

# San Ysidro Air Monitoring Study

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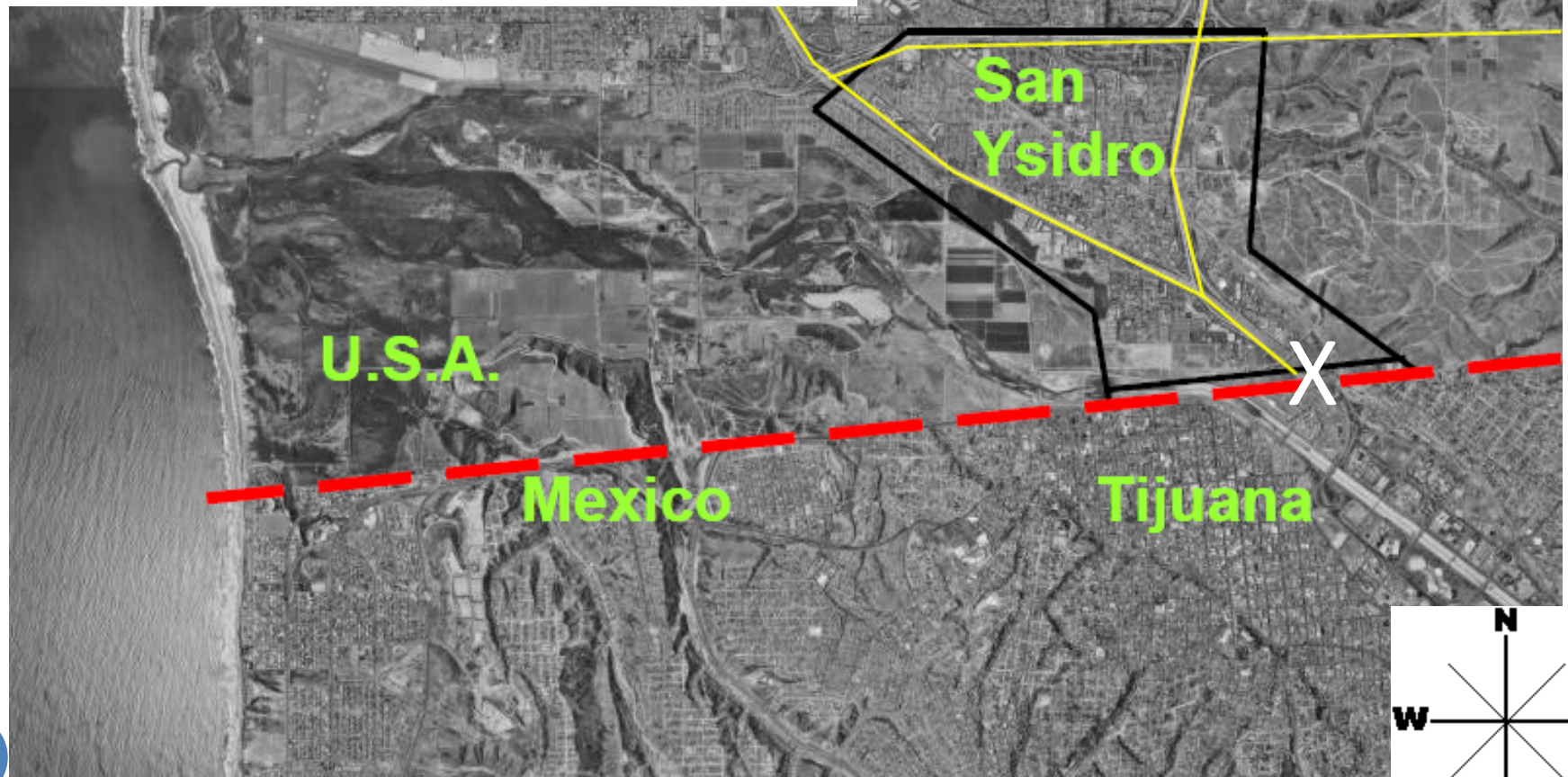
Casa Familiar

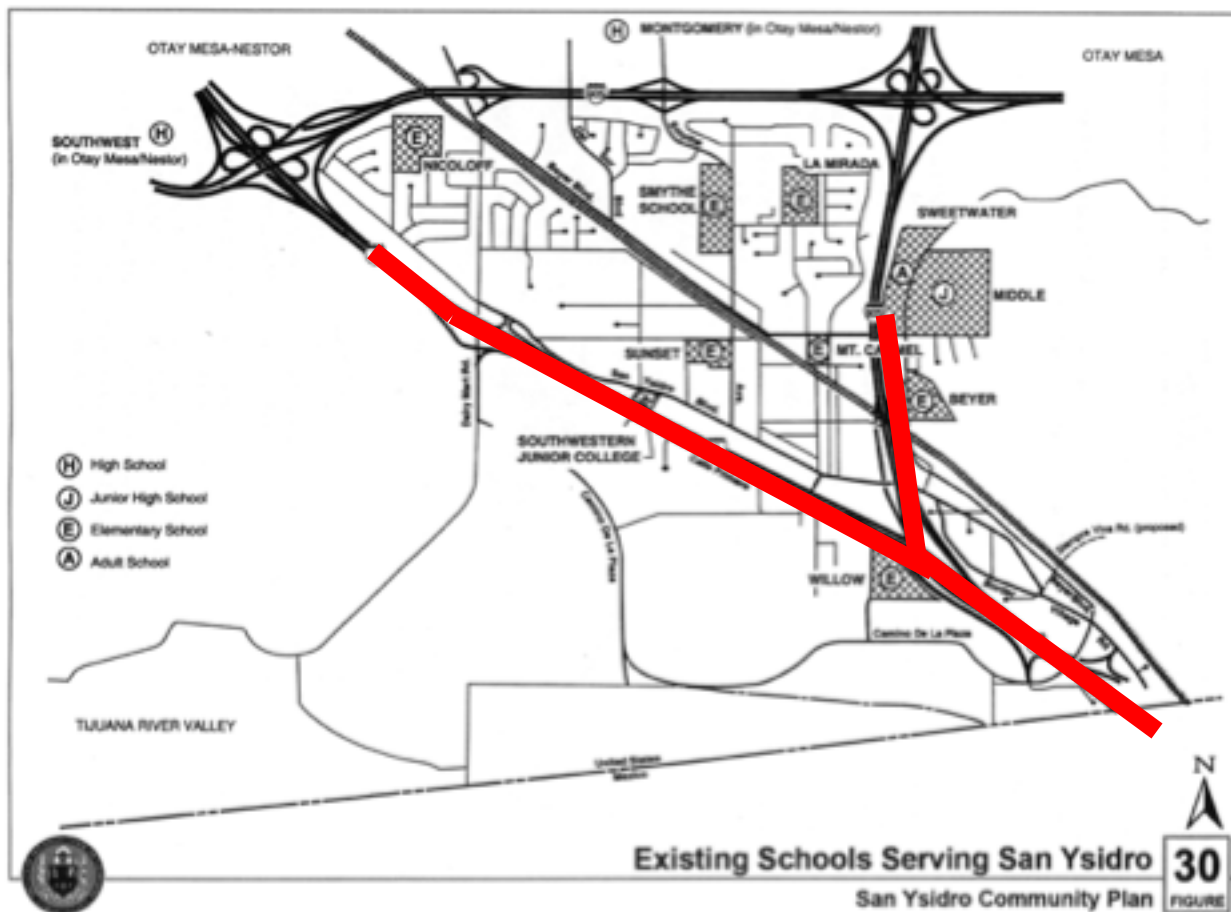
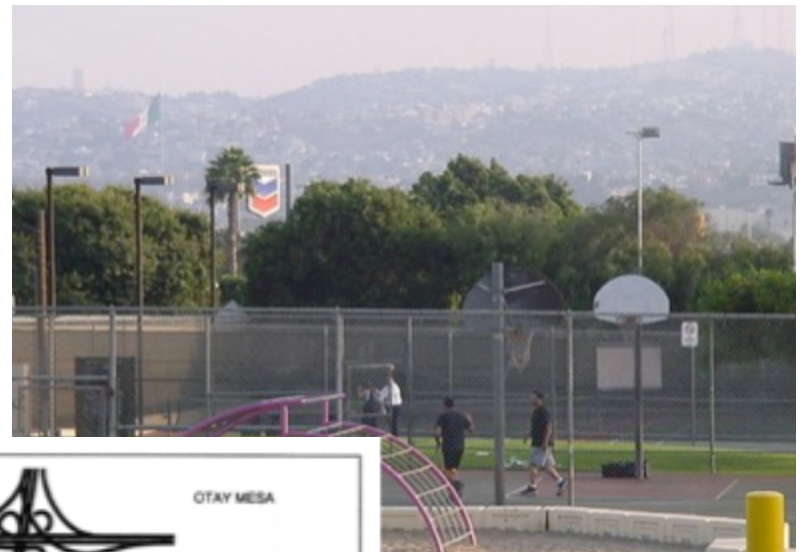
CalEPA, OEHA



# 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







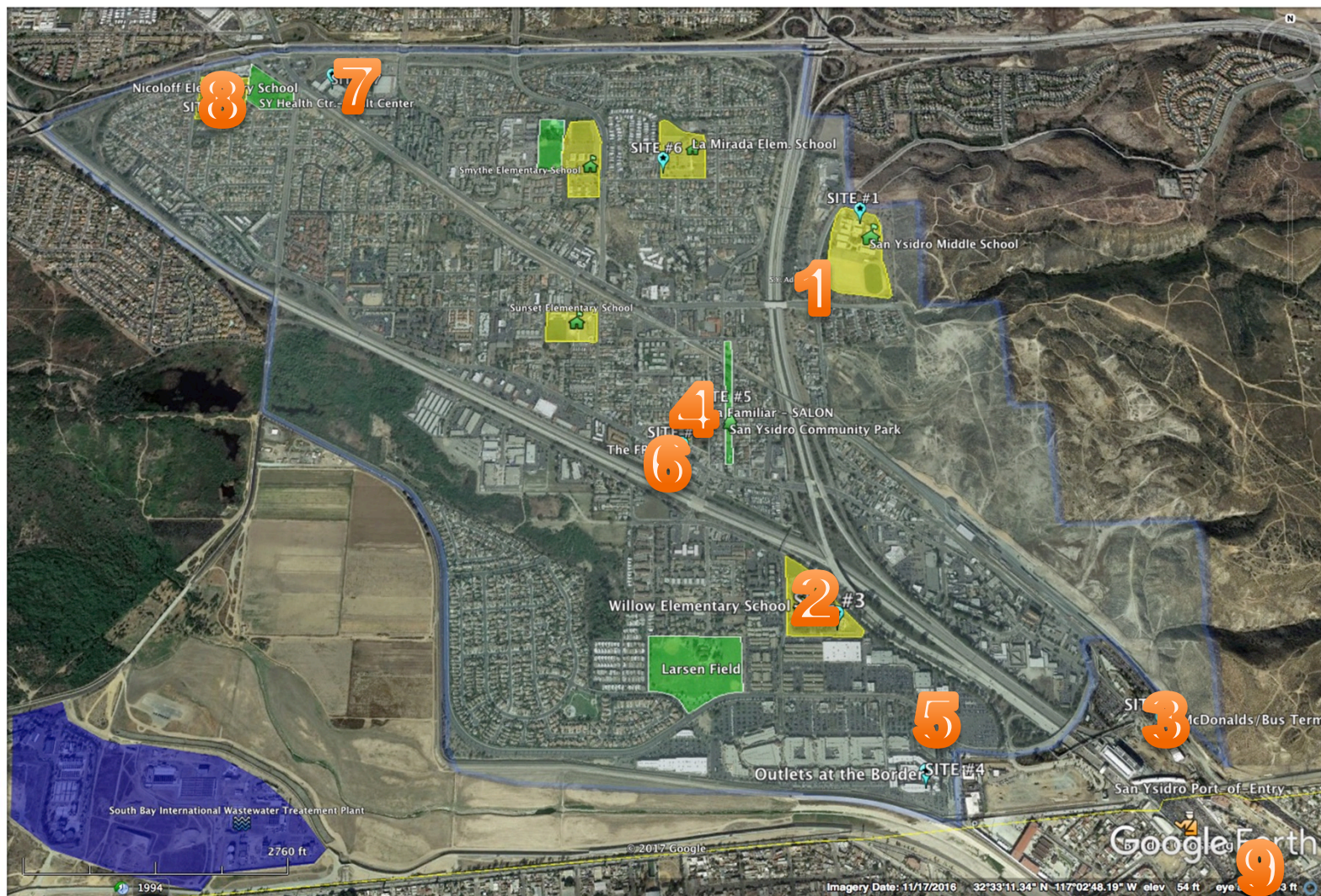
# SAN YSIDRO COMMUNITY AIR MONITORING STUDY - AIR MONITORS LOCATIONS MAP - Nov. 2017

## # 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



# 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)

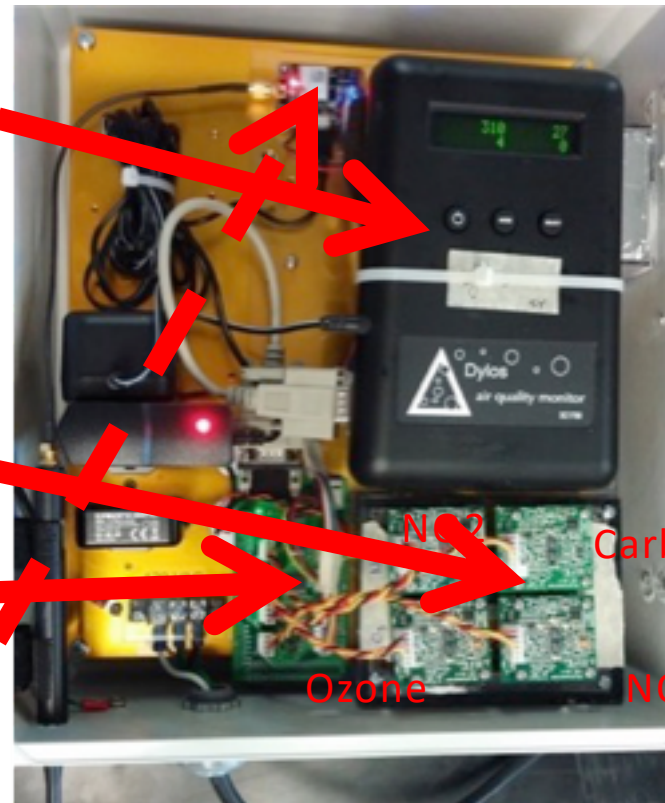
**Carbon monoxide**

**Oxides of nitrogen (NO and NO<sub>2</sub>)**

**Ozone**

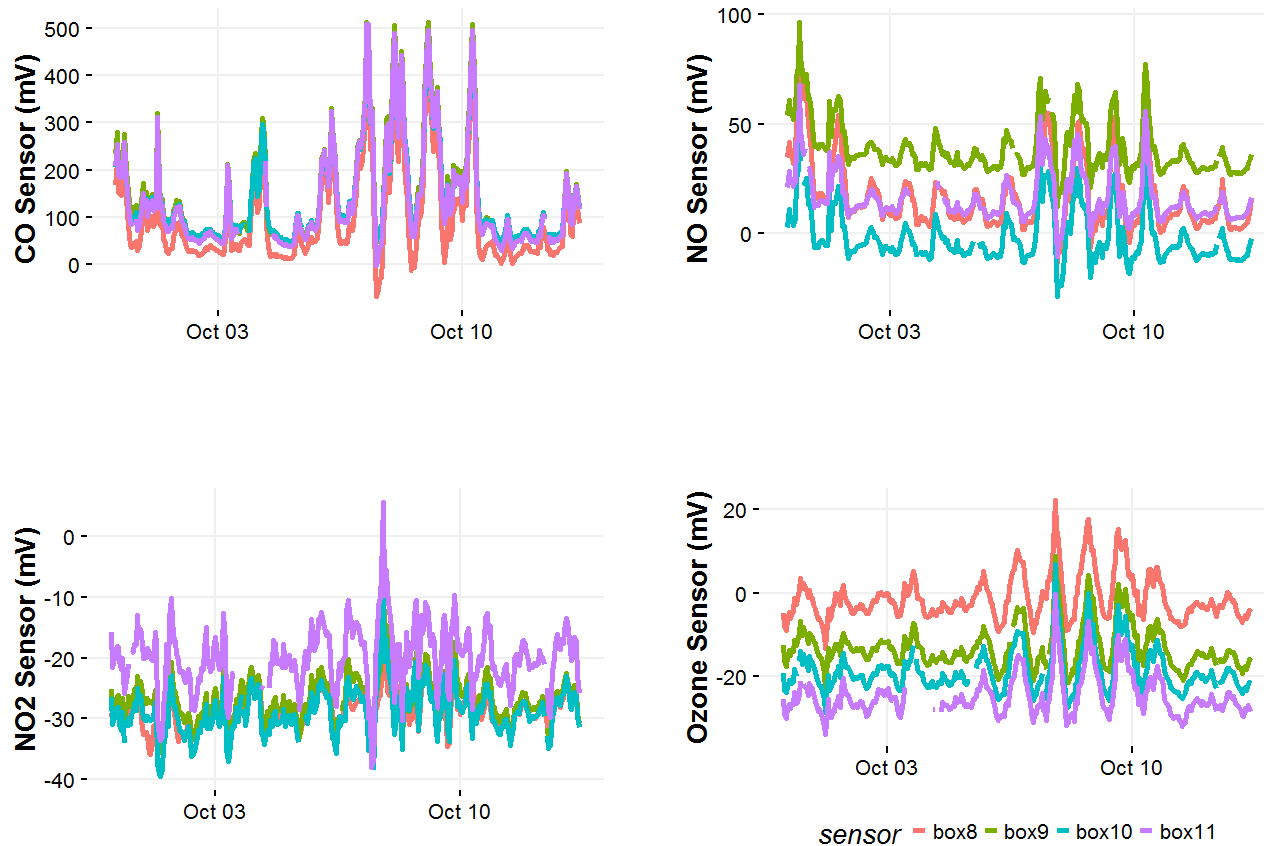
**Also Temperature  
and Relative Humidity**

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

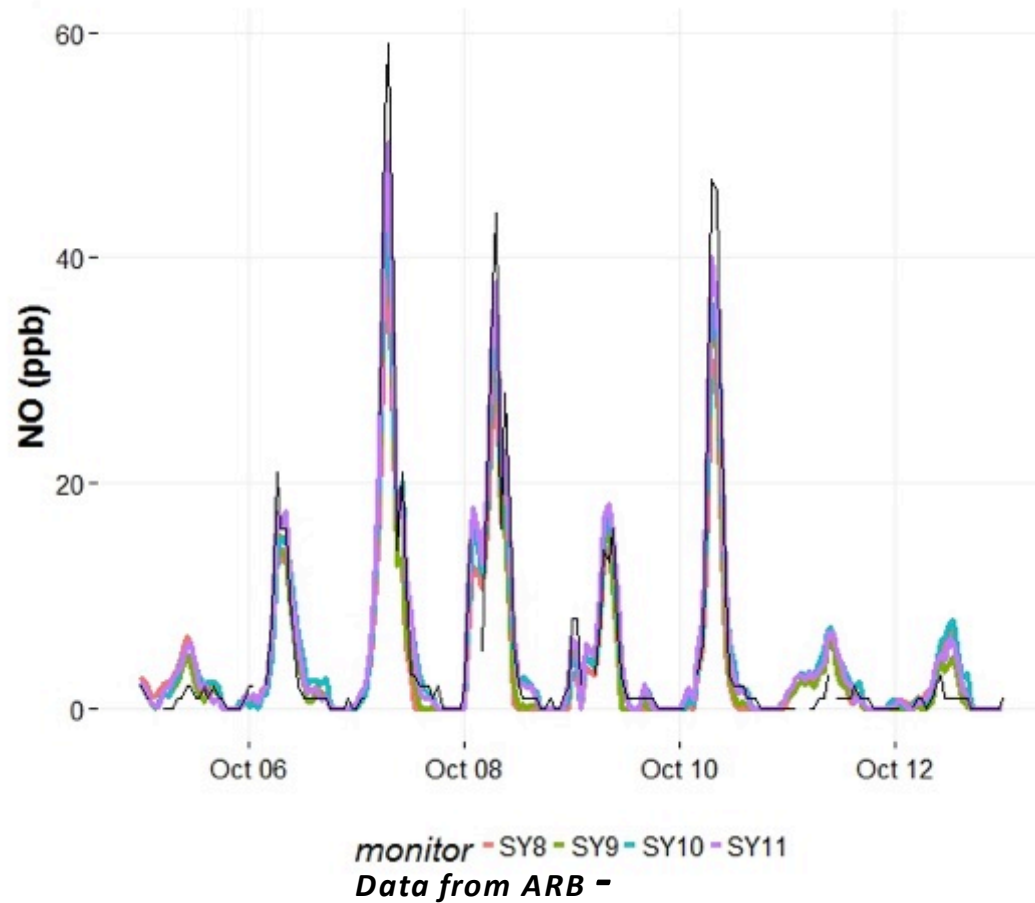




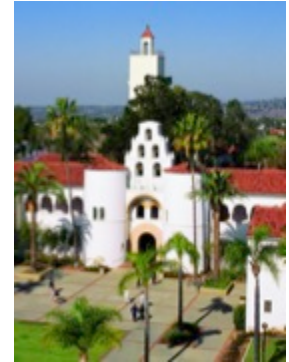
# Raw data from 4 Collocated Monitors Gases



# Preliminary Calibration



# 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<sup>a</sup>
    - Ultrafine particles (PM<1)<sup>b</sup>
    - Gravimetric PM 2.5<sup>c</sup>
    - Black carbon (BC), a marker for diesel and burning<sup>d</sup>
- **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**

<sup>a</sup> Dustrak DRX, TSI, Inc. or pDR1500, ThermoFisher. 5 minute continuous measurements.

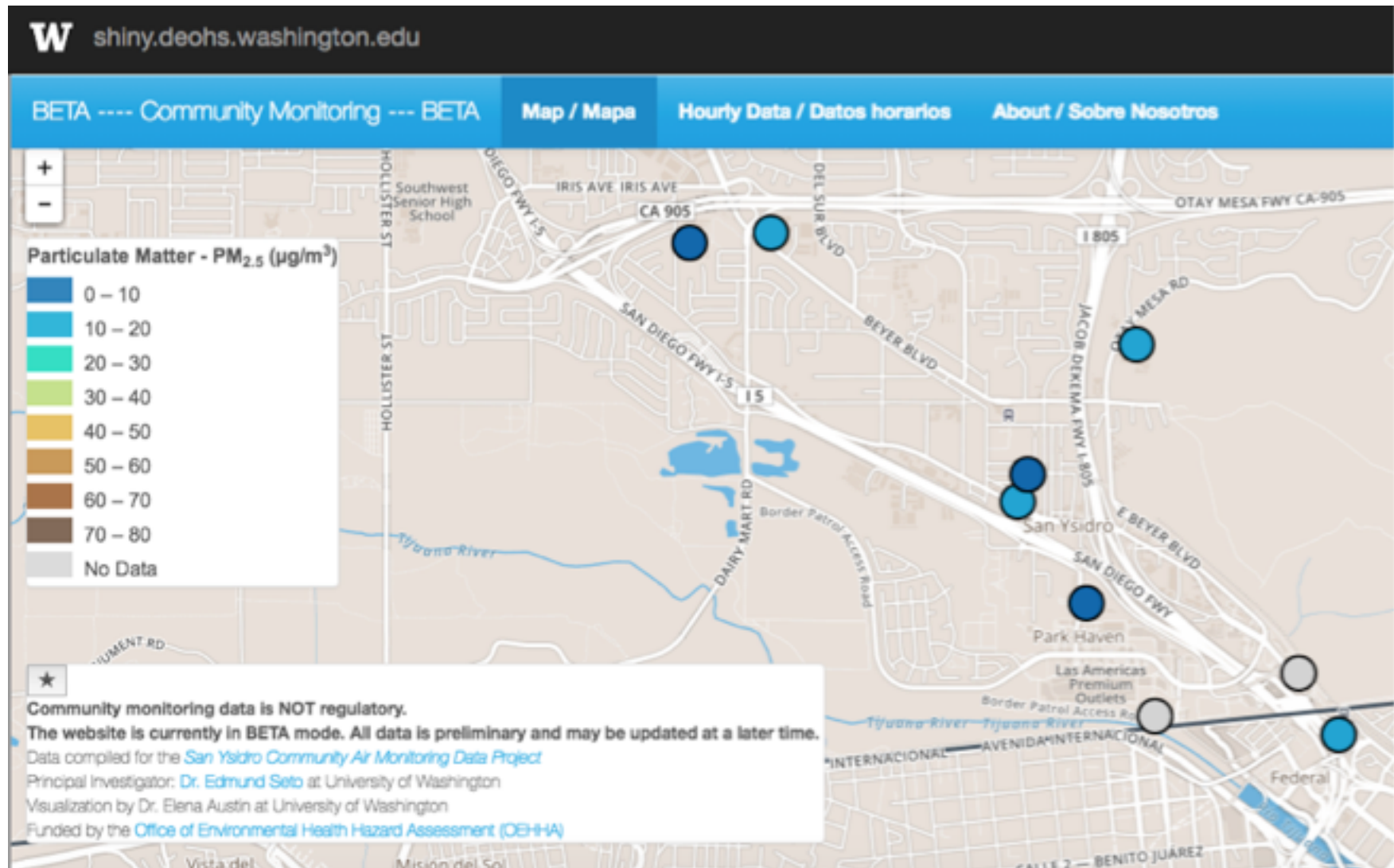
<sup>b</sup> Condensation particle counters TS13007, TSI. 5 minute continuous measurements.

<sup>c</sup> Minivols, AirMetrics. Average over 24 hours.

<sup>d</sup> Microaethalometer MicroAeth, San Francisco, CA and Aethalometer A-42, dual channel, Magee Scientific. 5 minute continuous measurements.



# 4th Community Meeting - Website Unveiling



# 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

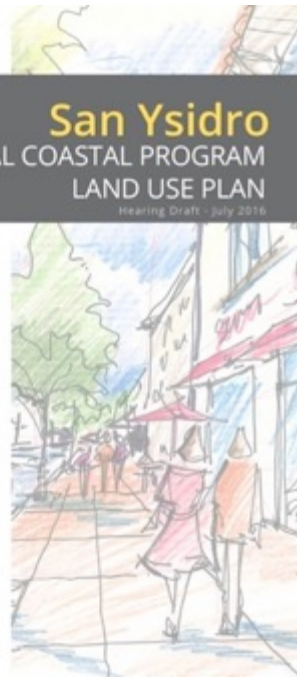


# Casa Familiar

## Integrating Community Concerns

San Ysidro Community Plan Update – City Council Adopted November 15, 2016

- NEW chapter 8.3 AIR QUALITY under Conservation Element



### 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?

## [www.syairstudy.org](http://www.syairstudy.org)



[WWW.CASAFAMILIAR.ORG](http://WWW.CASAFAMILIAR.ORG)



## Questions?

<http://deohs.washington.edu/san-vsidro-air-quality-and-border-traffic-study>

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