Imperial County Colonias Infrastructure Assessment Plan

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BEAR
BERKELEY ECONOMIC ADVISING AND RESEARCH
www.bearecon.com

Company Background

- BEAR is an economic research partnership in Berkeley, California.
- Two primary missions - improving visibility for policy makers and promoting evidence-based policy.
- Since founding in 2002, we have produced over 100 assessments for local, state, federal, and international agencies.
  - CARB - Scoping Plan for AB32
  - CEC - Long Term Energy Strategy Assessment
  - CAISO – SB350 Renewable Energy Assessment
  - CPUC – Diablo Canyon Nuclear Power Plant Closure
  - SCAG – Colonias study, Job Quality Index project, Economic Roundtable

BEAR's Assessment Team

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Imperial Colonias Infrastructure Assessment

Graciela Chong, MDP
Project Manager

Research Interns and BEAR Support Staff

General Project Strategy

1. Produce baseline assessments of Imperial County Colonia infrastructure and housing stock to provide insight on
   - baseline infrastructure and housing conditions across the County;
   - infrastructure needs and challenges to local development;
   - investment financing and sequencing
2. Create data visualization tools to illustrate scenarios, including a "business as usual" reference and alternative local development strategies
3. Develop a draft Colonias Infrastructure Plan
4. Consult with County officials and designated stakeholders to incorporate local priorities and suggestions for a Final Plan for SCAG, state, and federal investment authorities.

Information Resources

Private data sources for mapping structures:

- Microsoft US Building Footprints
- Google Streetview
- Open Street Map – crowd sourced GIS data
- Comprehensive mapping of non-permanent living units such as mobile homes and RVs using satellite imagery

Combined with State, Federal, and utility GIS data:

- Parcel maps
- Address level data on service connectivity (water, electricity, sewage, etc.)
- Data on roads including road surface and quality

Resulting Database for for 13 Colonias in Imperial County

We are constructing an integrated SQL database that can be embedded in Google Maps with address-level detail on Infrastructure

Structures (use, capacity, and quality):

- Residential
- Commercial
- Public (admin, schools, safety, etc.)
- Community (churches, libraries, etc.)

Services:

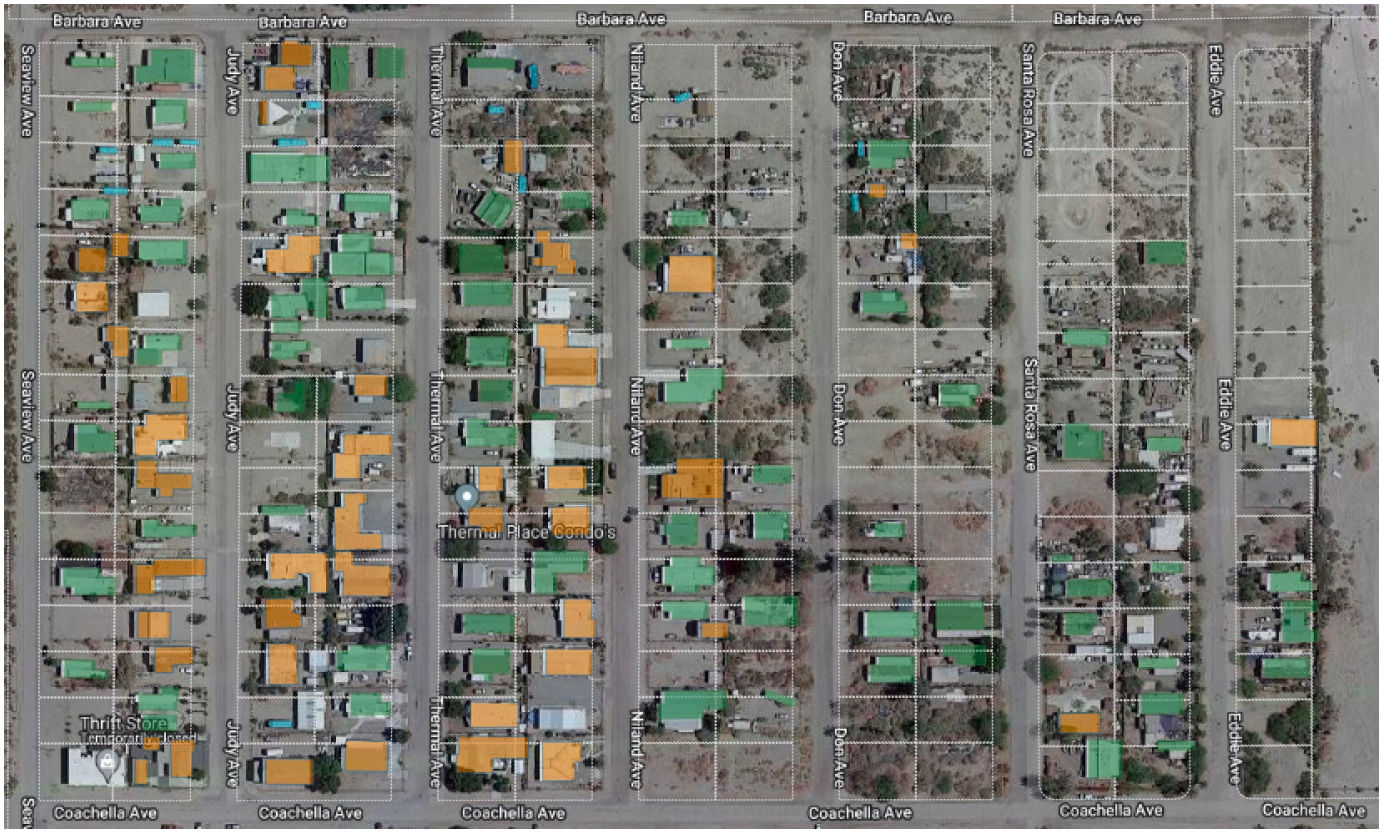
- Roads
- Electricity
- Water
- Sewage
- Refuse

Example: Structural Classification

Structures + Living Units

- Single Family Home
- Multifamily Home (eg Duplex)
- Apartment
- RV
- Mobile Home/Trailer
- Commercial
- School
- Government Building
- Fire Station
-
- Vacant
- Church

Salton Sea Beach

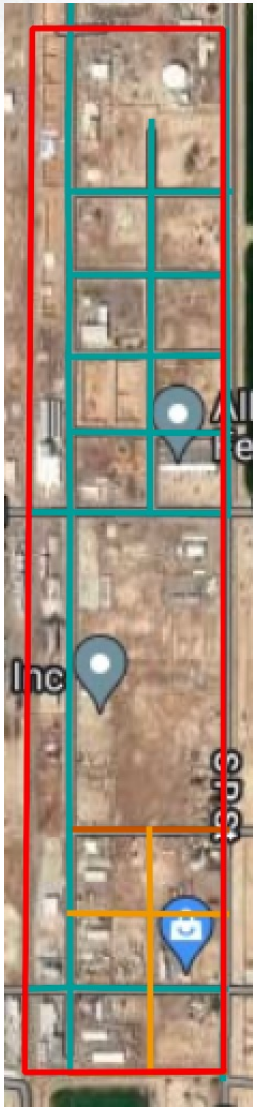


Housing Inventory
Living Units are Quite Diverse

- Salton Sea Beach
  - ~70% trailers or mobile homes, 25% single family homes, 5% RVs
- Brawley
  - ~60% single family homes and 20% apartments adjacent to commercial areas
- Niland
  - ~50% single family homes and 45% mobile homes or trailers
- Winterhaven
  - ~80% single family homes

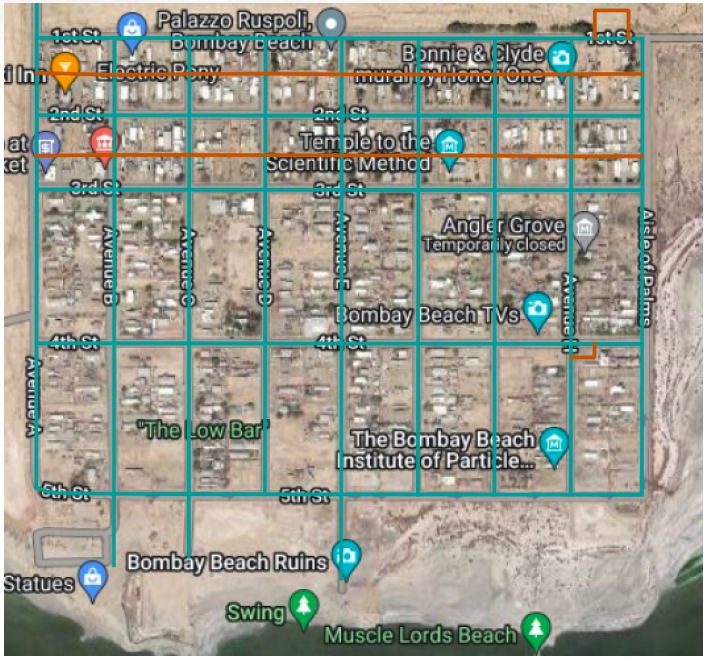
Examples: Road Inventory

Imperial (city)



Colonia boundaries in red

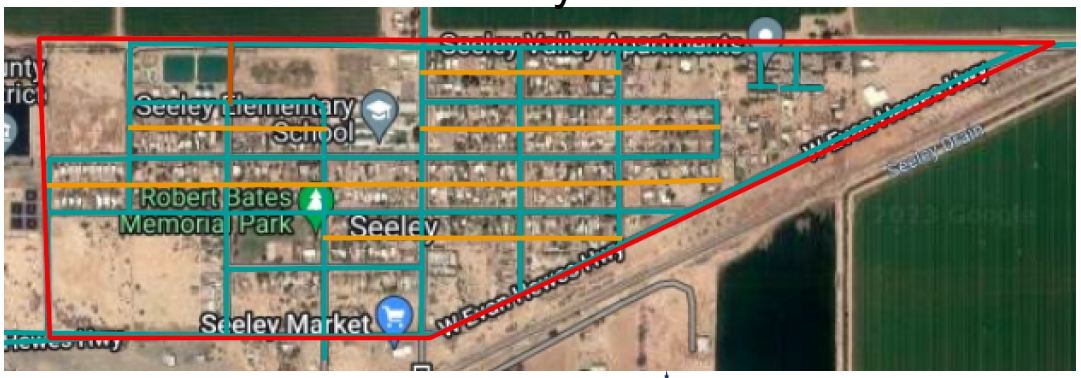
Bombay Beach



Roads

- asphalt/paved
- unpaved-improved
- unpaved-unimproved

Seeley

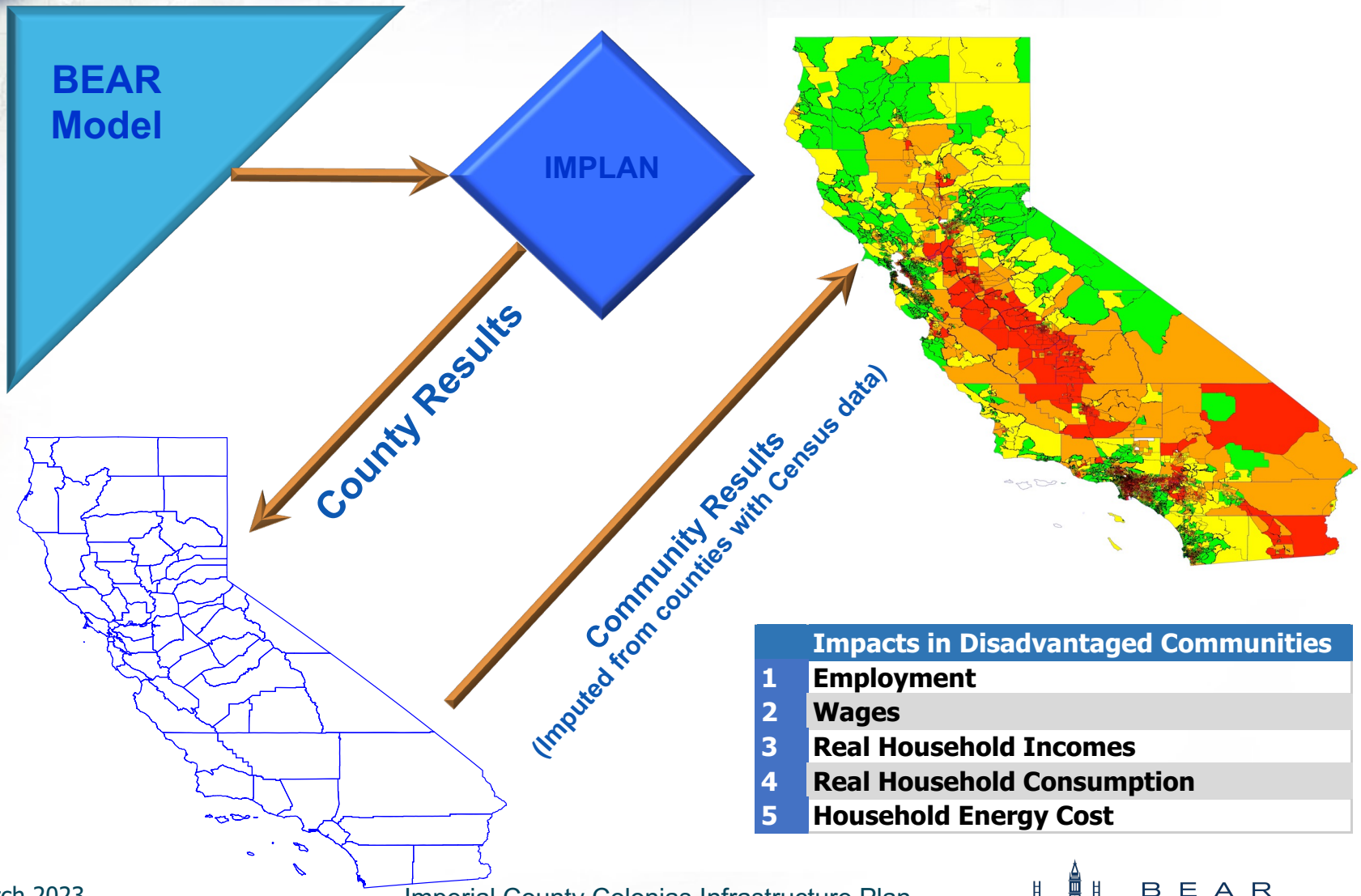


Scenario Modeling

To project baseline conditions forward under difference investment scenarios, we use our own

- BEAR Model – The most detailed and advanced economic forecasting model for the California economy
- Data resources
  - IMPLAN/BEA
  - US Census
  - CalEnviroscreen 4.0
  - ZILLOW

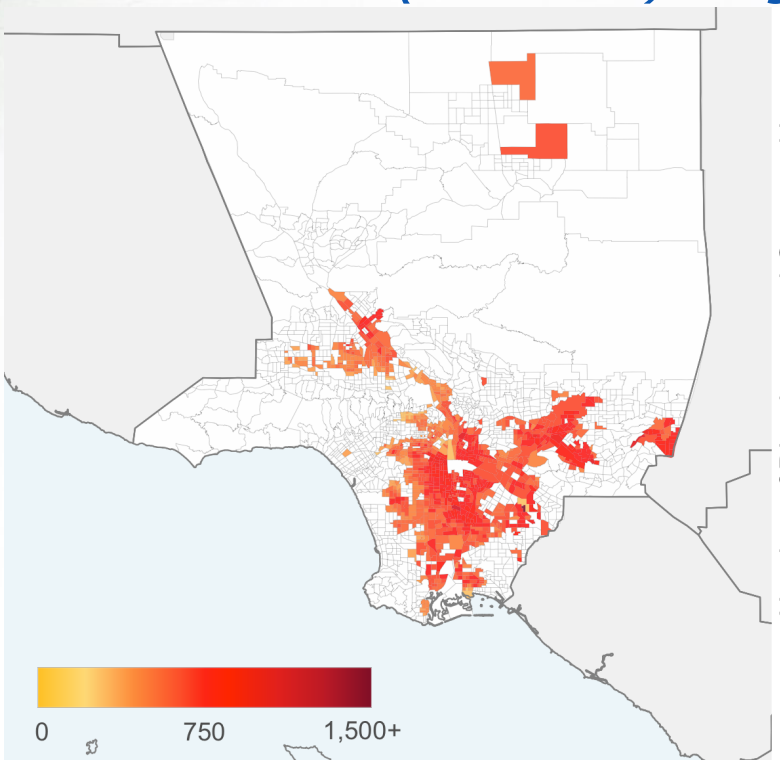
Detailed Livelihoods Impacts

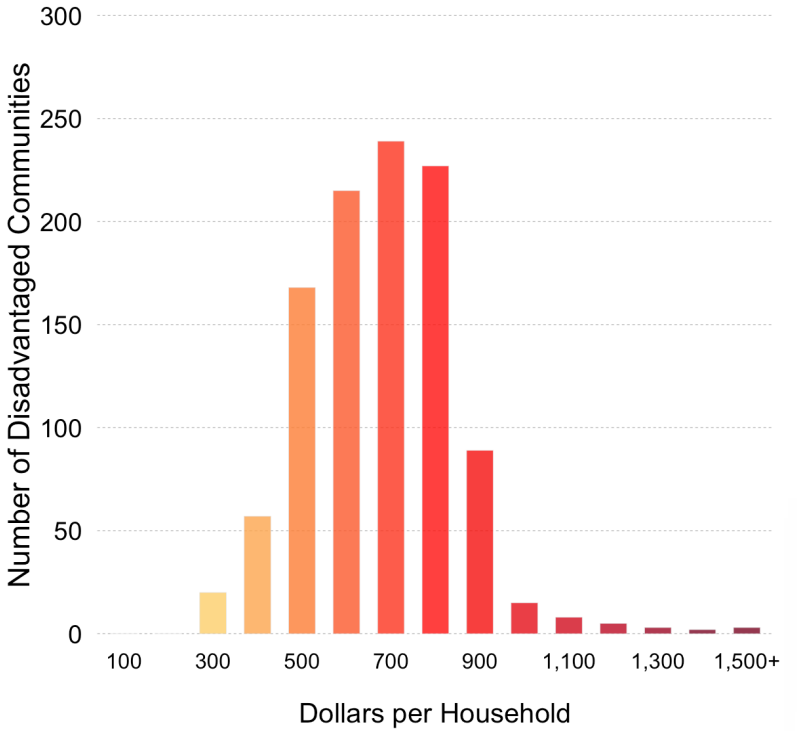


	Impacts in Disadvantaged Communities
1	Employment
2	Wages
3	Real Household Incomes
4	Real Household Consumption
5	Household Energy Cost

Example: Air Quality Impacts
Avoided Mortality and Morbidity Costs ($/hh)

Mit2030 (Base Cost) Mitigation Scenario – Los Angeles





- By 2030, average DAC households avoid $677/HH in costs while non-DACS avoid $511/HH.
- Los Angeles includes DACs with some of the highest PM 2.5 exposure (~90th percentile), Ozone exposure (~93rd percentile) and disease incidence (~99th percentile in asthma).
- Avoided health costs due to predicted reduction in both PM2.5 and Ozone concentrations in the region.

Thank you

Questions?

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