

Background

- What is Peak Oil ?
- How will it impact our cities?
- What kind of planning is taking place?

Vision Plan for Ventura

- Defining an approach for Post-Peak Oil planning

Open Discussion

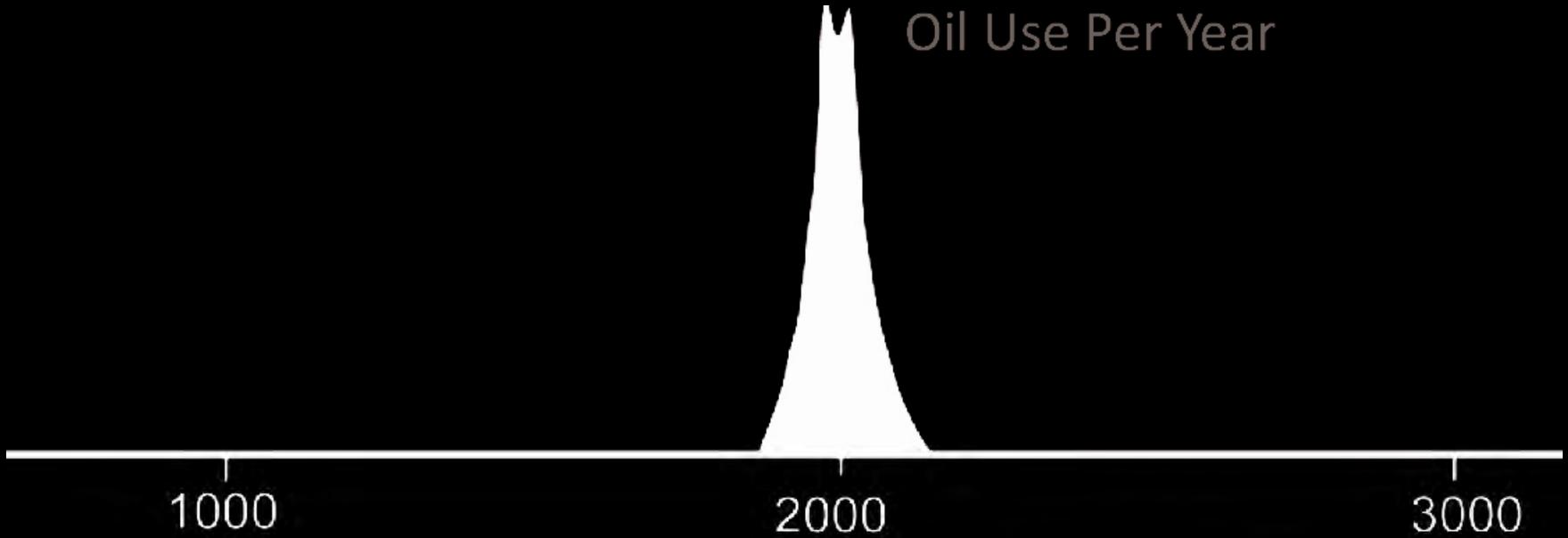
Transforming Urban Environments for a

POST-PEAK OIL FUTURE

A Vision Plan For the City of San Buenaventura

Yarnie Chen | Matt Deines | Henry Fleischmann | Sonya Reed | Isby Swick
606 Studio | Department of Landscape Architecture | California State Polytechnic University, Pomona 2007

Oil Use Per Year



ADAPTED FROM: www.321energy.com

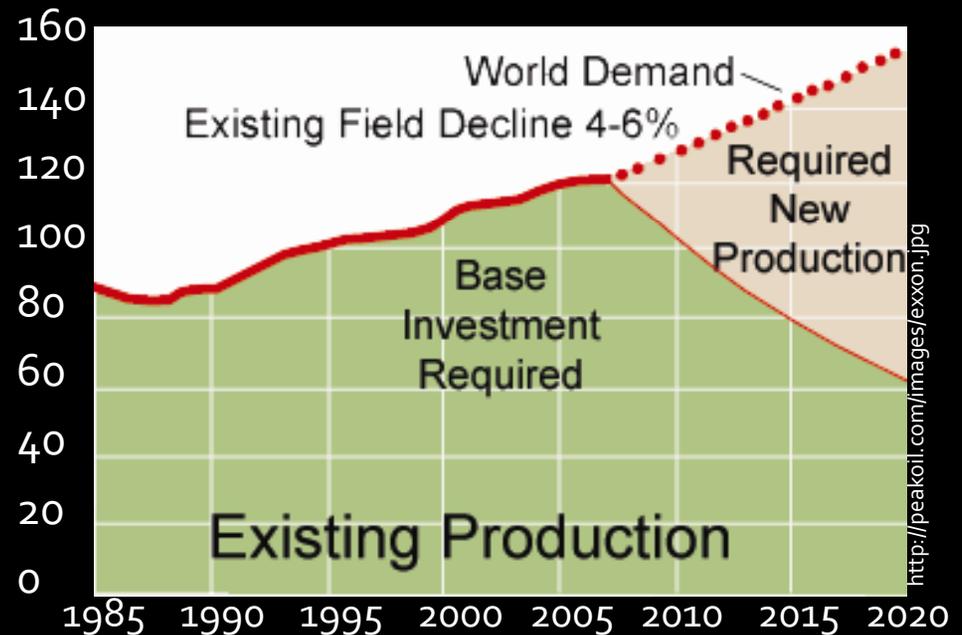
peak oil

Peak Oil: The point in time when global oil production peaks.

Once we hit that peak, daily production rates will decline over time.

PEAK OIL PREDICTIONS

- 2005- Kenneth Deffeyes, Richard Heinberg
- 2006- Henry Groppe, Matthew Simmons
- 2007- Bakharri, Duncan, ODAC
- 2010- Colin Campbell
- 2013- Rembrandt Koppelaar
- 2015- Jean Laherrere, PFC Energy
- After 2020- CERA
- After 2030- USGS

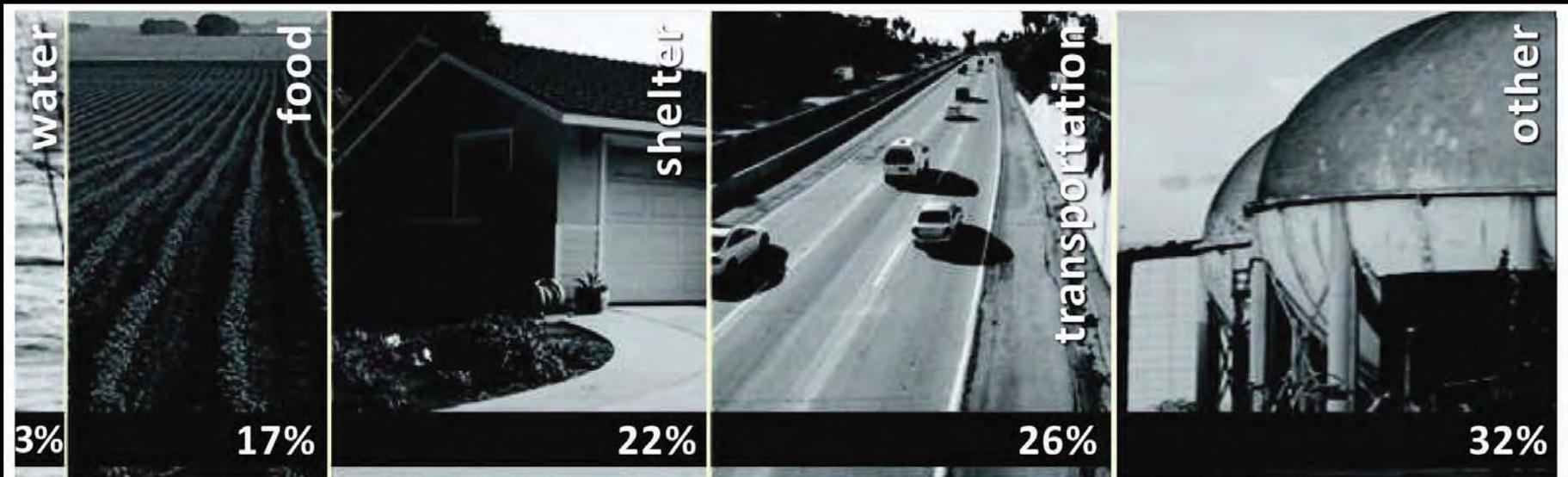


peak oil

Oil & the U.S.A

5% = Percentage of world's population living within the United States

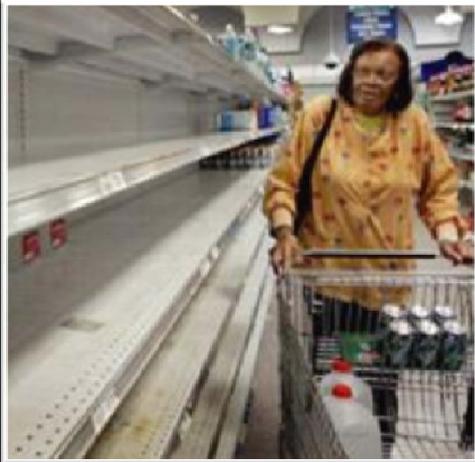
25% = Percentage of annual global oil production consumed by the United States



Compiled from multiple sources: Pimentel, David and Mario G. Istituto. "Food, Land, Population and the U.S. Economy," 1994; Brown, Lester R. Plan B 2.0: Rescuing a Planet Under Street and a Civilization in Trouble. Earth Policy Institute, 2006; EIA, AER 2000 DOE-EIA 0384 (2000)

United States Energy Consumption by Sector

peak oil



Implications for Post-Peak Oil Society:

- **Cost** of *all* consumer goods, water and food will increase
- Food production will require more land and labor; **food shortages** are likely
- Private auto transportation will be **cost prohibitive**
- **Alternative** transit and energy sources will not be able to handle **demand**
- Suburban residents will be increasingly **isolated** from daily needs
- Employment types will shift towards **labor** intensive jobs



peak oil

"Americans' confidence is withering amid a toxic combination of surging food and energy costs and falling home values."

~Squeeze Play on American Consumers, L.A. Times, February 27, 2008

"Overall, the cost of eating at home has risen more than 5% so far this year, the fastest rate since 1990."

~ Our Daily Bread? It's Costing More, L.A. Times, March 16, 2008

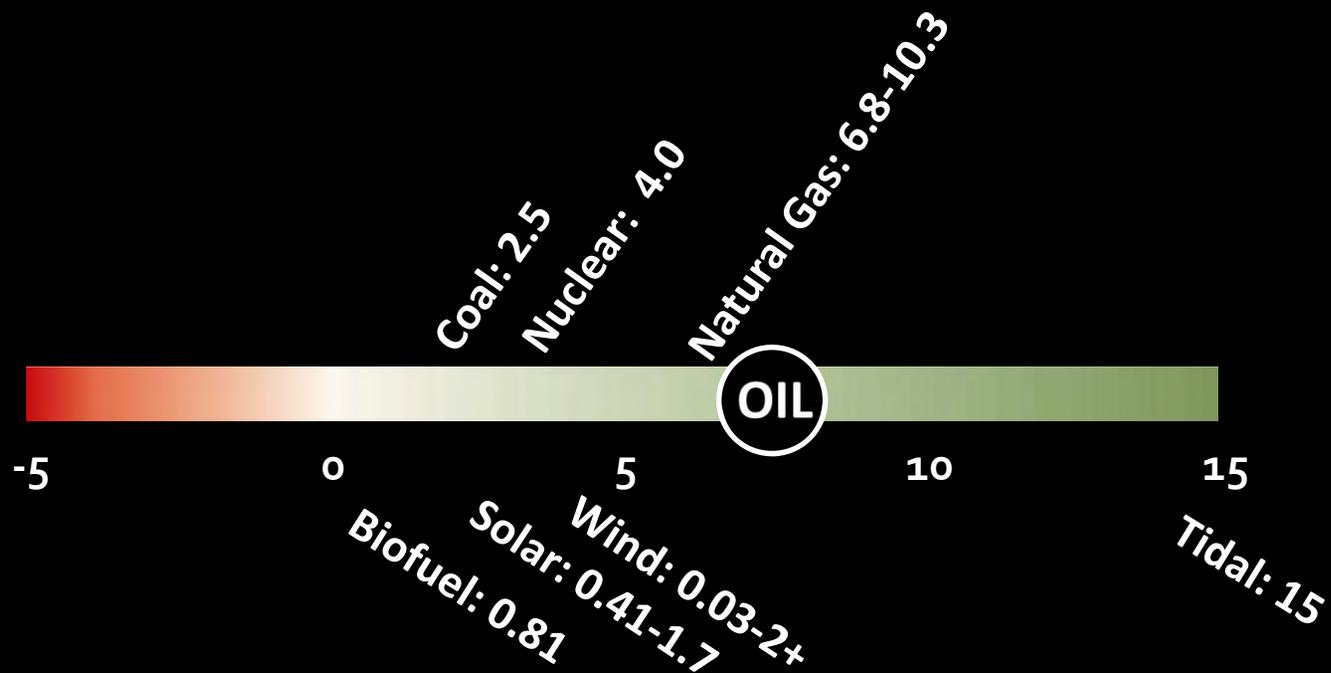
"The renewable fuel standard "won't give us cheaper gas, but it will give us costlier meat, milk and eggs."

~ Biofuel Crops Increase Carbon Emissions, L.A. Times, December 17, 2007

peak oil

Three Ways to Address Peak Oil:

1. Continual Resource Competition
2. Reliance on Alternative Energy



ENERGY RETURN ON ENERGY INVESTED (EROEI)

peak oil

Three Ways to Address Peak Oil:

1. Continual Resource Competition
2. Reliance on Alternative Energy
3. Decrease Energy Consumption

Related Planning Efforts



peak oil

Peak Oil Planning:

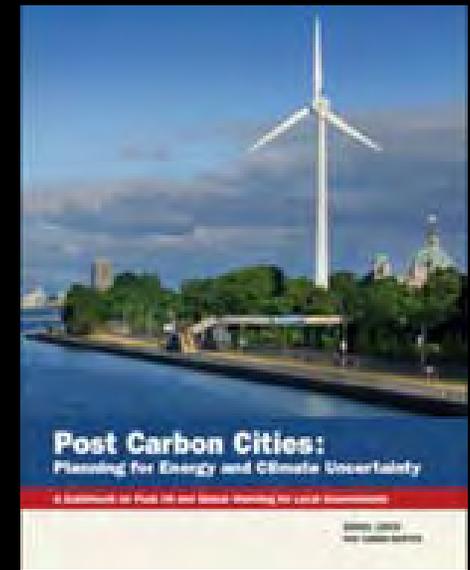
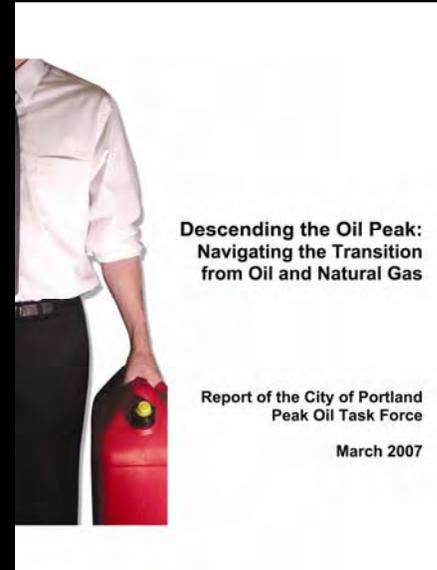
Peak Oil Protocols &
Resolutions



Peak Oil Task Forces



Peak Oil Plans



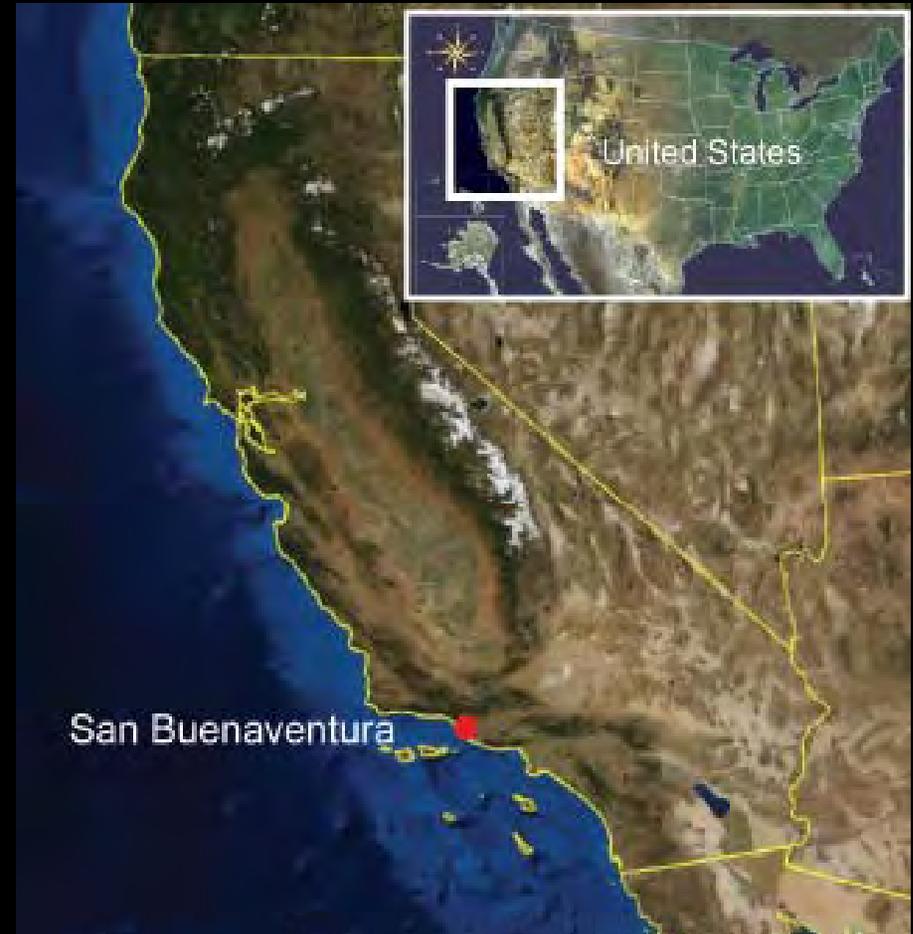
peak oil

Post-Peak Oil Plan for Ventura:

Address Peak Oil through Community Planning and Design.

What is peak oil planning?

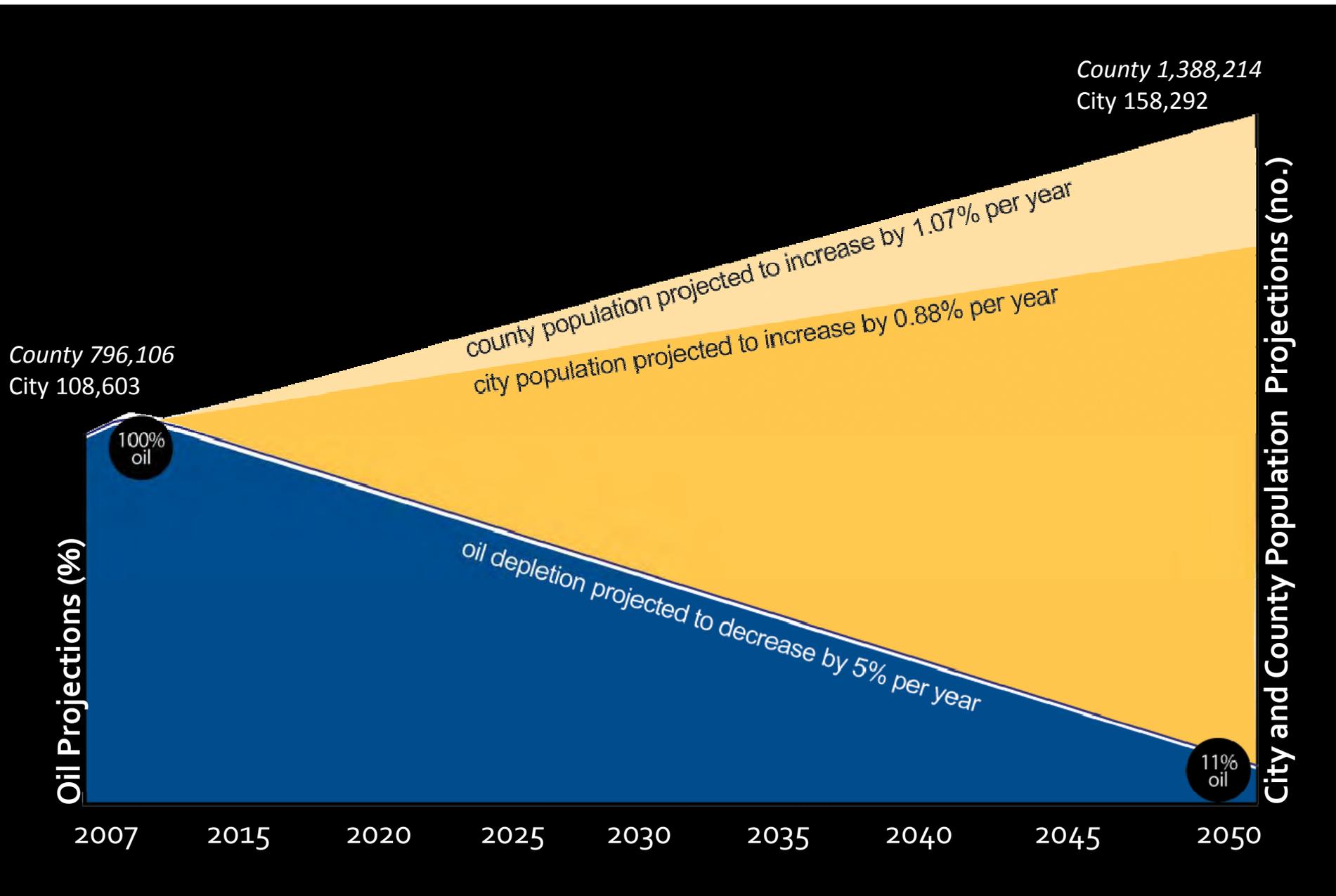
- Understanding impacts
- Proactive localization
- Action



Ventura vision plan

Peak oil planning is:

Understanding the
Impacts

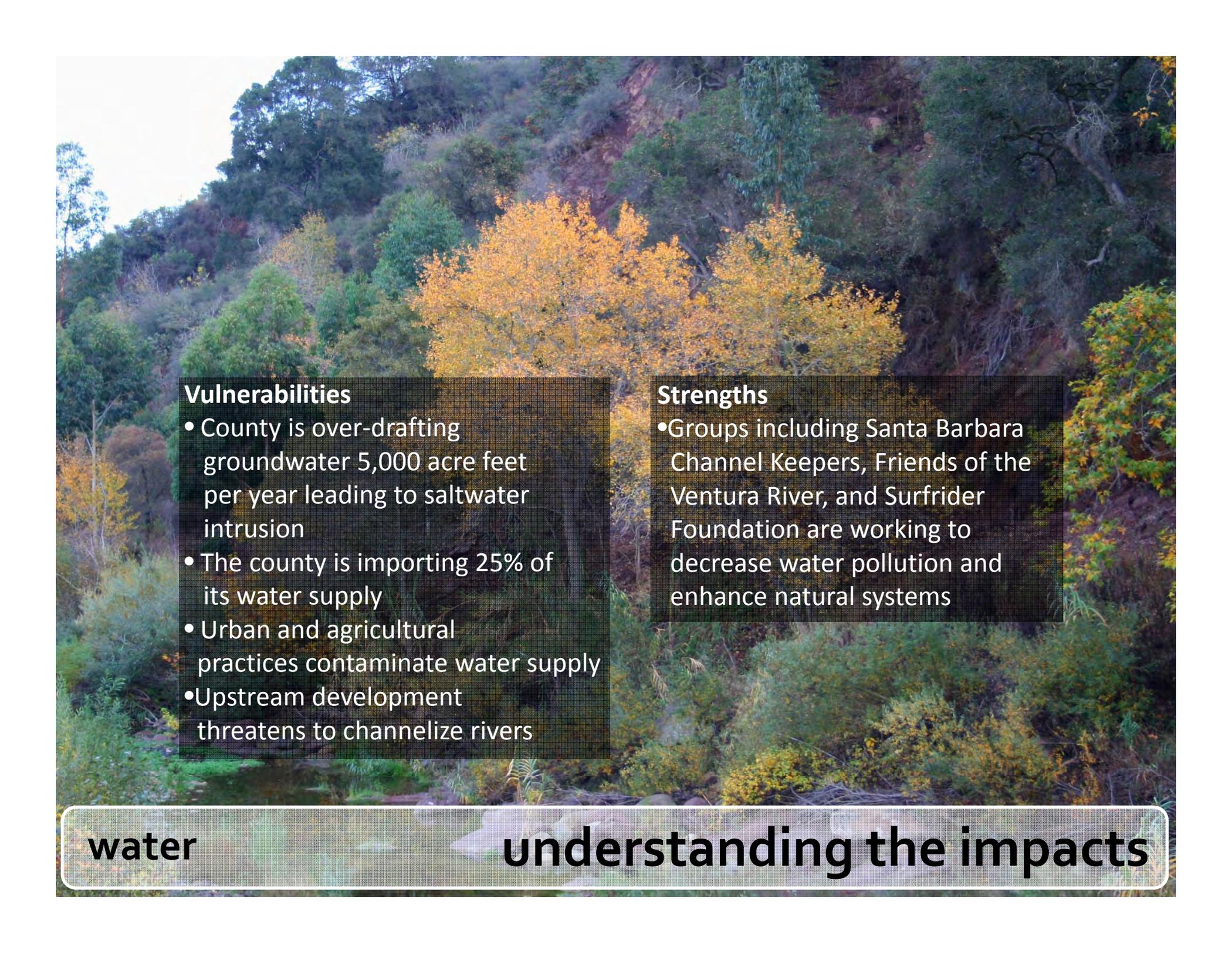


understanding the impacts

Critical Systems:

- Water
- Food
- Transportation
- Shelter
- Natural communities
- Community
- Economy
- Energy

understanding the impacts



Vulnerabilities

- County is over-drafting groundwater 5,000 acre feet per year leading to saltwater intrusion
- The county is importing 25% of its water supply
- Urban and agricultural practices contaminate water supply
- Upstream development threatens to channelize rivers

Strengths

- Groups including Santa Barbara Channel Keepers, Friends of the Ventura River, and Surfrider Foundation are working to decrease water pollution and enhance natural systems

water

understanding the impacts



Vulnerabilities

- Food grown in the county is mostly exported; food consumed within the county is largely imported
- 95.4% of food grown is non-organic
- There is a lack of localized infrastructure

Strengths

- SOAR ordinance preserving agricultural land throughout the city and county
- The region has a long growing season and an abundance of agricultural land
- Local food programs include: Farm to School, Farmer's Markets and School gardens

food

understanding the impacts



Vulnerabilities

- The city has an auto-centric landscape
- No central station for multi-modal transportation
- 97.2% of San Buenaventura residents commute to work by personal automobile

Strengths

- Flat terrain and mild climate make biking plausible for the city
- Residents are willing to commute by bike

transportation

understanding the impacts



Vulnerabilities

- Most of the existing housing within the city is energy intensive single family homes
- Much of the existing housing is located in hazard zones
- Mixed-use development that is occurring throughout the region is not tied to public transportation

Strengths

- City is promoting infill first for new developments
- Climate amenable for passive building design

shelter

understanding the impacts

Peak oil planning is:

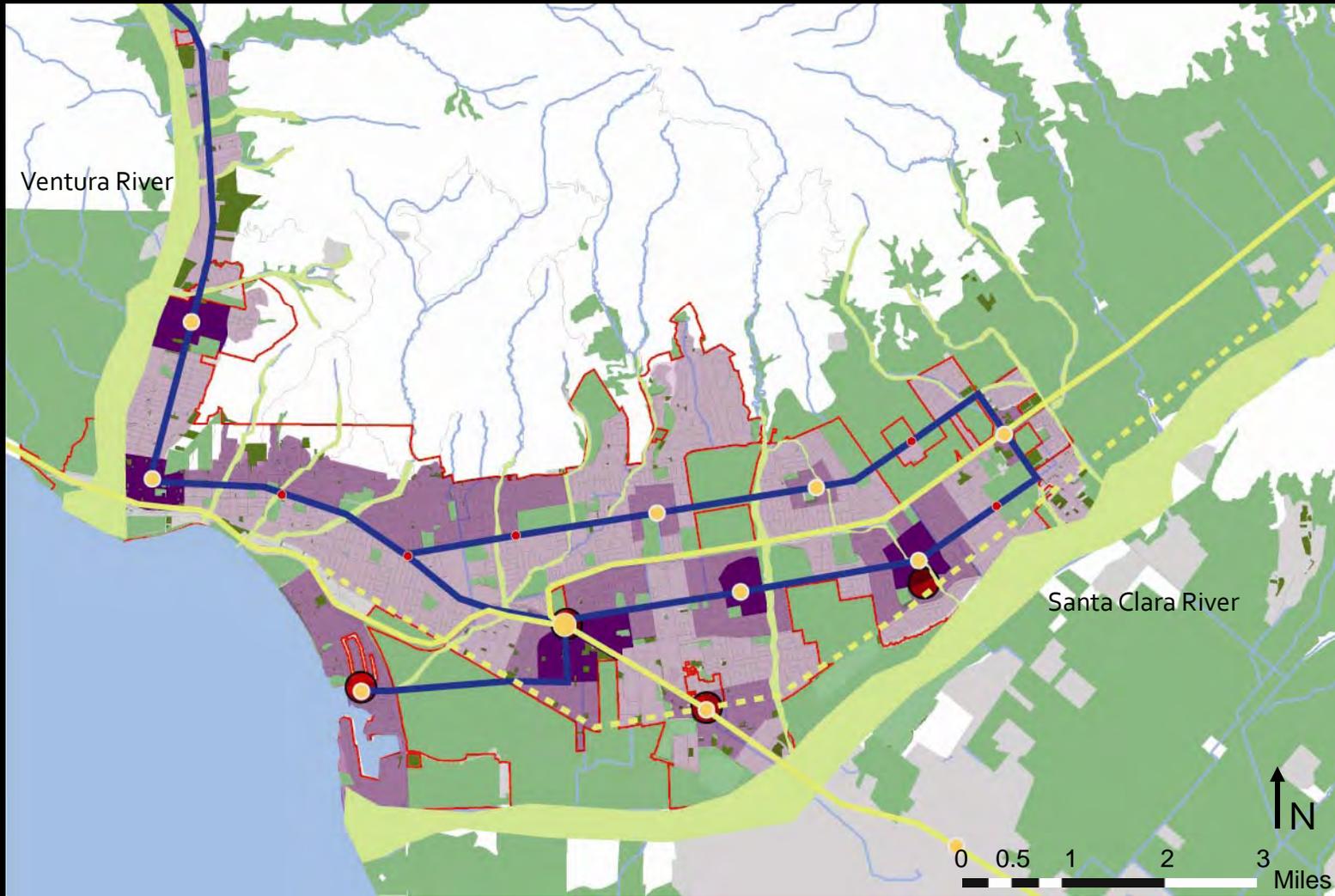
Creating a vision for
Localization



- Flood Zone
- Wildlife Habitat
- Wildlife Corridor
- Agriculture
- County Boundary
- City Limits



regional vision for 2050



- | | | |
|-------------------|---------------------------------|--------------------|
| High Density | Intra-City Rapid Transit | Freight Only |
| Medium Density | Inter-Regional Commuter Transit | Designated Habitat |
| Suburban Retrofit | Transit Node | Agriculture |
| | Transit Stop | |

city vision for 2050



ARTERIAL ROAD

2007



AGRICULTURAL CORRIDORS

2050



SUBURBAN STREET

2007



COMMUNAL SPACES

2050



PARKING LOT

2007



PUBLIC PLAZA ALONG TRANSIT

2050



BUSINESS PARK

2007



PEDESTRIAN CORRIDOR

2050

Peak oil planning is:

Implementation

“If you want to build a ship, don’t herd people together to collect wood, and don’t assign them tasks and work; but, rather, teach them to long for the endless immensity of the sea.”

~Anon



Longing for the Sea
2007-2015



Building the Ship
2015-2025



Sailing the Ship
2025-2050

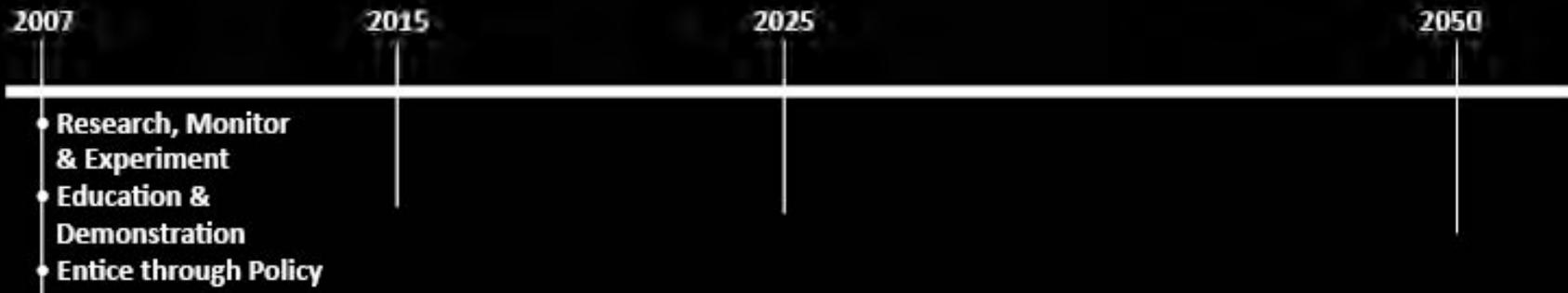
taking action



2007 to 2015

Longing for the Sea

- Research, Monitor, and Experiment
- Educate and Demonstrate
- Entice through Policy



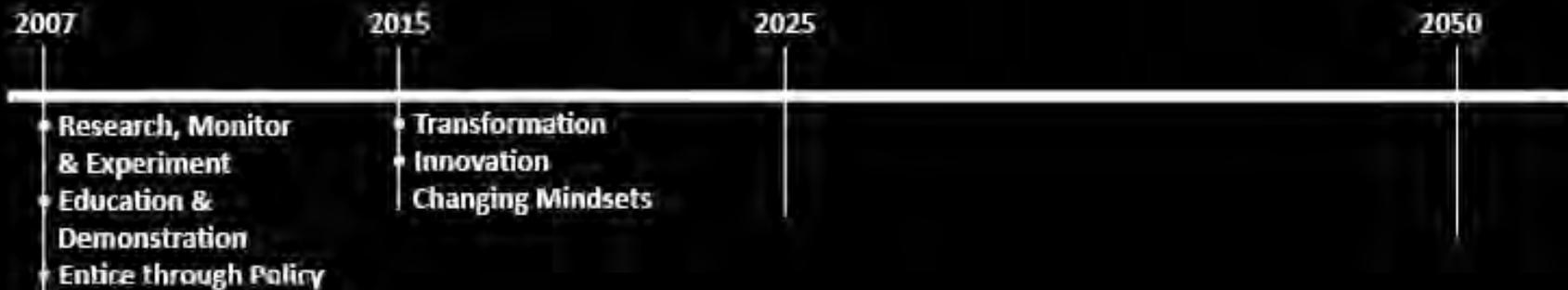
taking action



2015 to 2025

Building the Ship

- Transformation and Innovation in the Built Environment
- Shifts in Mindset



taking action



2025 to 2050

Sailing the Ship

- Continuous Innovation, Adaptability, and Livability



taking action

Evaluation

- Decrease countywide water demand by 20 billion gallons
- Supply food for 100% of the county's population
- 85% of the cities population is living within ½ mile of public transportation
- 85% of the cities population lives on 26% of the cities land





Vision Plan: www.cityofventura.net/depts/environmental/post-peakoil.asp

www.norcalapa.org/assets/chapter/newsletter/april08.pdf

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