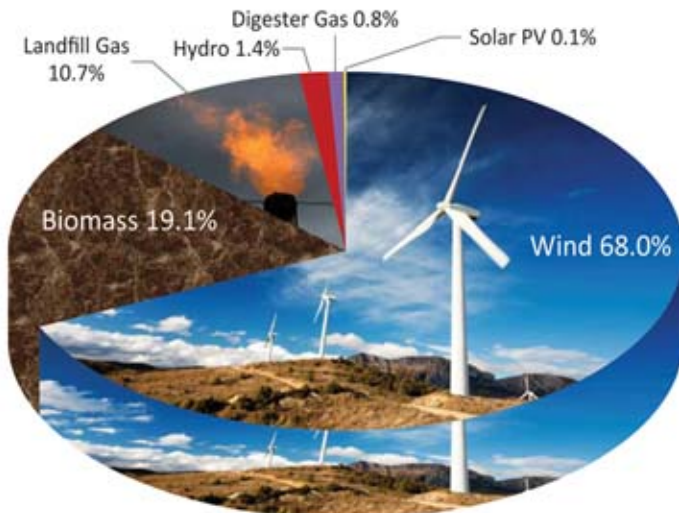
SDG&E was able to comply with the RPS mandate by using flexible credits from previous years. However, the region's renewable energy supply by the end of 2010 was still less than the 20% target. The utility is redoubling its efforts to meet the 2020 target and to overcome the challenges associated with reaching it, including the complexity of permitting large scale renewable facilities and new transmission lines.

RENEWABLE ENERGY AS  
A PERCENT OF SDG&E SALES, 2009



Source: Equinox Center, 2010; California Public Utilities Commission, 2010; SDG&E 2010

## SDG&E RENEWABLES MIX 2009



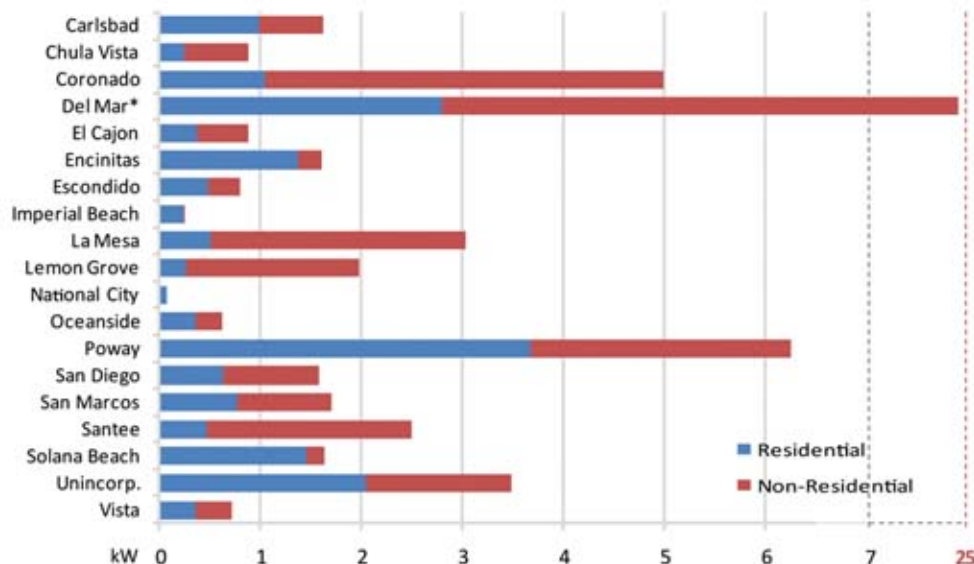
Source: Equinox Center, 2010; SDG&E, 2010



## POLICY OPTIONS:

- Establish regional or multi-jurisdictional “renewable energy parks” that are pre-permitted for large scale renewable energy projects.
- Plan for adequate transmission capacity that minimizes environmental or recreational impacts in the County.
- Provide incentives for home builders to “pre-wire” for solar PV or “pre-plumb” for solar water heaters.
- Encourage smaller scale renewable energy projects by revising zoning, HOA or other codes that hinder installation of renewable energy technologies.

## KILOWATTS OF SOLAR INSTALLED PER 100 RESIDENTS SAN DIEGO JURISDICTIONS, 2010



Source: Equinox Center, 2010; California Center for Sustainable Energy, 2010

\* While other jurisdictions' non-residential values are comprised of multiple installations, Del Mar's is attributable to one very large non-residential solar installation.

# ENERGY

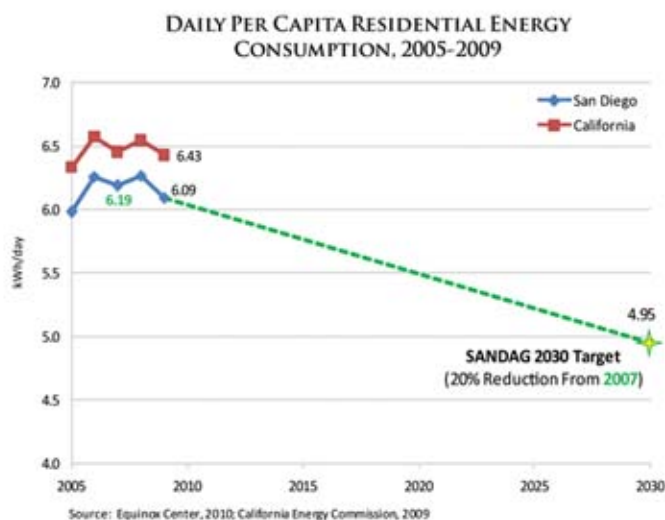
## RESIDENTIAL ENERGY CONSUMPTION

### WHAT IS THE MEASURE?

Total per capita per day *residential electricity* use.

### HOW ARE WE DOING?

Electricity consumption in San Diego County dropped in each of the last two years and is below the California average. The economic downturn continues to play a role in the decline, but significant investments in energy efficiency programs in the last year are also likely having an impact.



### BRIGHT SPOT:

**Get Smart About Energy Efficiency.** SDG&E is on track to install “smart meters” throughout all of San Diego County by the end of 2011. Smart meters convey real-time energy usage and cost information to consumers, allowing residents to make more informed decisions. A statewide pilot study demonstrated consumers used 14% less electricity during high energy usage times when using smart meters.

### WHY IS IT IMPORTANT?

- Ample and affordable energy is critical to every aspect of our residential life.
- Building new power plants can be difficult due to regulatory, environmental and neighborhood concerns, and requires large capital outlays.
- Using electricity more efficiently is the least expensive and most environmentally friendly way to meet the energy needs of a growing population.
- Using less energy reduces greenhouse gas emissions, improves the region’s air quality and reduces public health spending resulting from air pollution.



### POLICY OPTIONS:

- Incentivize homeowners to conduct energy audits and implement whole house energy efficiency retrofits.
- Explore opportunities to combine energy and water efficiency education efforts and programs.
- Support projects that voluntarily exceed minimum energy codes through favorable fee structures, and streamlined or fast track permitting.
- Incubate clean tech companies developing “smart appliance and smart house” technologies to interface with smart meters.
- Create or support job training programs for energy audits to meet the need for more trained workers in the region.

# CLIMATE

## GREENHOUSE GAS EMISSIONS

### WHAT IS THE MEASURE?

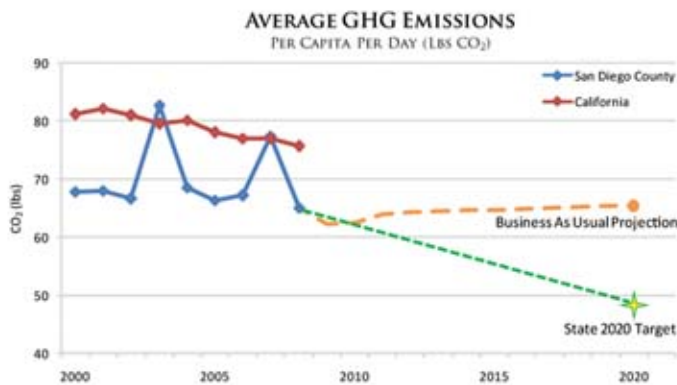
*Per capita daily greenhouse gas emissions, measured in pounds of carbon dioxide equivalent (CO<sub>2</sub>e).\**

### WHY IS IT IMPORTANT?

- Climate change could threaten San Diego's quality of life by causing longer and more frequent droughts, reducing water supplies, increasing the risk of wildfires, and causing the loss of coastal lands and beaches.
- A recent San Diego Foundation survey found that the vast majority of voters believe the San Diego region should take a leadership role in reducing greenhouse gas emissions.

### HOW ARE WE DOING?

The most updated countywide GHG inventory conducted by USD's Energy Policy Initiative Center (EPIC) shows a decline in emissions from 2007-2008, which is partly due to the high emission levels in 2007 resulting from wildfires. Many other indicators that are linked to greenhouse gas emissions have declined due to the economic recession, including energy consumption, VMTs, and waste disposal. However, the region still needs to make significant cuts in emissions from business as usual scenarios in order to meet State targets.



zero Emission

Photo: www.greenstockmedia.com

### MUNICIPAL ACTION ON CLIMATE CHANGE

Jurisdiction	Baseline Inventory	Reduction Targets	Develop Plan	Implement Plan	Monitoring & Evaluation
Carlsbad	●				
Coronado	In Progress				
Chula Vista	●	●	●	●	●
Del Mar	In Progress	In Progress	In Progress		
El Cajon	In Progress				
Encinitas	●	In Progress	In Progress		
Escondido	In Progress				
Imperial Beach	●				
La Mesa	●				
Lemon Grove	In Progress				
National City	●	In Progress	In Progress		
Oceanside	In Progress				
Poway	●				
San Diego	●	●	●	●	●
San Marcos	●				
Santee	In Progress				
Solana Beach	●				
Vista	●				
County of San Diego	●	In Progress	In Progress		

Source: Equinox Center, 2010; ICLEI, 2010

With support from The San Diego Foundation and other non-profits such as the International Council for Local Governments for Sustainability (ICLEI), many jurisdictions in the county have made significant strides in assessing their greenhouse gas emissions and several have set targets and are developing plans to reduce emissions. We will be one of the first regions in the country with baseline inventories for all community and local government operations.



### POLICY OPTIONS:

Policy options suggested for Vehicle Miles Traveled, Transit Ridership, Residential Energy Consumption, Renewable Energy and several other indicators will all help to address greenhouse gas emissions.



### BRIGHT SPOT:

**Chula Vista's Home Upgrade Carbon Downgrade Program.** The City of Chula Vista has launched a new program to reduce greenhouse gas emissions and save money on energy and water bills. The City uses local, state and federal funding, and works with utility companies to provide free energy and water evaluations for homes and businesses, rebates for more efficient appliances, incentives to complete home energy retrofits, and low interest financing for homeowners.

\*All greenhouse gasses, such as methane and nitrous oxide, are compared to CO<sub>2</sub> and measured in the equivalent amount of CO<sub>2</sub> (CO<sub>2</sub>e), in terms of their effect on trapping heat in the Earth's atmosphere.

# AIR QUALITY

## UNHEALTHY DAYS FOR ELDERLY & CHILDREN

### WHAT IS THE MEASURE?

*Number of days air quality is considered unhealthy for children and older adults in San Diego County, based on EPA's standards and air quality index.*

www.LamarPics.com

### WHY IS IT IMPORTANT?

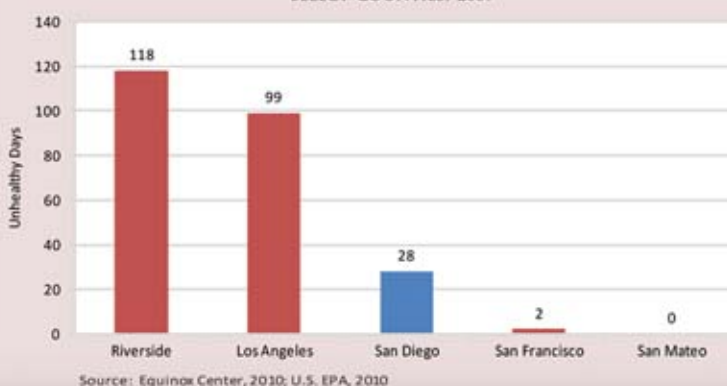
- Air pollution costs the California economy more than \$28 billion annually, about \$1,200/person in Southern California, because of lost worker productivity and public health costs.
- Pollution-related health care costs drive up health insurance premiums, increasing costs for individuals and employers who contribute to their employees' health care.
- Children living in communities with higher levels of traffic-related air pollution have a 30 percent higher risk of new asthma cases, often resulting in higher hospitalization rates and missed days at school.
- If climate models are accurate, we will see an increase of hot sunny days in our region, with an increase in ozone pollution, and corresponding health problems.

### HOW ARE WE DOING?

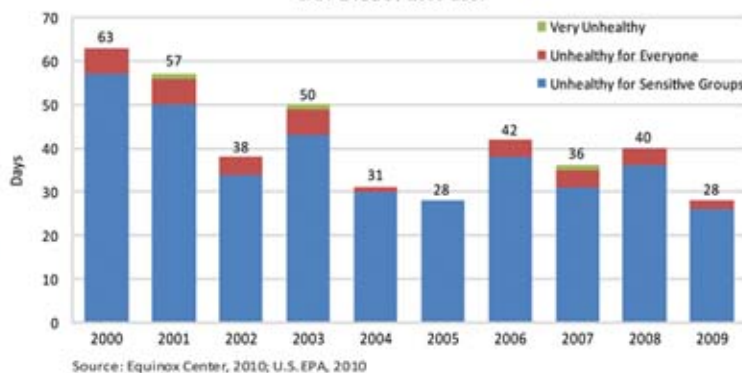
Air quality was unhealthy for children and the elderly for 28 days in 2009, an improvement from 2008. This is a positive result for the region as a whole, and in comparison to neighboring counties such as Riverside and Los Angeles, San Diego has far fewer bad air days.

Unfortunately, some parts of the county experience higher air pollution-related illnesses, such as asthma. For example, children's asthma hospitalization rates are higher in areas with lower income and minority populations that are closer to major highways or other pollution sources (see map).

NUMBER OF UNHEALTHY AIR QUALITY DAYS  
FOR OLDER ADULTS & CHILDREN  
SELECT COUNTIES, 2009



NUMBER OF UNHEALTHY AIR QUALITY DAYS  
FOR OLDER ADULTS & CHILDREN  
SAN DIEGO, 2000-2009

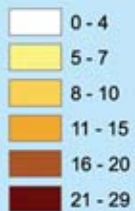


### POLICY OPTIONS:

- Incorporate all health impacts and costs when making decisions about how to spend transportation dollars regionally.
- Plan communities so there is housing near jobs to reduce vehicle miles traveled, air pollution and public health costs.
- Conduct "walk audits" of neighborhoods and identify how to make communities more pedestrian friendly.
- Incentivize development of innovative, less polluting biofuels such as algae.

# CHILDREN'S ASTHMA HOSPITALIZATION RATES

CHILDREN'S ASTHMA  
HOSPITALIZATION RATES  
(Per 10,000 Persons)



0 1.5 3 6 Miles

Source: Equinox Center, 2010; Office of  
Statewide Health, Planning, & Development,  
2010. Environmental Health Coalition, 2010.  
Map Layers from SanGIS



# WASTE

## WASTE DISPOSAL

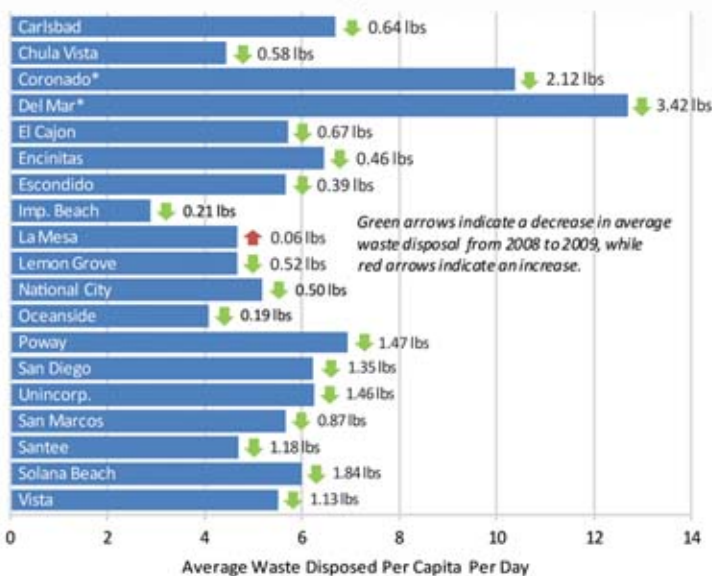
### WHAT IS THE MEASURE?

The average number of pounds of solid waste per capita disposed of each day in San Diego County. This number includes waste that is brought to landfills, incinerated and exported, and reflects both residential and commercial waste.

### WHY IS IT IMPORTANT?

- Excessive waste generation requires more landfills, which are difficult to site due to environmental, neighborhood and political concerns, and contributes to greenhouse gas emissions.
- Recycling leads to reduced waste and better stewardship of our limited natural resources.
- Diverted organic waste could be used to produce electricity, biofuels, mulch and other valuable products.
- There are new green job opportunities in waste reduction, recycling and processing.

**AVERAGE WASTE (LBS) DISPOSED PER CAPITA PER DAY**  
SAN DIEGO COUNTY JURISDICTIONS, 2009



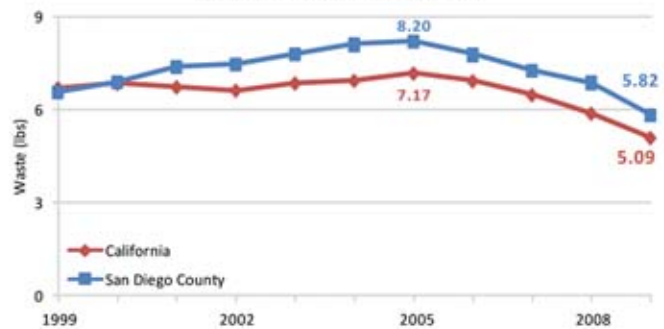
Source: Equinox Center, 2010; California Department of Resources Recycling and Recovery, 2010

\* In the case of Coronado and Del Mar, numbers are skewed by large waste generators such as the Navy Base in Coronado and the Fairgrounds in Del Mar, as compared with the small populations of these towns.

### HOW ARE WE DOING?

From 2008-2009, San Diego County residents reduced waste by approximately 1 pound per person per day, although the region's average waste disposal is still above California's. The slowing of the economy had a significant impact on the reduction of personal and commercial waste, especially construction and demolition materials. The City of San Diego recently started accepting more plastic items in recycling bins, which will divert more waste. New demolition and construction recycling ordinances implemented in some jurisdictions will also have a positive effect as the economy recovers. However, a significant amount of food waste and other organic materials still enter the waste stream.

**AVG WASTE PER CAPITA PER DAY**  
CA STATE & SAN DIEGO COUNTY



Source: Equinox Center, 2010; California Department of Resources Recycling and Recovery, 2010



### POLICY OPTIONS:

- Encourage producers to take responsibility for the life of their products, including take-back and recycling options.
- Reduce organic waste going to landfills and increase the number of large composting or biomass conversion facilities.



Photo: PETCO Park



### BRIGHT SPOT:

#### *A Home Run for Recycling at PETCO Park*

Petco Park's Green Initiative diverts tons of food waste, green waste and e-waste from landfills. Best idea at the Field of Dreams: fans place empty beverage containers into a "reverse vending machine" for a chance to win a prize. Solar compactors use power from the sun to compact trash on site, reducing carbon emissions.

# METHODOLOGY

Based on positive feedback from the community, Equinox Center used the same countywide indicators contained in the 2010 Dashboard, with a few exceptions. Below we note changes from last year or other noteworthy methodology issues.

- The data source for the Vehicle Miles Traveled Indicator was changed due to lack of available data from the Texas Transportation Institute. 2008-2009 data in the 2011 Dashboard are from the California Department of Transportation.
- The Housing Affordability Indicator was changed to include the significant numbers of residents who live in rental housing and are also affected by high housing prices in the region. On the jurisdictional affordable housing units chart, we used SANDAG data to determine the median household income (adjusted for inflation) for each jurisdiction and summed the number of households whose incomes fell at or below this value.
- Green Jobs Indicator: CONNECT did not collect data on new green tech jobs until 2009 so the 2010 dashboard only includes data on new start-up companies. However, the number of new green tech jobs is a better indicator than the previous indicator, so we will use that going forward. We also note that CONNECT's definition of environmental technology is fairly narrow and does not capture all potential green jobs in the region, but it is the best available local data at this time.
- Average Annual Wage and % Change in Employment: The percent change in employment was calculated by taking the annual change for each industry (e.g. percent change from 2000-2001, from 2001-2002, etc.) and then summing those changes over time. The same methodology was used when comparing the percent change in San Diego's employment with other regions of the state.
- 12 water quality monitoring stations have been dropped in the past two years due to budget cuts.
- In 2010, EPIC revised its 2007 greenhouse gas inventory for the County which now shows slightly lower per capita greenhouse gas emissions compared to the 2007 inventory.
- Policy options were derived from independent Equinox Center research, using academic sources, case studies, or interviews with regional or national experts.



All charts refer to San Diego County unless otherwise denoted in chart title or on the chart. In calculating per capita numbers we consistently used demographic estimates from the California Department of Finance unless noted:

- Per capita water usage is based on population within the San Diego County Water Authority's service area, which does not include the entire county.
- In the Conserved Lands and Park Access Maps we used 2000 Census population numbers because 2010 Census numbers were not yet available at the appropriate level. We used a combination of land use data from Green Info Network and SANDAG for the Conserved Lands Map.
- The asthma hospitalization rate map uses SANDAG population layers.

If you have questions on methodology, please contact Ann Tartre at [ann@equinoxcenter.org](mailto:ann@equinoxcenter.org).

## Organizations that provided data and/or were consulted:

Agri-Service  
American Lung Association  
California Center for Sustainable Energy  
California Energy Commission  
California Department of Finance  
California Department of Transportation  
Canyonlands  
Center on Policy Initiatives  
Childhood Obesity Initiative  
Connect-UCSD  
Community Housing Works  
Endangered Habitats League  
Energy Policy Initiative Center (EPIC), USD  
Environmental Health Coalition  
GreenInfo Network  
Move San Diego  
PETCO Park  
San Diego County Water Authority  
San Diego County Environmental Health Department  
San Diego Association of Governments (SANDAG)  
San Diego Coastkeeper  
San Diego Economic Development Corporation  
San Diego Gas & Electric  
San Diego Housing Federation  
San Diego Regional Water Quality Control Board  
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The San Diego Foundation  
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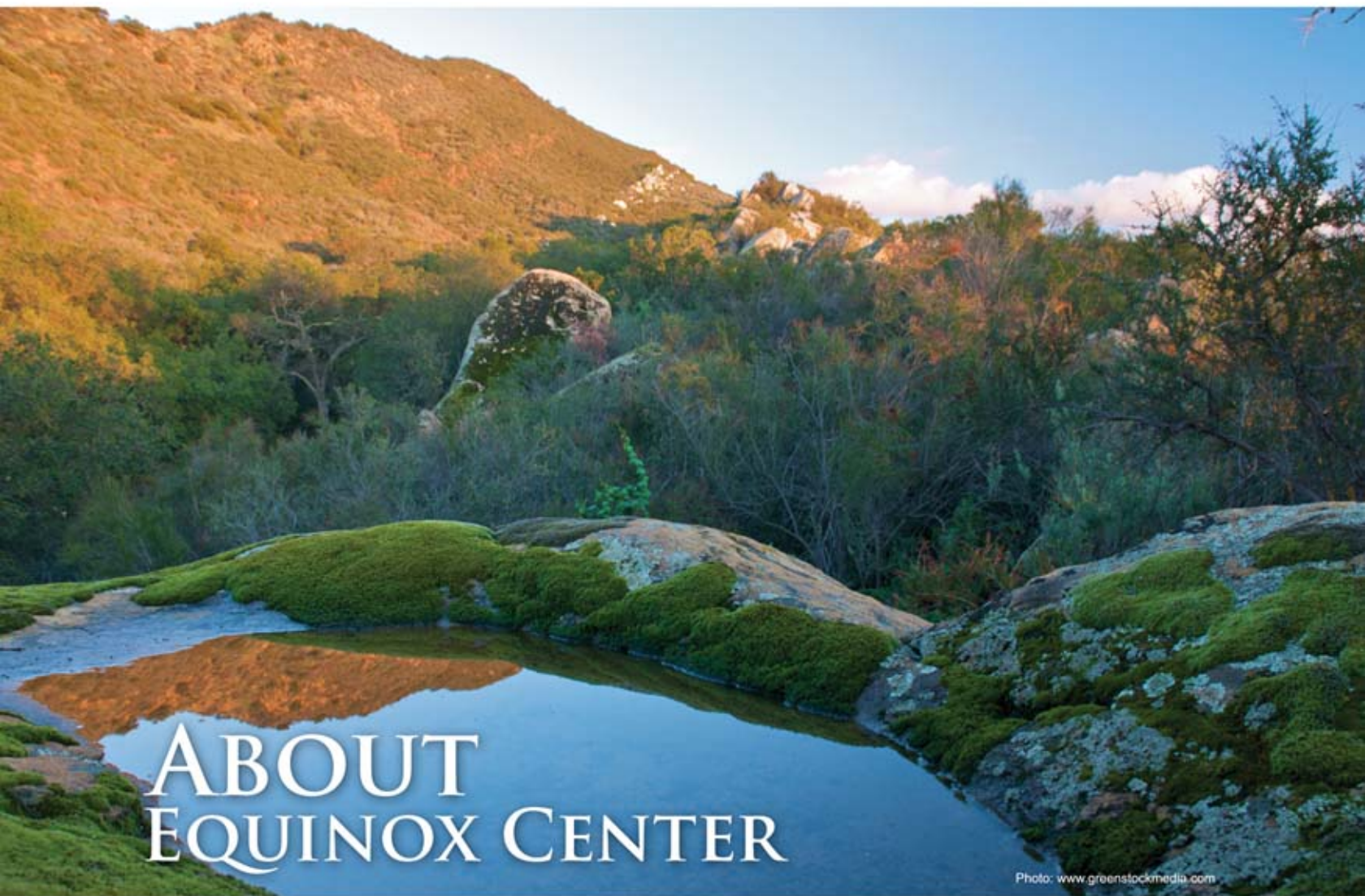
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