DEPARTMENT OF ENVIRONMENTAL & OCCUPATIONAL HEALTH SCIENCES

UNIVERSITY *of* WASHINGTON
School of Public Health

CASA FAMILIAR
A COMMUNITY DEVELOPMENT AGENCY

OEHHA
SCIENCE FOR A HEALTHY CALIFORNIA

CalEPA
California Environmental
Protection Agency

POR LA REALIZACIÓN PLENA DEL HOMBRE

SAN DIEGO STATE UNIVERSITY

San Ysidro Air Monitoring Study

November 9, 2017

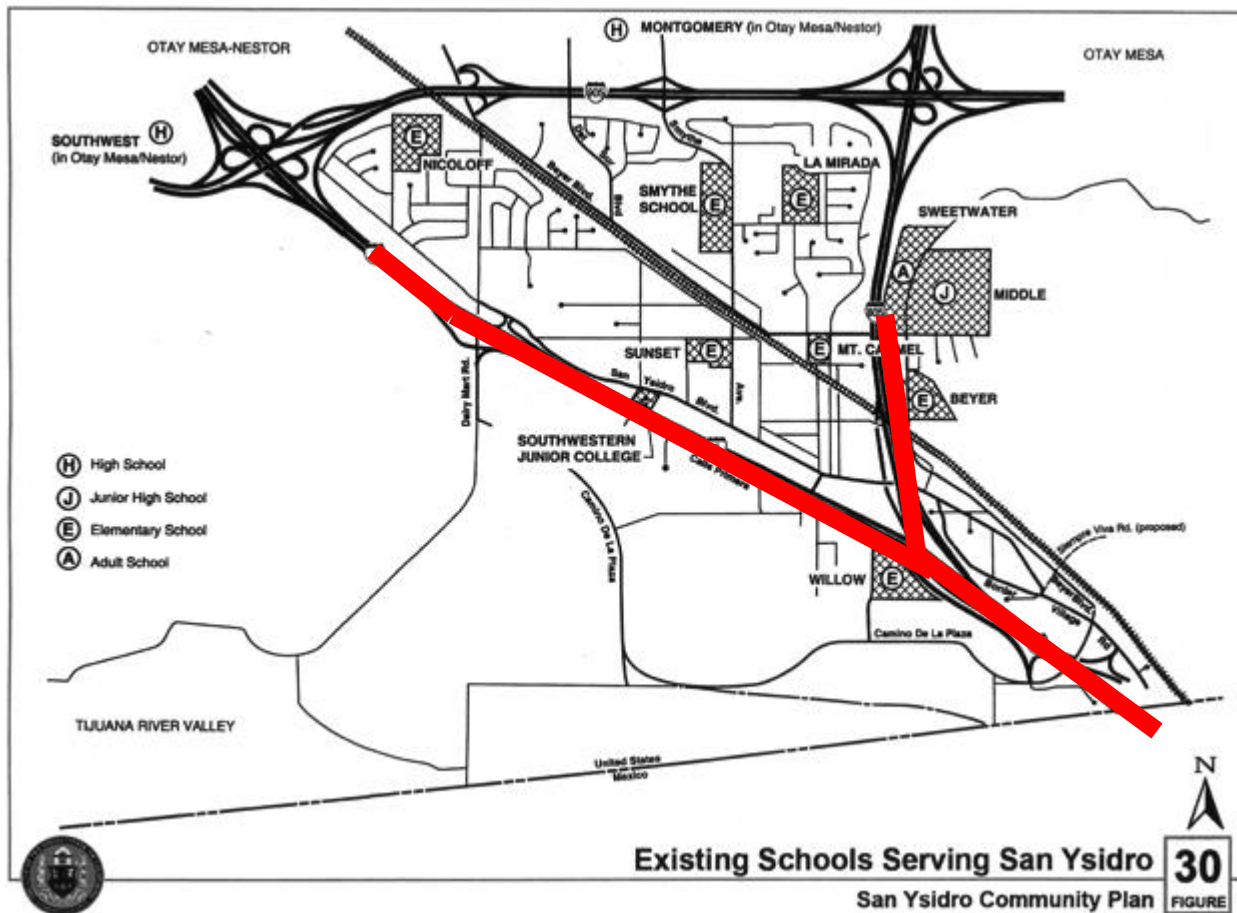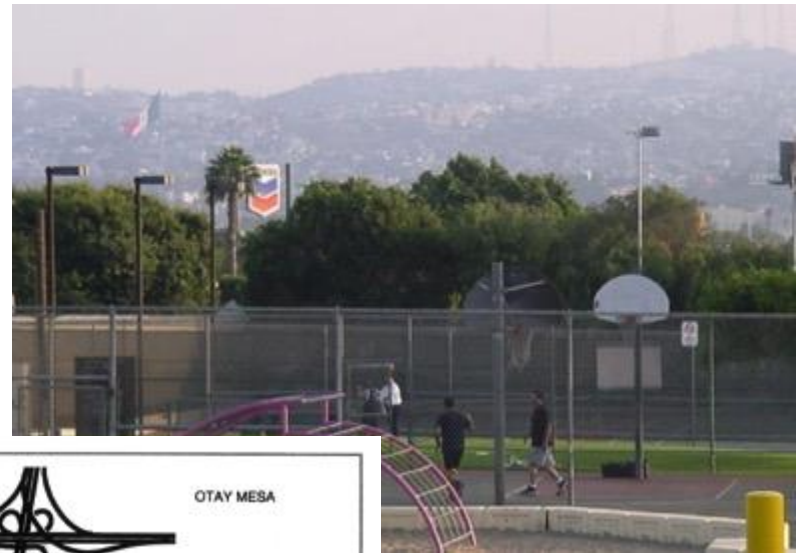|	
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David Flores	**Casa Familiar**
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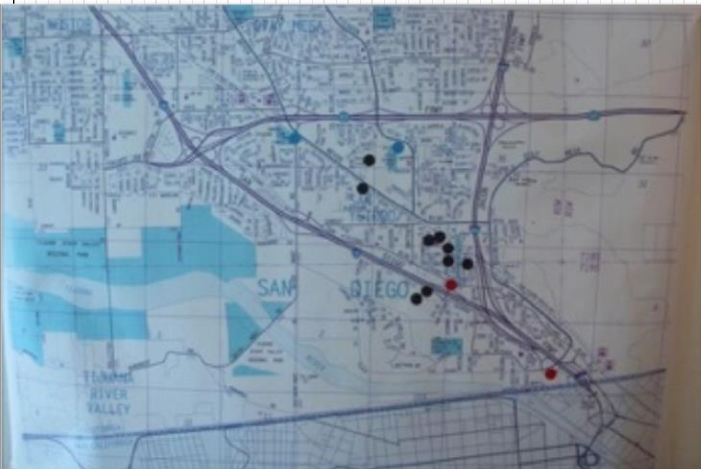
San Ysidro

- Primarily Latino – 93% Hispanic
- Median income ~60% < SD county
- Transportation issues
  - 3 freeways cross community
  - Commercial trucks from Otay Port of Entry
  - San Ysidro Port of Entry

Existing Schools Serving San Ysidro

San Ysidro Community Plan

30 FIGURE

OTAY MESA-NESTOR

MONTGOMERY (in Otay Mesa/Nestor)

OTAY MESA

SOUTHWEST (in Otay Mesa/Nestor)

NICOLOFF

SMYTHE SCHOOL

LA MIRADA

SWEETWATER

MIDDLE

SUNSET

MT. CARMEL

BEYER

SOUTHWESTERN JUNIOR COLLEGE

WILLOW

Camino De La Plaza

TIJUANA RIVER VALLEY

United States
Mexico

N

(H) High School

(J) Junior High School

(E) Elementary School

(A) Adult School

12

SAN YSIDRO COMMUNITY AIR MONITORING STUDY - AIR MONITORS LOCATIONS MAP - Nov. 2017

on Map
1-San Ysidro Middle School
2-Willow Elementary School
3-SY McDonalds/Bus Terminal
4-Casa Familiar - El Salon
5-Outlets at the Border
6-The FRONT Gallery - SY Blvd.
7-SYHealth Ctr. - Adult Ctr.
8-Nicoloff Elementary School
9-Tijuana Border

10-Tijuana River Valley Estuary/
Imperial Beach (Off Map)
11-Donovan/Otay Colocation
(Off Map)

Yellow - School Grounds
Green - Parks

4

U of W Next-Gen Community Air Monitor

- Non-regulatory research instruments

Pollutants measured:
Fine particulate matter (particle count)
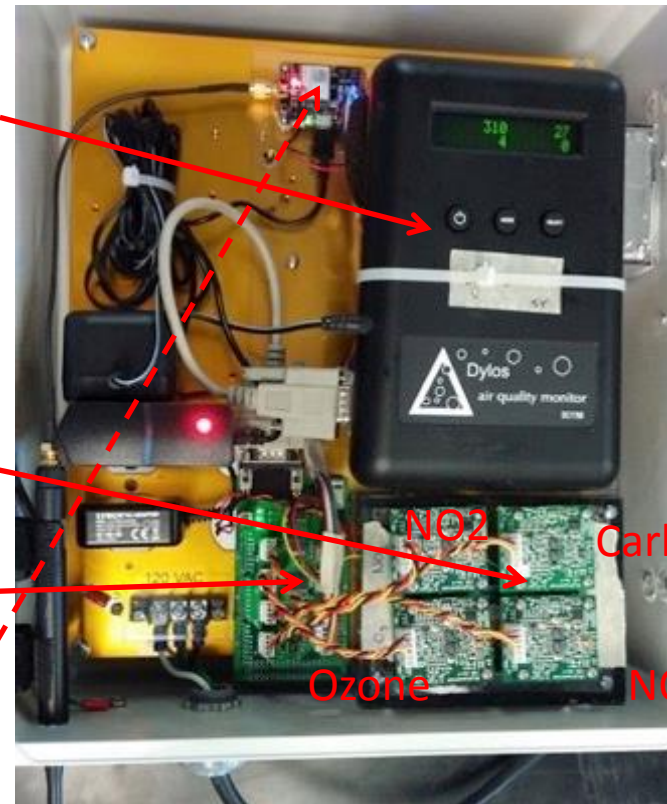Test ultralow cost particle monitors (2)
(not visible)
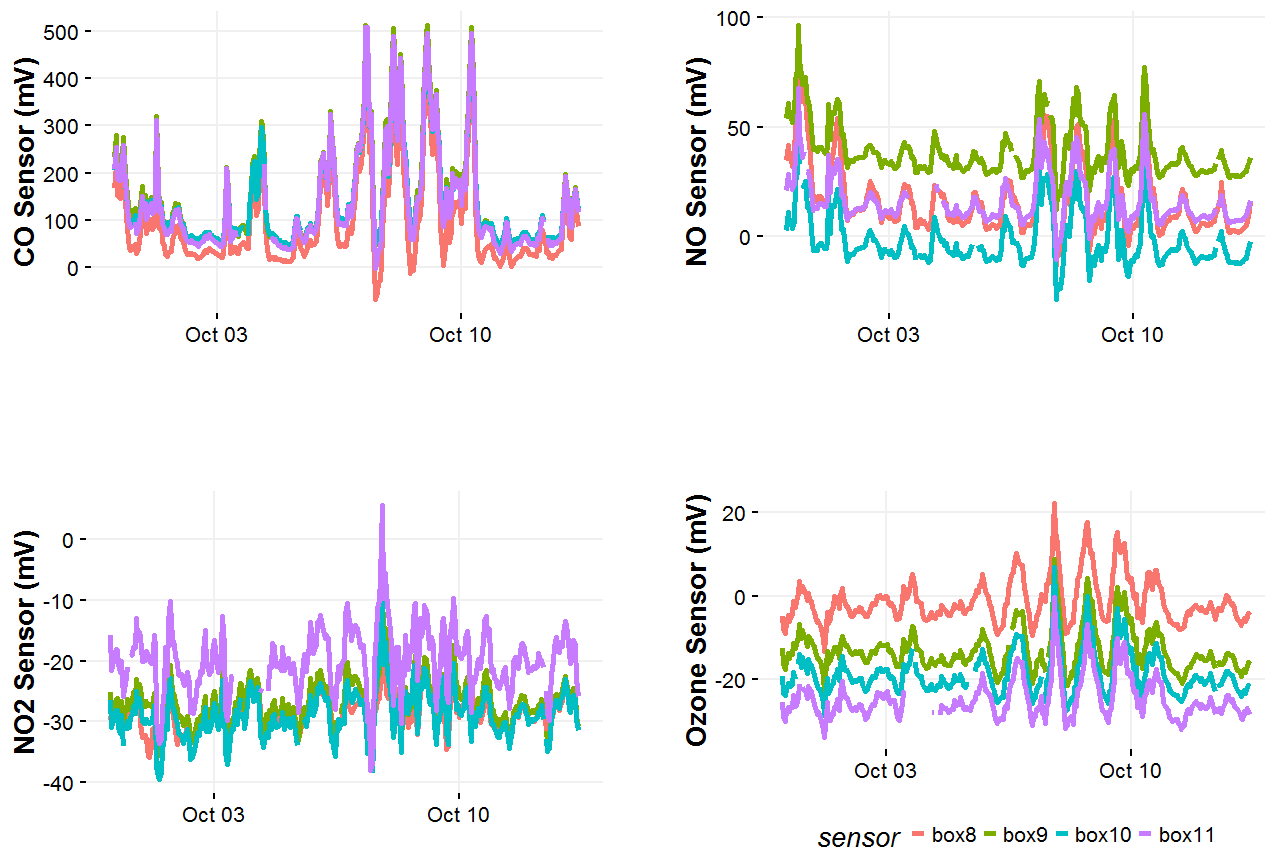
**Carbon monoxide
Oxides of nitrogen (NO and NO2)
Ozone**

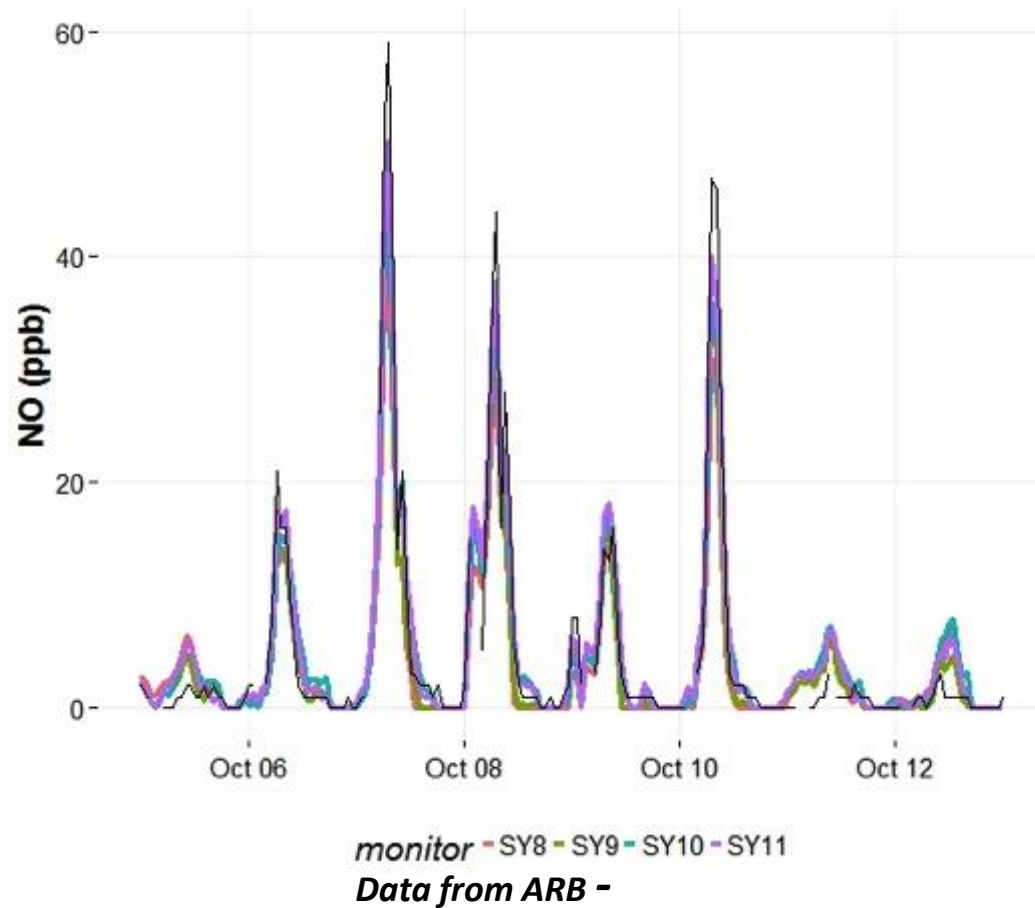**Also Temperature
and Relative Humidity**

**Data streamed to UW website
5 minute averages**

NO2
Carbon monoxide
Ozone
NO

Raw data from 4 Collocated Monitors Gases

Preliminary Data

Preliminary Calibration

Data from ARB

What will be measured in San Ysidro snapshot campaign (SDSU)

- At beginning: Co-locate UW monitors at lab then San Diego Downtown site

- Snapshot campaigns during the time the monitors are operating (SDSU)
  - **FOCUSED ON PARTICULATE MATTER:**
    - **Particulate matter of various sizes PM 1, 2.5, 4, 10[a]**
    - **Ultrafine particles (PM<1)[b]**
    - **Gravimetric PM 2.5[c]**
    - **Black carbon (BC), a marker for diesel and burning[d]**

- **Some filters analyzed for diesel and road dust markers**
  - **1-nitropyrene (1-NP)**, which is another marker for diesel that can be detected in low concentrations.
  - **elemental carbon and organic carbon (EC/OC)**and **toxic/ source tracer metals to help detect sources**

[a] Dustrak DRX, TSI, Inc. or pDR1500, ThermoFisher. 5 minute continuous measurements.
[b] Condensation particle counters TS13007, TSI. 5 minute continuous measurements.
[c] Minivols, AirMetrics. Average over 24 hours.
[d] Microaethalometer MicroAeth, San Francisco, CA and Aethalometer A-42, dual channel, Magee Scientific. 5 minute continuous measurements.

4th Community Meeting - Website Unveiling

www.syairstudy.org
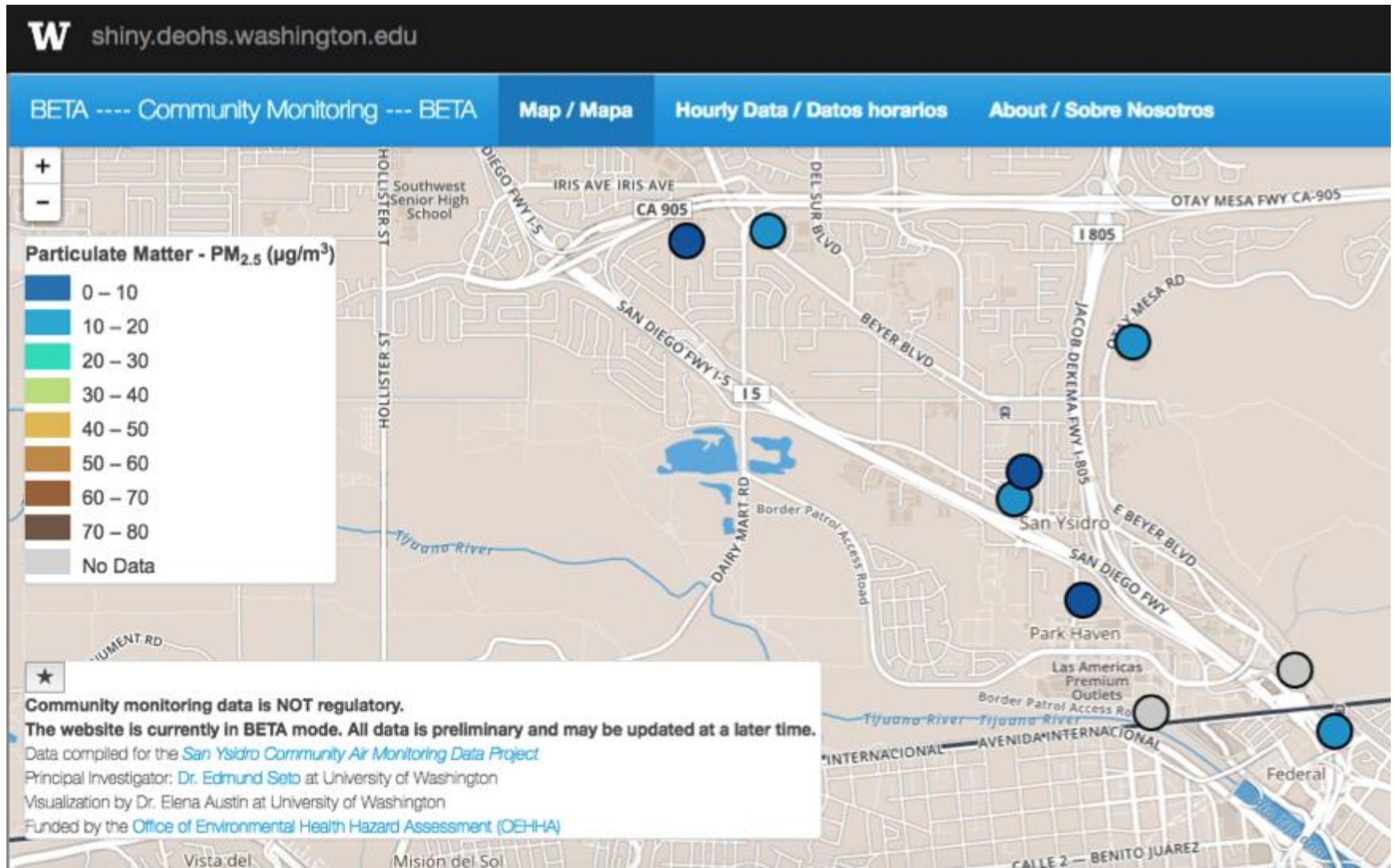
Next Steps for CASA Community Development

- PRIORITY PROJECT – SUSTAINABILITY of Air Monitor Network through CalEPA – SEPS – ARB (CA AB617)
  - PROJECT #1 – "Using Community Air Data to Prioritize Community Infrastructure"
    - 66 Community Infrastructure Projects in the new SY Infrastructure
  - PROJECT #2 –Develop Green Infrastructure for Non-Profits implementation plan
  - PROJECT #3 – Develop "Indoor Air Quality Solutions & Strategies for San Ysidro Schools & Residents"
  - PROJECT #4 – Community Strategies with CalTrans to Improve Bike/Ped Connectivity
  - PROJECT #5 – Develop US CBP Strategy for Cross Border Wait Time Alert System to Inform Community Residents
  - PROJECT #6 – Develop "Air Quality Technology for Community Engagement" – EnviroSuite & Observ App
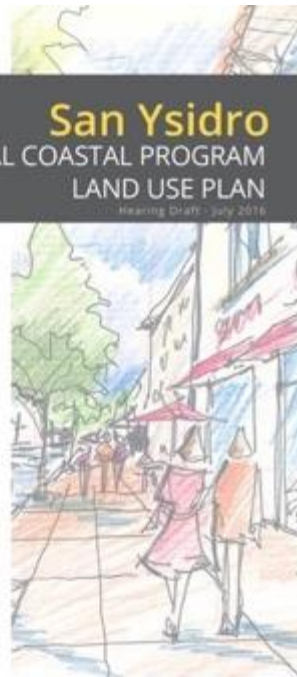
Casa Familiar
Integrating Community Concerns

San Ysidro Community Plan Update – City Council Adopted November 15, 2016
- NEW chapter 8.3 AIR QUALITY under Conservation Element

San Ysidro
COMMUNITY PLAN AND LOCAL COASTAL PROGRAM
LAND USE PLAN
Hearing Draft - July 2016

Policies

8.3.1 Encourage enforcement of air quality regulations by the San Diego County Air Pollution Control District (APCD).

8.3.2 Implement a pattern of land uses that can be served efficiently by a multi-modal transportation system that directly and indirectly minimizes air pollutants.

8.3.3 Support the monitoring of particulate pollution at the Port of Entry, and pursue methods of reducing emission, while accommodating the expansion of the Port of Entry activities.

8.3.4 Educate businesses and residents on the benefits of alternative modes of transportation, including public transit, walking, bicycling, car and van pooling, and teleworking.

8.3.5 Encourage street tree and private tree planting programs throughout the community to increase absorption of carbon dioxide and pollutants.

GOT AIR QUALITY? CALIDAD DE AIRE?

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Questions?

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