# BRIDGING the CAP.

From Climate Action Planning and
Implementation to
Healthy Communities in
Santa Barbara and San Diego Counties







### **Panelists**

### Darin Neufeld, AICP - Moderator

- CEQA Team Manager, County of San Diego Planning & Development Services
- San Diego AEP Secretary

### Laurel G. Lees

- Sustainability Team Manager, County of San Diego Planning & Development Services
- San Diego AEP Vice President of Membership

### Poonam Boparai

Senior Air Quality and Climate Change Specialist, Ascent Environmental, Inc.

### Mindy Fogg

- Supervising Planner, County of Santa Barbara
- California AEP Director-at-large

### Selena Evilsizor, AICP

Planner, County of Santa Barbara Planning and Development

### Shelley Saitowitz, MPH

Community Health Program Specialist, County of San Diego Health and Human Services Agency

# Agenda

- Developing the County of San Diego's Climate Action Plan
- 2. Integrating Health into Climate Action Plans
- Implementing the County of Santa Barbara's Energy and Climate Action Plan
- 4. Understanding Climate Impacts on Public Health





# DEVELOPING THE COUNTY OF SAN DIEGO'S CLIMATE ACTION PLAN (CAP)

AEP CONFERENCE May 20, 2017 5

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### REGULATORY FRAMEWORK

Executive
Order S-3-05
established
statewide
2050 goal:
80% below
1990 levels by
2050

#### **MANDATE:**

AB 32 set statewide GHG reduction requirement: 1990 levels by 2020

GUIDELINE: CARB 2020 Scoping Plan

### REVISED MANDATE:

SB 32 amended AB 32 statewide requirement: 40% below 1990 levels by 2030

### **GUIDELINE:**

CARB *Draft* 2030 Scoping Plan



2006

2007**-** 2010

2011

2012

2013

2014

2015

2016

2017

2018

2005

6

Board adopts General Plan Update and certifies EIR Board adopts CAP and Addendum

Sierra Club challenges in court CAP litigation concludes; rescinds documents

CAP project begins

Board to consider CAP, Threshold and EIR by March 2018 as directed by the court

CLIMATE ACTION PLAN

- □ Public Outreach and Engagement Plan AEP AWARD WINNER
- 2014 Baseline Inventory (Production), Projections, Post-2020 Targets
- Existing Achievements, Potential GHG Reduction Measures, Adaptation
- Gap Analysis, Draft Reduction Measures, Local Benefits, Preliminary Cost Estimates
- Working Draft CAP and EIR
- CEQA Public Review
- Planning Commission Hearing
- Board of Supervisors Hearing
  - **Implementation** 
    - Annual monitoring and corrective actions
    - 2-year inventory updates SANDAG REGIONAL FRAMEWORK?
    - 5-year plan updates

July - August 2017

**Late 2017** 

**Early 2018** 

**Ongoing** 

### Sustainability Task Force (internal team)

- Agriculture, Weights and Measures
- Air Pollution Control District
- County Counsel
- Environmental Health
- General Services
- Health & Human Services Agency
- Human Resources
- Live Well San Diego Food Systems Initiative
- Office of Emergency Services
- Parks and Recreation
- Planning & Development Services
- Public Works

### **Technical & Facilitation Consultants**

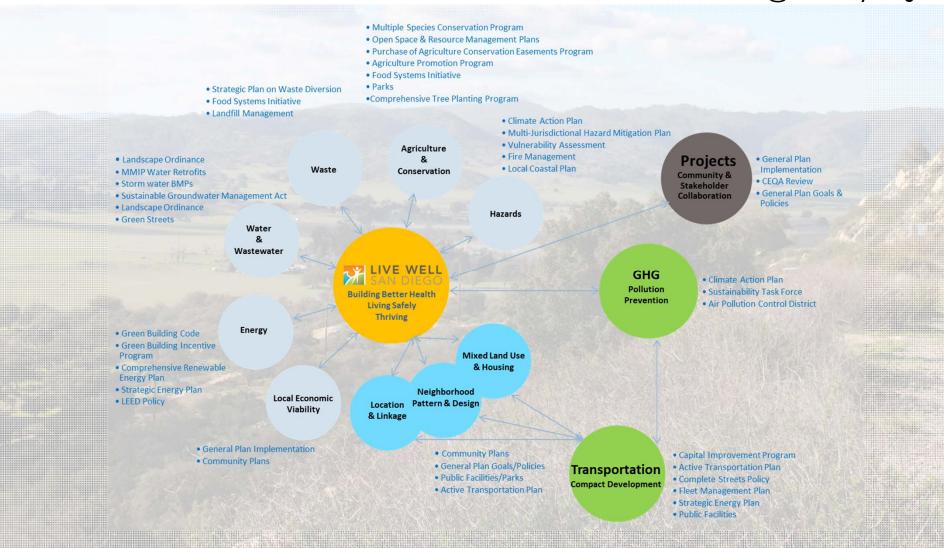




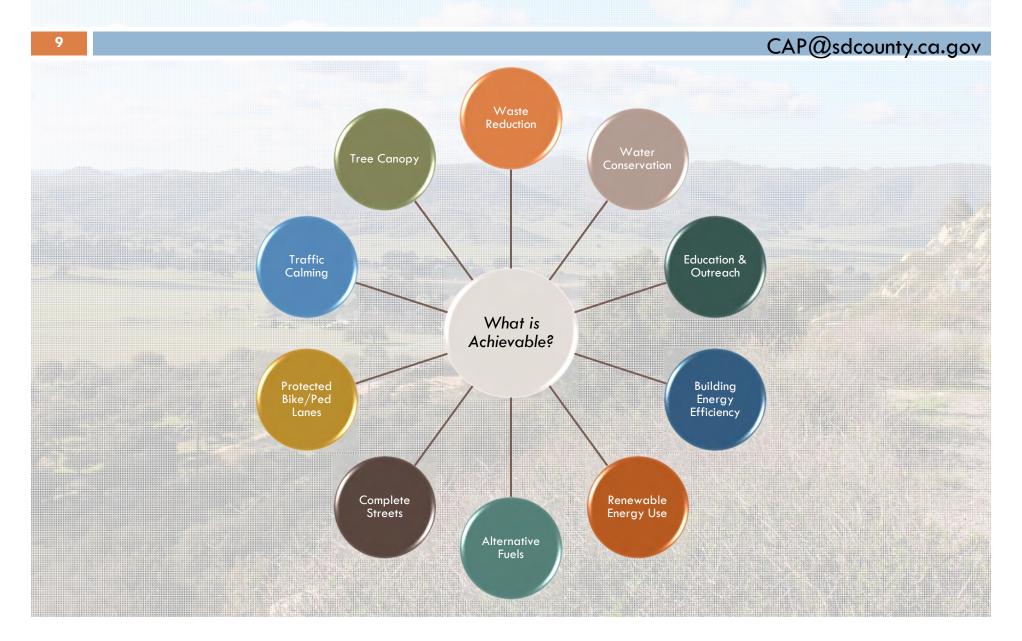




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# Identify "Achievables"



### Learn from Each Other

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- Remember the context and purpose
- Ensure "functional threading" with implementers
- Emphasize implementation by working backwards
- Capture existing plans, programs, policies, initiatives
- Build ROI into scope, schedule, budget to focus on biggest impact
- Provide an outreach plan and leverage resources to implement it
- Acknowledge nuances and limitations
- Storyboard it with the "B.L.U.F."
  - Enterprise/Fiscal Impact
  - Business Impact/Cost to Development
  - Local Benefits and Strategic Alignment with Initiatives, including Health
  - Triple Bottom Line Stakeholder Benefits and Concerns

# Thoughts - Thank You

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### **ABSTRACT**

### Two UC Berkeley Professors, 1973

The search for scientific bases for confronting problems of social policy is bound to fail, because of the nature of these problems. They are "wicked" problems, whereas science has developed to deal with "tame" problems. Policy problems cannot be definitively described. Moreover, in a pluralistic society there is nothing like the undisputable public good; there is no objective definition of equity; policies that respond to social problems cannot be meaningfully correct or false; and it makes no sense to talk about "optimal solutions" to social problems unless severe qualifications are imposed first. Even worse, there are no "solutions" in the sense of definitive and objective answers.

If I were starting out today and looking for the same kind of opportunity to make a big impact in the world, I would consider three fields.

One is artificial intelligence. We have only begun to tap into all the ways it will make people's lives more productive and creative.

The second is energy, because making it clean, affordable, and reliable will be essential for fighting poverty and climate change.

The third is biosciences, which are ripe with opportunities to help people live longer, healthier lives.

Richest Person on Earth, 2017





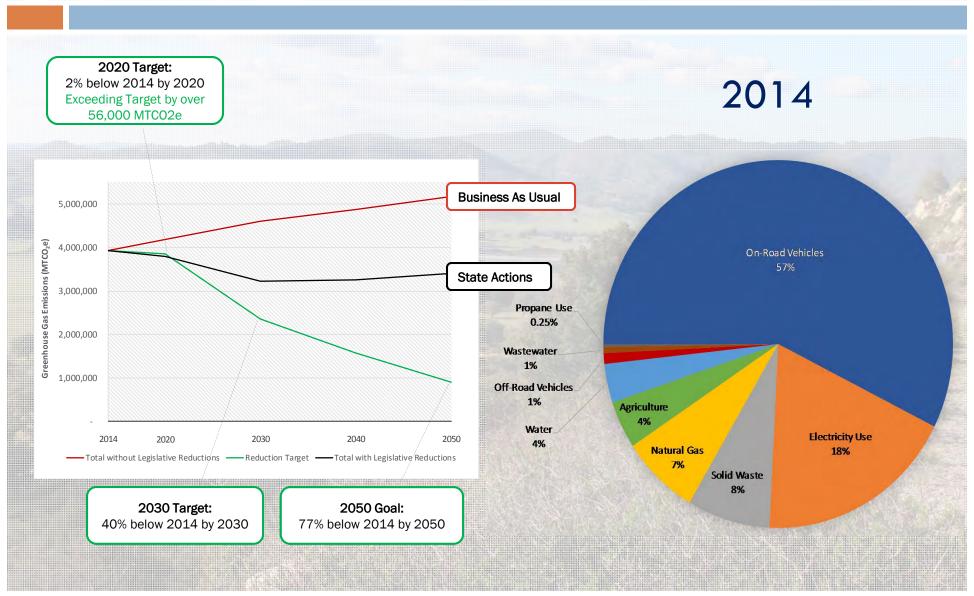
# INTEGRATING HEALTH INTO CLIMATE ACTION PLANS

AEP CONFERENCE May 20, 2017

# California Health and Safety Code, Division 25.5

- Global warming poses a serious threat to the economic wellbeing, public health, natural resources, and the environment of California. (emphasis added)
- The state board shall evaluate the total potential costs and total potential economic and noneconomic benefits of the plan for reducing greenhouse gases to California's economy, environment, and public health, using the best available economic models, emission estimation techniques, and other scientific methods. (emphasis added)

# Baseline Emissions Inventory, Projections, and Targets



### **Impact of Climate Change on Human Health**

Injuries, fatalities, Asthma, mental health impacts cardiovascular disease Air Severe Malaria, dengue, **Pollution** Weather Heat-related illness encephalitis, hantavirus, and death, Rift Valley fever, RISING TURES AND ERATURES cardiovascular failure Lyme disease, Changes in Vector chikungunya, Extreme **Ecology West Nile virus** Heat **Increasing** Environ-**Allergens** Respiratory mental Forced migration, Degradation allergies, asthma civil conflict, mental health impacts **Water and Food** Water **Supply Impacts Quality Impacts** Cholera, Malnutrition, cryptosporidiosis, diarrheal disease campylobacter, leptospirosis, harmful algal blooms Source: Centers for Disease Control and Prevention

# Integrating Public Health into CAPs

- Health co-benefits
- Motivator for action
- Intersection with health and social equity
- Resource sharing
- Leverage local investments in community well-being

### **Climate Action for Health:**

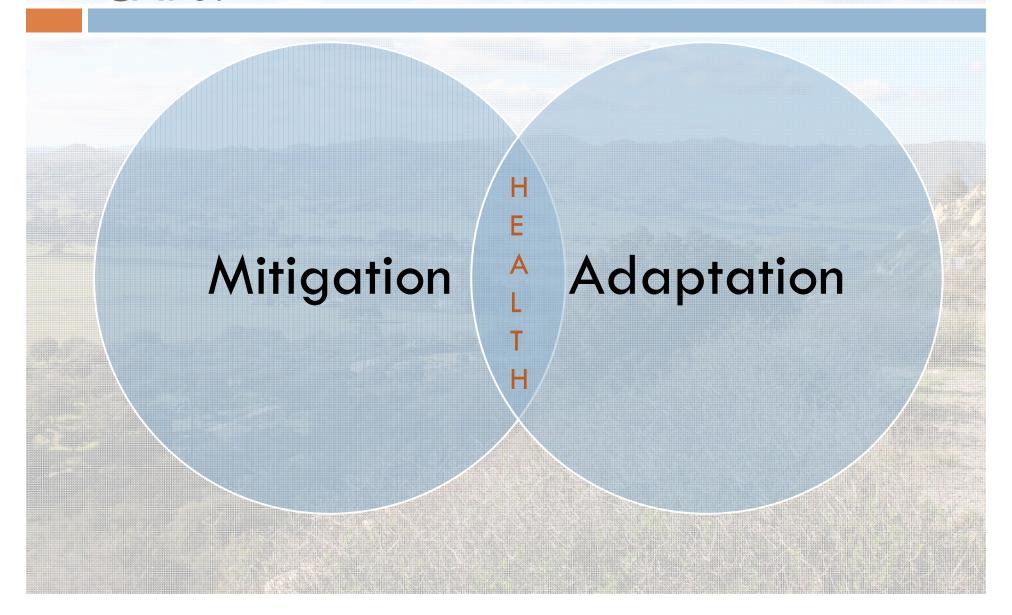
Integrating Public Health into Climate Action Planning



February 2012 California Department of Public Health JOPH



# Where to Include Health Content in CAPs?





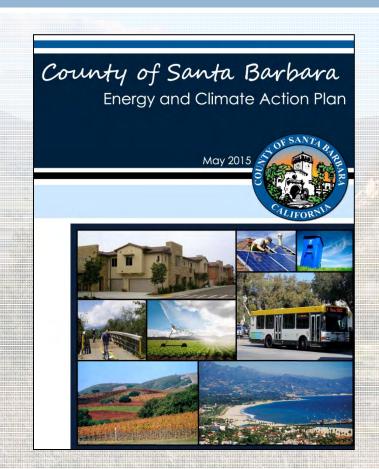


IMPLEMENTING THE COUNTY
OF SANTA BARBARA
ENERGY AND CLIMATE
ACTION PLAN (ECAP)

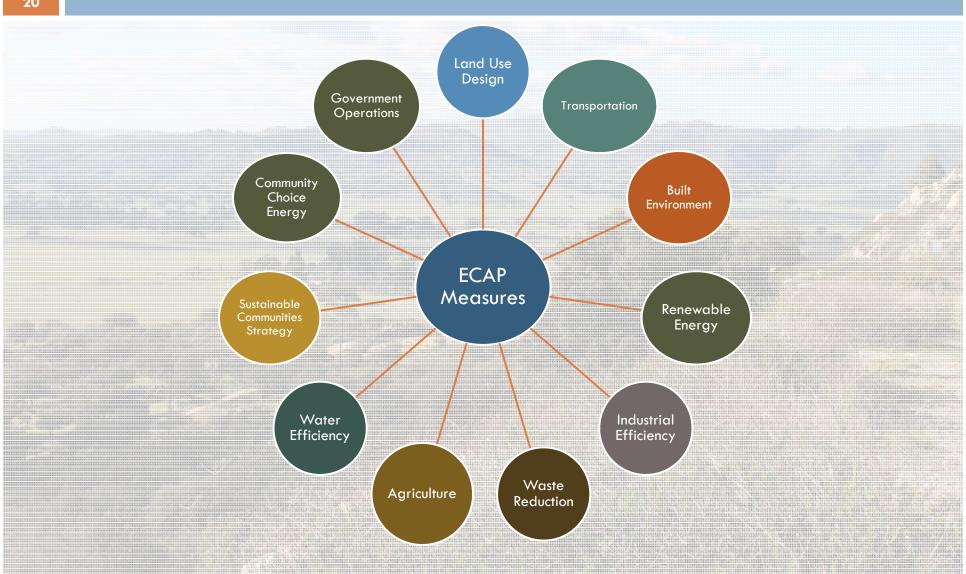
Mindy Fogg Selena Evilsizor AEP CONFERENCE May 20, 2017

### **ECAP Overview**

- Applies to Unincorporated County
- Does not include Stationary Industrial Sources
- Emission reduction measures
  - Combination of mandatory, phased, and voluntary
- 15% GHG reduction targetby 2020



# Measure Topics



# Community Co-Benefits



- Improves Public Health
- Increases Mobility
- Supports LocalEconomy/Jobs
- CEQA Tiering/Streamlining

# **ECAP** Implementation

Planning & Development

**Public Works** 

**General Services** 

**Public Health** 

**APCD** 

Ag Commissioner's Office

Energy & Sustainability Initiatives

**CEO's Office** 

County
Sustainability
Committee

# Implementation Efforts

- Monitoring and Reporting
- Development Applications/Building Permits
- New/Updated Ordinances
- Education and Outreach
- Plan Updates

# Measures – T 3/RE 1

□ **T 3/RE 1** — Proposed ordinance to require **new** dwelling units to be solar and electric vehicle ready





# Implemented Measures

Measure BE 2

2020 GHG Reduction 15.480

2035 GHG Reduction 32.460

Responsible Department(s)
Planning and Development
Community Services

Co-Benefits







Built Environment



Measure WR 2

2020 GHG Reduction 16,360

**2035 GHG Reduction** 27,150

Responsible Department(s)

Public Works
Planning and Development
Community Services

**Co-Benefits** 







Measure AG 3

2020 GHG Reduction 5.800

2035 GHG Reduction 8.930

Responsible Department(s) SBCAPCD

Agricultural Commissioner

Co-Benefits











Measure T 3

2020 GHG Reduction 1.670

2035 GHG Reduction 3.650

Responsible Department(s)
Planning and Development

Co-Benefits



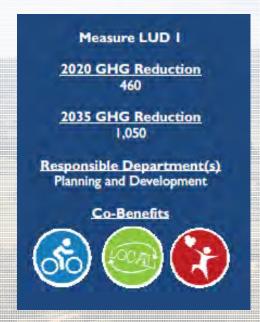




Land Use

Design

### **Future Measures**



Measure T 4

2020 GHG Reduction
1,330

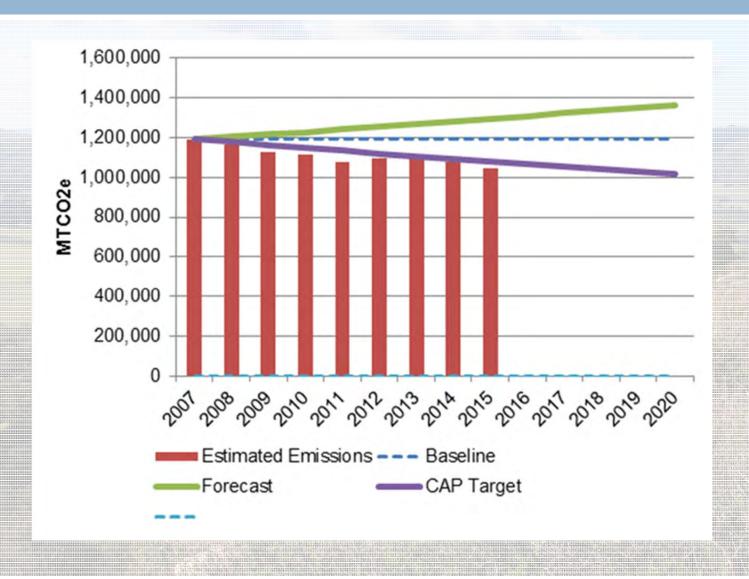
2035 GHG Reduction
2,430

Responsible Department(s)
Public Works
Planning and Development

Co-Benefits



# Progress



# Benefits Since ECAP Adoption

- Energy-efficiency efforts more embedded in Government
   Operation decisions
- GHG emission goals will tie into future County planning efforts
- More frequent collaborations within County departments and between the County and outside agencies/organizations
- Increased availability and promotion of energy-efficiency programs and opportunities to the public
- Linkages between climate change and health are being made

### Lessons Learned

- Need buy-in from more than just department heads
- CEO commitment to monitor long-term
- Identify funding sources
- Test the monitoring tool and retain a contract with the developer
- Aspirational measures should be identified clearly
- Provide general time frames (e.g., near term vs long-term goals)
- Need to explicitly link to Community Health...



# Bridging the CAP / HiAP Gap

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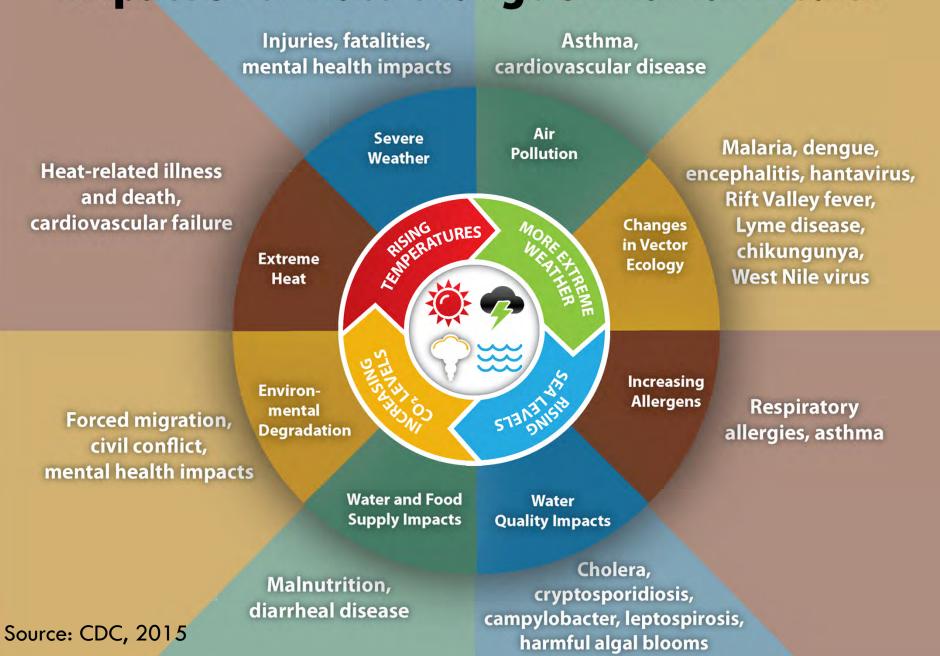




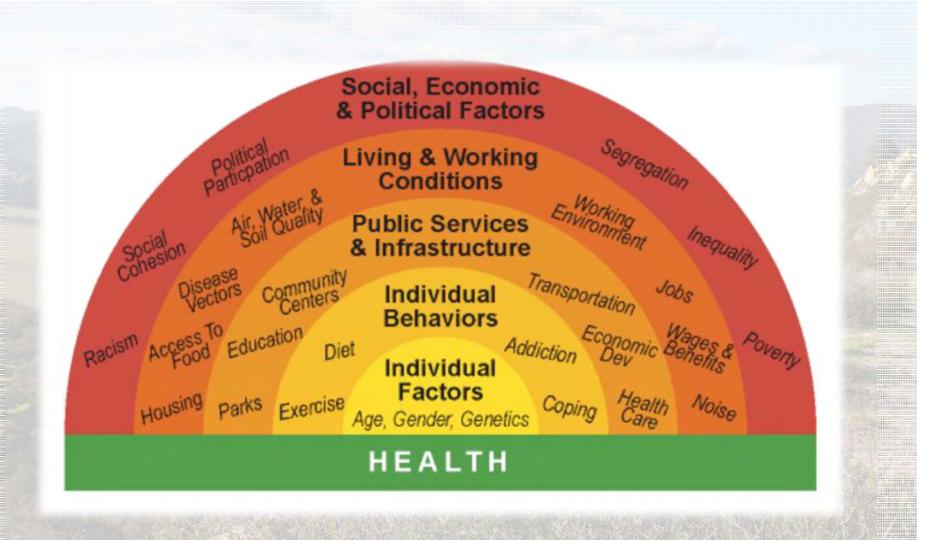




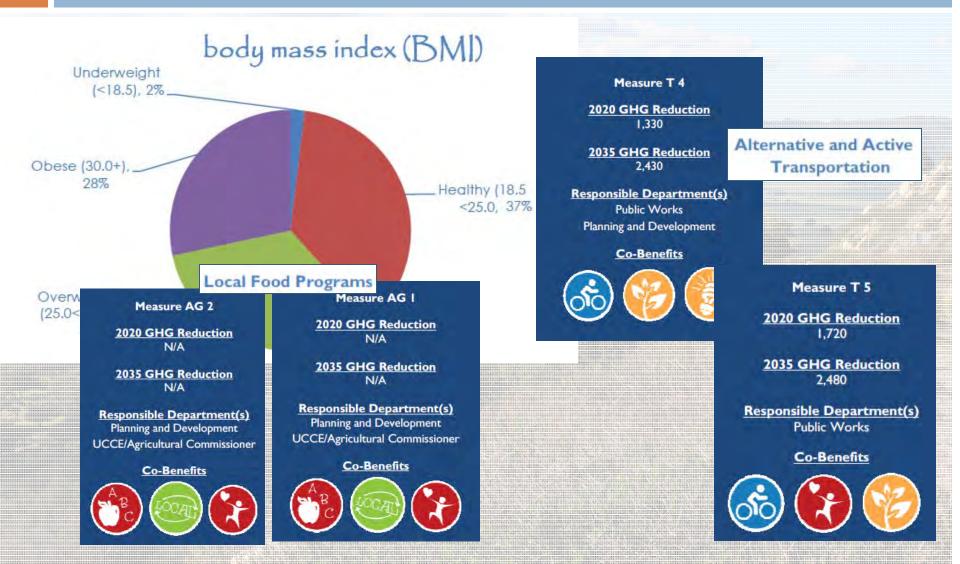
### **Impact of Climate Change on Human Health**



# SBC Community Health Assessment



# Addressing Obesity



# Community Health Improvement Plan (CHIP)



### Community Health Improvement Plan

# Goals, Objectives and Activities

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#### Data Sources to Measure Objectives

#### **Activities**

#### **Activity Partners**

**GOAL #1:** Obesity Prevention – Increase the number of county residents who maintain a healthy weight and decrease the number of county residents in the obese category leading to better health outcomes and a healthier community.

- IA. By December 31, 2020, increase the percentage of adult residents with a
- wic

healthy BMI (between 18.5 & 24.9) by 5% over 2016 rates.

- IB. By December 31, 2020, reduce the number of children in the WIC program in the obese BMI range to the Healthy People 2020 goal of 9.4%.
- IC. By December 31, 2020, increase the number of miles of connected bike paths from baseline by 20%.

- A. California Health
  Information Survey,
  Department of
  Education, Health
  Care Centers, Health
  Information Exchange
  data for Sansum,
  Cottage,
  Neighborhood Clinics
- B. Women, Infants and Children program



C. Bike Coalition, Planning and Development Department

- Review proposed Planning and Development projects for elements that promote health and physical activity (e.g. bike and walk paths).
- Implement elements of the Food Action Plan and Healthy Eating Active Living (HEAL) resolutions that encourage full family participation in healthy eating and physical activity.
- Incentivize retailers to carry healthy snacks and fresh produce in their stores along with consideration of the placement of advertisement and unhealthy items.
- Highlight successes with retailers and restaurants who serve healthy food by listing them on the PHD website.
- Obtain and use tools to measure walkability and physical activity such as tools from the Safe Routes to Schools projects.
- Outreach to organizations such as sports and recreation entities to focus on healthy food and drinks.

- City and County Planning and Development Departments, Bike Coalition, Healthy Lompoc
- Food Bank, Live Well Santa Barbara County, People Helping People, Healthy Lompoc, UC Cooperative Extension, Healthy People, Healthy Trails
- Tobacco Program, cities in jurisdiction including Lompoc, and Santa Maria



- Nutrition Education Obesity
   Prevention Program,
   Environmental Health Services
- Healthy Lompoc, UC Cooperative Extension



 Youth and adult athletic and sports leagues, Parent Teacher organizations

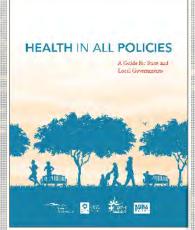
### Live Well Santa Barbara



### OUR MISSION, PURPOSES AND STRUCTURE

The primary collaborative focus of Live Well Santa Barbara County is providing health education and advocating for health in all policies and programs. The coalition includes representation from organizations, agencies, and government officials with an interest in nutrition, physical activity, public health, the environment, and health care.







# Healthy Eating Active Living (HEAL)



#### Land Use

Access to everyday physical activity through sidewalks and bike paths, the availability of parks and open space for recreation, close proximity of housing to grocery stores, farmers markets and community gardens all depend on good land use policies. Cities' land use tools of planning, zoning and infrastructure investment can have a positive impact on community health.

# **Healthy Foods**

Cities have powerful planning, economic development, and public relations tools to attract healthy food to underserved neighborhoods. Cities are focusing these tools on establishing healthy corner stores, grocery stores, farmer's markets, community gardens and urban farms in the neighborhoods that most need them.

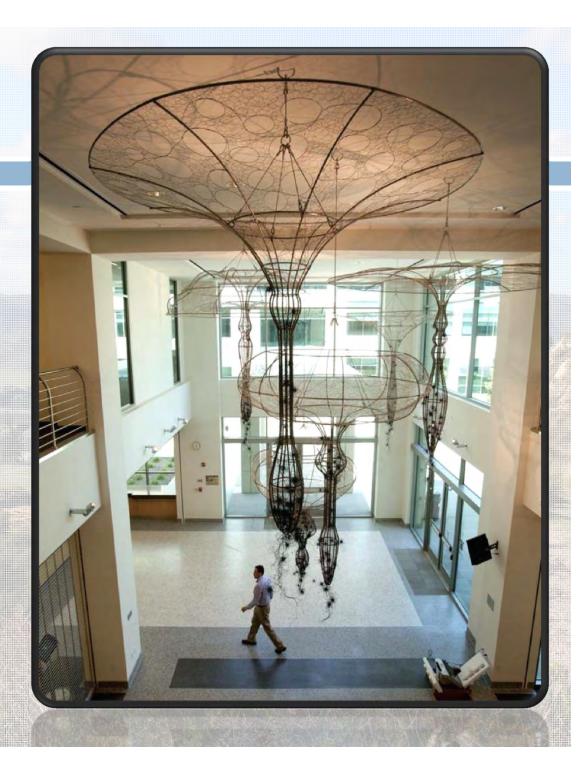
# Complete Parks

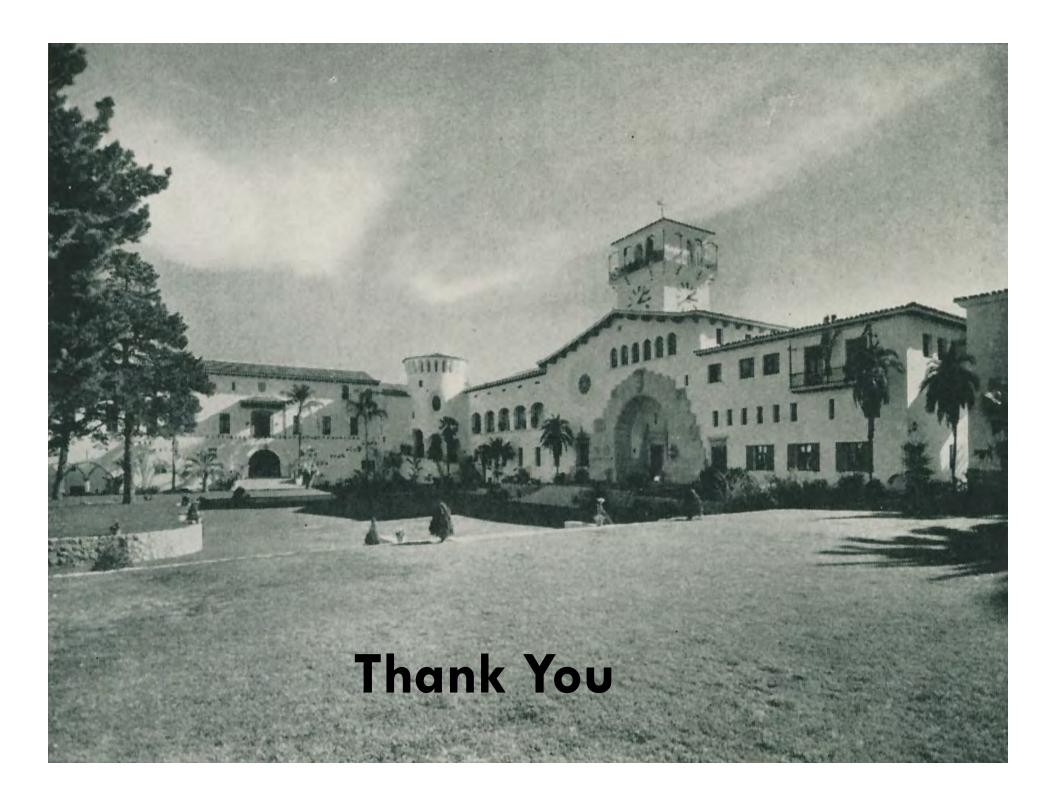




# SB County HEAL Resolution

- Safe routes to schools
- General Plan ———— Health in All Policies







# CLIMATE IMPACTS ON PUBLIC HEALTH: SIGNIFICANT AND AVOIDABLE

Shelley Saitowitz, MPH

May 20<sup>th</sup>, 2017

Association of Environmental Professionals Conference

San Francisco







# WHAT DO OUR PUBLIC HEALTH LEADERS SAY?



## **CALL TO ACTION**







# American Academy of Pediatrics



DEDICATED TO THE HEALTH OF ALL CHILDREN\*

APHA AMERICAN PUBLIC HEALTH ASSOCIATION

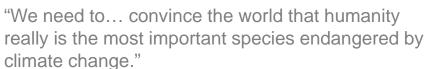
Medical and public health organizations call for action on climate change.

# CLIMATE CHANGE IS BAD FOR PEOPLE SAN DIEGO









-Margaret Chan, MD, Director-General, World Health Organization



"Climate change is one of the most serious public health threats facing our nation. Yet few Americans are aware of the very real consequences of climate change on the health of our communities, our families and our children."

> —Georges Benjamin, MD, Executive Director American Public Health Association



# LINKING CLIMATE CHANGE TO HEALTH IMPACTS





THE IMPACTS OF CLIMATE CHANGE ON

# HUMAN HEALTH

IN THE UNITED STATES:

A SCIENTIFIC ASSESSMENT



## **CLIMATE CHANGES HEALTH**



#### ENVIRONMENTAL & INSTITUTIONAL CONTEXT

- Land-use change
- Ecosystem change
- · Infrastructure condition
- Geography
- Agricultural production
   & livestock use

#### **CLIMATE DRIVERS**

- Increased temperatures
- Precipitation extremes
- Extreme weather events
- Sea level rise

#### **EXPOSURE PATHWAYS**

- Extreme heat
- Poor air quality
- Reduced food & water quality
- Changes in infectious agents
- Population displacement

#### HEALTH OUTCOMES

- · Heat-related illness
- Cardiopulmonary illness
- Food-, water-, & vector-borne disease
- Mental health consequences
   & stress

## SOCIAL & BEHAVIORAL CONTEXT

- · Age & gender
- Race & ethnicity
- Poverty
- Housing & infrastructure
- Education
- Discrimination
- Access to care & community health infrastructure
- Preexisting health conditions

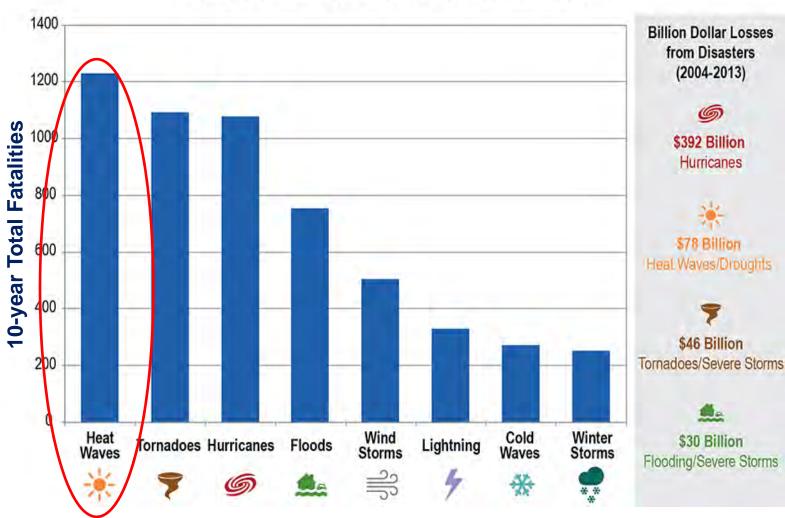


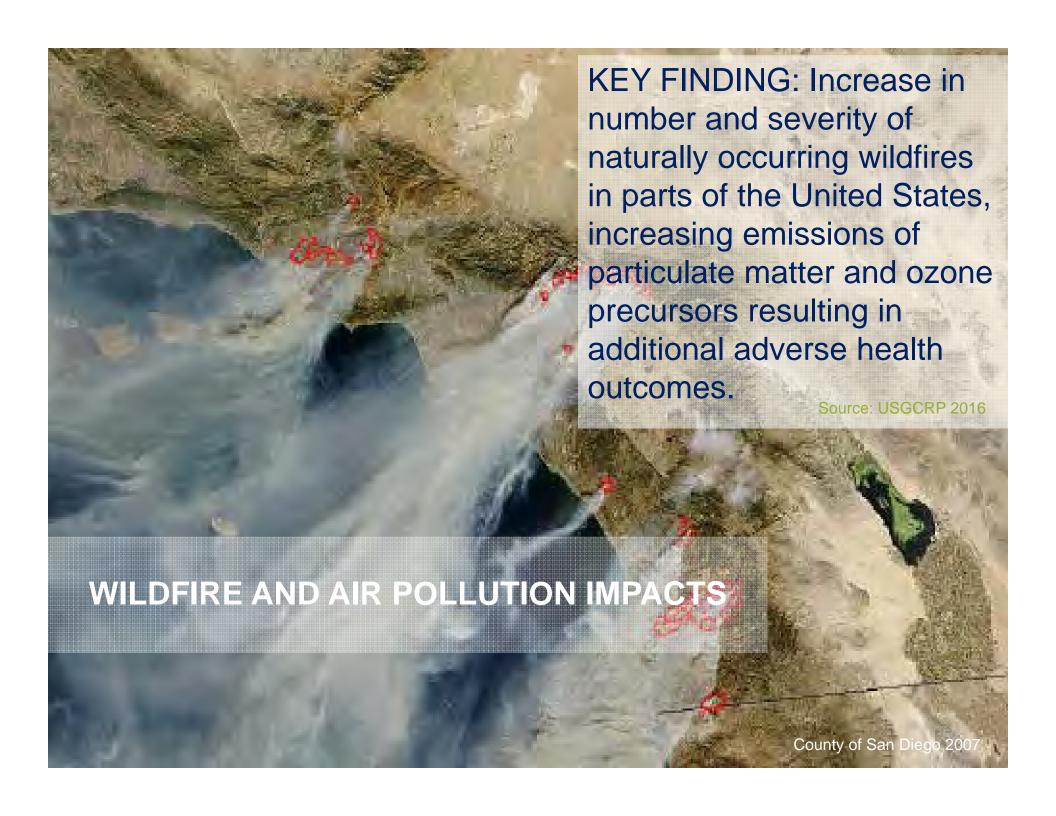
NBC 7's Elena Gomez reports on the Coronado Unified School District's decision to minimum day. (Published Monday, Sept. 26, 2016)

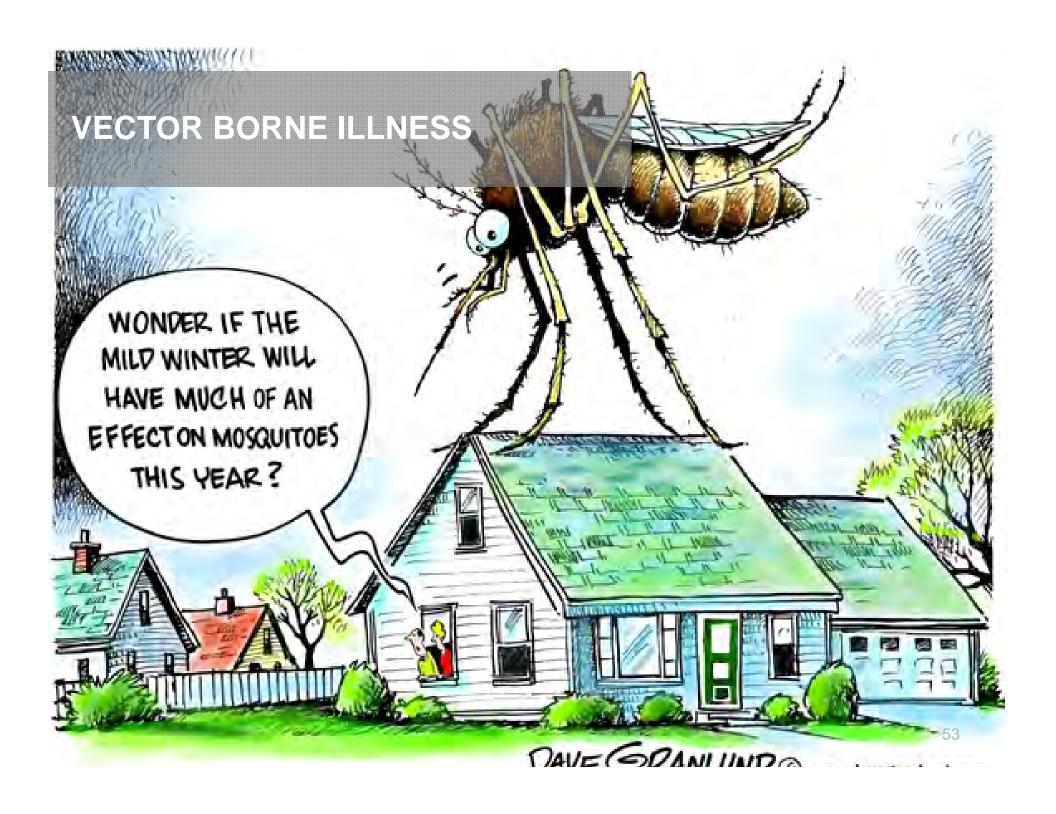
## **COST OF CLIMATE CHANGE**



# Estimated Deaths and Billion Dollar Losses from Extreme Events in the U.S., 2004–2013







# CHANGING MOSQUITO-BORNE **DYNAMICS**



# COUNTYNEWS CENTER DIRECT TO YOU

#### Mosquito Control Spraying Set For Areas of North Torrey Pines, South Del Mar



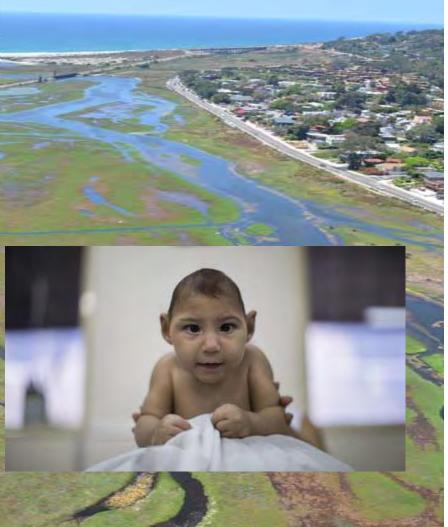
May 16, 2016 | 3:31pm







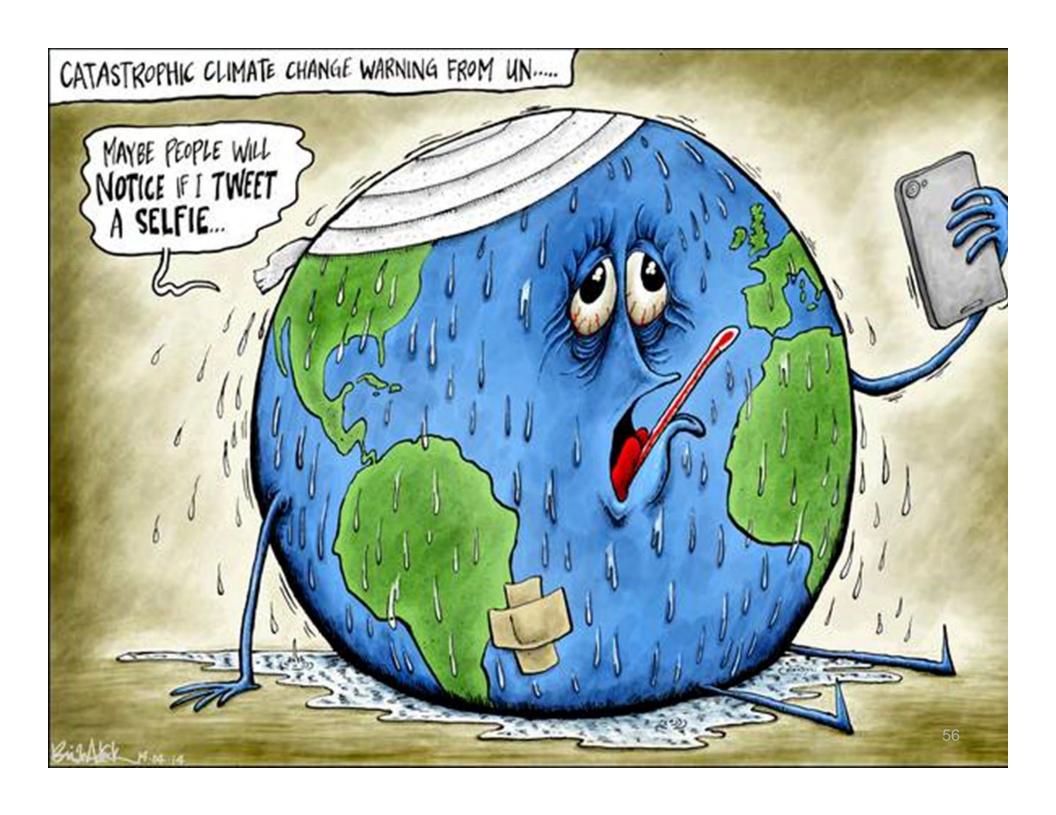
The County of San Diego's Vector Control Program is scheduled to conduct pesticide spraying in several neighborhoods around the Los Peñasquitos Lagoon after finding increasing numbers of adult mosquitoes carrying West Nile virus in the area.





# UNDERSTANDING THE ROLE OF PUBLIC HEALTH





# 10 ESSENTIAL SERVICES OF PUBLIC HEALTH & CLIMATE ACTION



Research health effects of climate change,
e.g., techniques like modeling and
research on optimal adaptation strategies

Tracking of diseases and trends
related to climate change

Evaluate

Training public health staff and health care providers on health aspects of climate change

Health care service provision following disasters

Assure Diagnose Competent em Manage & Investigate SSURANC Workforce Link Rese Lin inform, to/Provide Educate, Care Empower Mobilize Enforce Community Laws Partnerships Develop Policies

Monitor

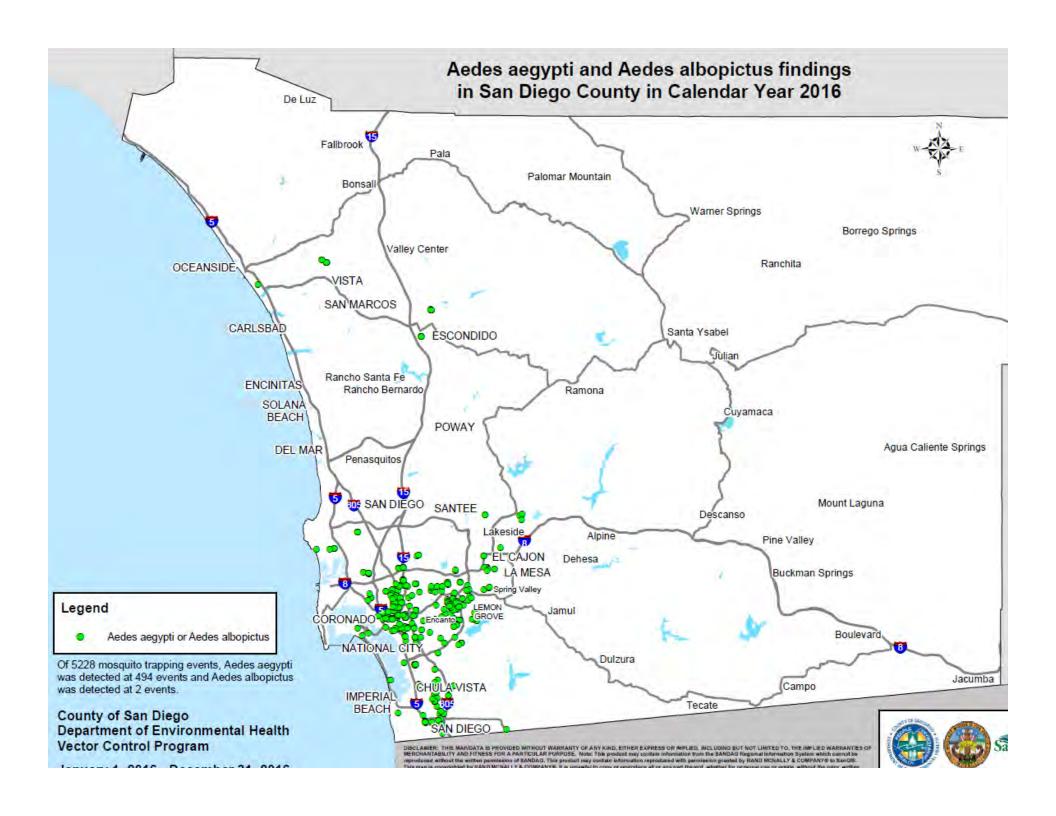
Nealth

Municipal heat-wave Preparedness/Climate Action Plans Investigation of infections water-, food-, and vector-borne disease outbreaks

Informing public and policymakers about health impacts of climate change

Public health partnership with industry, other professional groups, other community members to design and implement solutions

Role for public health?

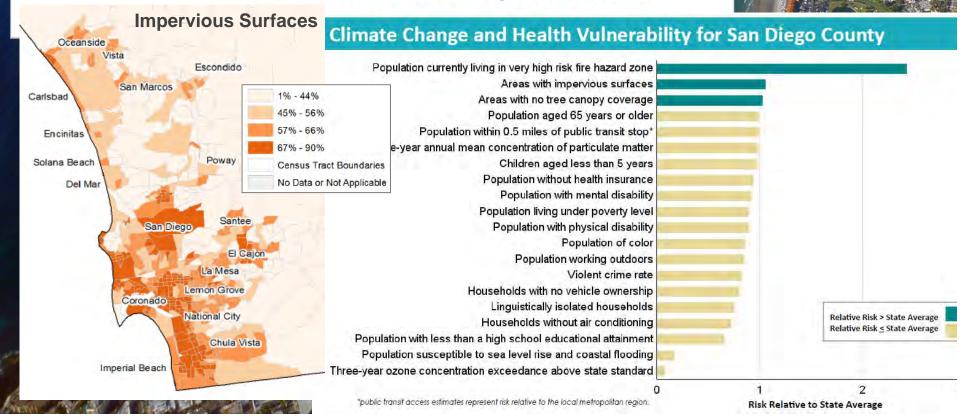


CALBRACE (CA BUILDING RESILIENCE AGAINST CLIMATE EFFECTS)

2016 CalBRACE

Public Health Planning for Climate Change Adaptation in California

Section 2: San Diego County Climate Change and Health Vulnerability Assessment



## CLIMATE EDUCATION PARTNERS LOCAL **VULNERABILITY ASSESSMENT**





**VULNERABILITY MEASURED BY THE COMBINATION OF 29** SOCIO-ECONOMIC, LAND USE, AND OTHER **DEMOGRAPHIC VARIABLES** 

#### Population Vulnerability **by Census Tract**



Medium



High





HIGHER TEMPERATURES, HEALTH RISKS, AND NEW OPPORTUNITIES









San Diego County is a beautiful place to live where one can enjoy the outdoor environment year round. However, temperatures have been steadily rising and this poses a threat to the natural beauty of our region and the health of our residents. If temperatures continue to rise at the current rate, the quality of life San Diegans are accustomed to will not be available for future generations.

#### Rising Temperatures in San Diego County

Global average temperature has been steadily rising. It is now 1.7°F hotter than it was in 1985, and it is expected to rise to 4.8°F by 2050. This changing climate brings with it new health risks which could be more problematic for our most vulnerable populations. This report identifies who our most vulnerable residents are and where they live in San Diego County, as well as summarizes the potential detrimental effects of rising temperatures on their health. We will also highlight solutions from local agencies and organizations that are working together to address these challenges.

#### AMNUAL AVERAGE TEMPERATURE IS INCREASING AND WILL CONTINUE TO INCREASE BETWEEN NOW AND 2050:





#### **Perspectives from Local Leaders:**

"In 2015, San Diego saw a greater number of heat alerts than in any other past years. The impact of extreme heat has a significant risk to one's health, especially the most vulnerable populations. These incidents resulted in increased health-related illnesses for humans and animals, as well as damage to the environment by wildfires."

#### Wilma Wooten, MD, MPH

rublic Health Officer, Health and Human Services Agency, County of San Diego

### RESEARCH COLLABORATION



## DROUGHT AND PUBLIC HEALTH IN A WARMING CA

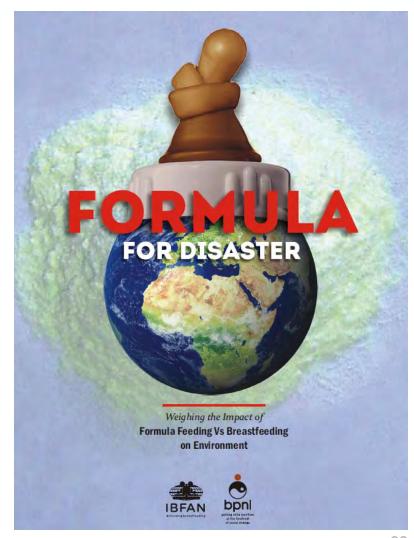
- UCLA, UCSD/Scripps, UCB, UC Merced
- 4 years
- Local public health collaboration
- Areas of research include:
  - Drought and climate relation to West Nile Virus and Valley Fever
  - Drought, wild fires and health impacts of PM
  - Drought on mental health esp. among farm workers of Central Valley
  - Extreme precipitation, water quality and public health impacts of run-off contaminants
- Communication outreach to government, general community and middle/high school children

# BREASTFEEDING FIGHTS INFECTION AND CLIMATE CHANGE!



#### BENEFITS TO THE ENVIRONMENT

- Renewable and natural resource
- Zero chemicals
- Zero energy use
- Zero waste in landfills
- Zero water footprint
- Zero deforestation
- Zero transport needed
- Provides food security in economic hardship and natural disasters





## THE ROLE OF PUBLIC HEALTH



"As public health professionals charged with protecting and promoting the health of the population, we have a responsibility and an obligation to educate our communities about the health impacts of climate change, to support action to reduce greenhouse gas emissions, and to enhance the ability of our communities to be ready for and resilient in the face of climate change."





# SELECTING THE BEST MITIGATION STRATEGIES FOR HEALTH



## WHO CLIMATE BRIEFINGS



# Health in the green economy

Co-benefits to health of climate change mitigation

#### HOUSING SECTOR

#### **Key messages**

#### Health co-benefits

- The right mix of mitigation policies reductions in noncommunicable
- Noncommunicable diseases: hea diseases can be reduced through and cold; reduce mould and da heating and appliances. There is
- Infectious diseases: vector-borne

# Health in the green economy

Co-benefits to health of climate change mitigation

HEALTH CARE FACILITIES Preliminary findings – initial review

#### **Key messages**

#### Health gains/risks

• While hospitals and health clinics are not a specific focus of mitigation assessment by the Intergovernmental Panel on Climate Change, adoption of safe and sustainable building measures by health facilities will offer more health co-benefits than the same measures applied to other commercial buildings. This is partly due to health facilities' large demands for reliable energy, clean water and temperature/air flow control in treatment and infection prevention. Significant health gains also can be expected from



gaseous health care products, as well as emissions from infectious, chemical and radioactive agents, can reduce exposure to risks of hepatitis B/C and HIV infections

# CDPH CLIMATE AND HEALTH REPORTS

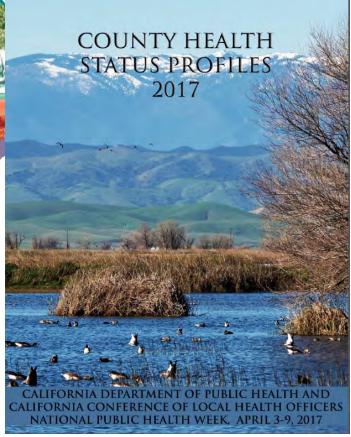


# Climate Change and Health Profile Report San Diego County





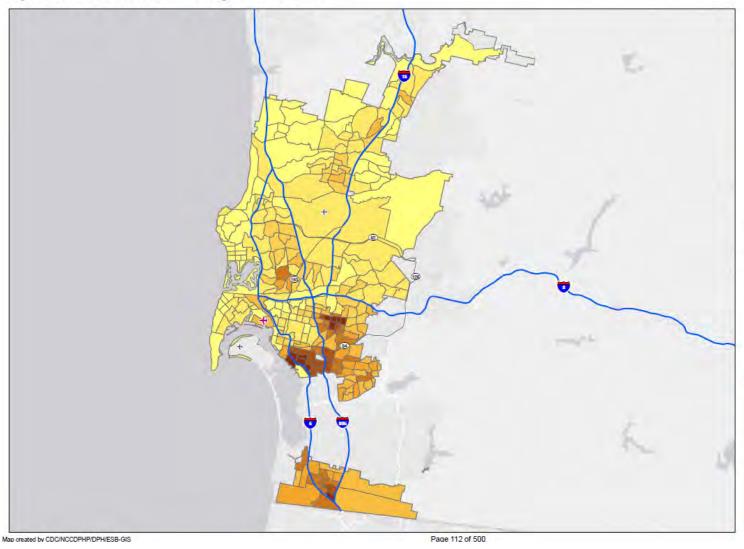
February 2017

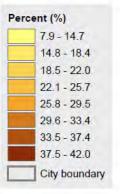


## HEALTH OUTCOMES DATA: 500 CITIES



No leisure-time physical activity among adults aged ≥18 years by census tract, San Diego, CA, 2014





#### Classification:

Jenks natural breaks (9 classes) based on data for all 500 cities' census tracts. Legend depicts only those data classes within this map extent.

Census tracts with population less than 50 were excluded from map.



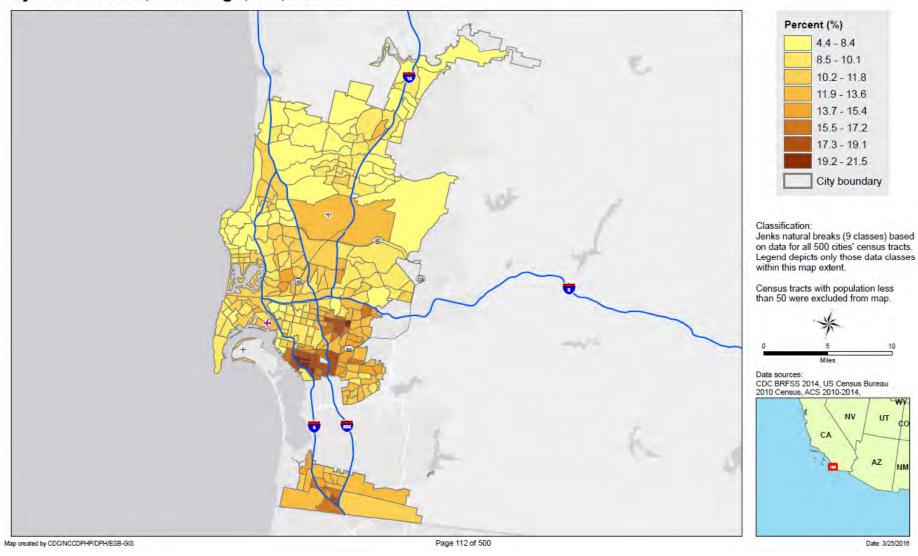
#### Data sources: CDC BRFSS 2014, US Census Bureau

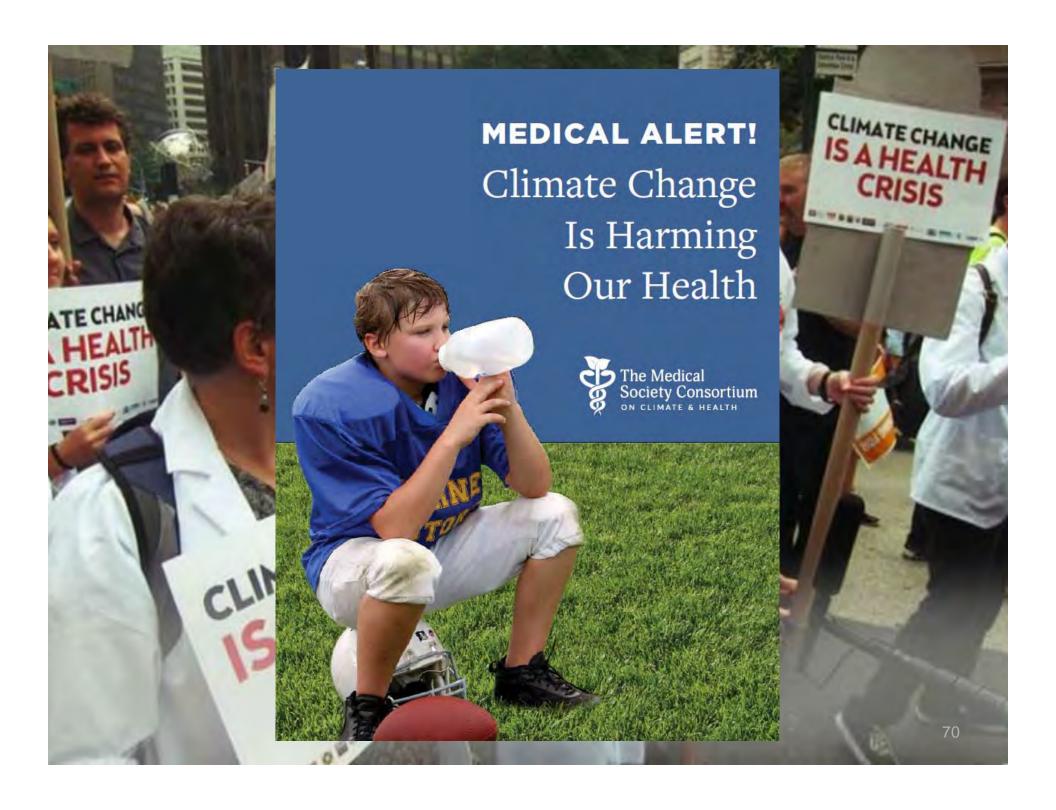


# HEALTH OUTCOMES DATA: 500 CITIES



Mental health not good for ≥14 days among adults aged ≥18 years by census tract, San Diego, CA, 2014





# MITIGATION CO-BENEFITS



Source: adapted from CDPH's Climate Action for Health 2012

Strategy to Reduce GHG Emissions	Chronic Disease and Health Equity Unit Funding	Health Co-Benefits
Reduce VMT/Increase active transportation (e.g. biking, walking)	Caltrans EJ, CPPW, CTG, Prevention 1422, LUEG AT grants, Support for SANDAG for Caltrans Sustainable Communities Planning grant	Increase PA Reduce CD Improve mental health Reduce air pollution
Reduce emissions via land use changes (e.g. transit-oriented development, infill development, Smart Growth, open space and ag land conservation)	CPPW, CTG, Prevention 1422, CDHE support for City of SD Sustainable Communities Strategy grant	Increase PA Reduce CD Increase access to essential services Enhance safety
Reduce energy intensity in local food systems	CPPW, CTG, NEOP, Prevention 1422, CDHE/City of SD Zero Waste HIA, Supporting County Zero Waste Initiative	Increase access to healthy, fresh foods Reduce CVD due to saturated fats Increase local social cohesion
Urban greening	CPPW, NEOP, Prevention 1422, PICH (unfunded), Support for City of SD Urban Greening Grant	Reduce temperature and urban heat island health effects Reduce air pollution Reduce noise Enhance safety
Reduce building energy use (e.g. active design standards, energy efficiency, weatherization)	CPPW, Prevention 1422	Reduce energy costs Promote healthy homes Create local green jobs Promote cooler communities

# "At the present time... Beijing is not a livable city"

Beijing Mayor Wang Anshun

January 23, 2015

### CITY OF SD CLIMATE ACTION



San Diego Signs Climate Action Plan to Use 100 Percent Renewable Energy By 2035



By Jessica F

May 05, 2016 01:21 PM EDT



Increasing a city's tree canopy has also been shown to reduce storm water runoff, lower crime rates, boost public health and strengthen communities, city officials said.

While San Diego's streets are lined with approximately 200,000 trees and 48,000 palms, previous studies estimated that they could accommodate more than four times that amount with the new plan.







# THANK YOU

