

Sacramento Area Regional Planning





SACOG Region



- **2.3 million people**
- **6 Counties, 22 Cities**
- **15% Urban, 85% Rural**
- **6,500 sq-mi**

- **COG = Regional Issues**
- **MPO = Transportation**

Regional Planning?

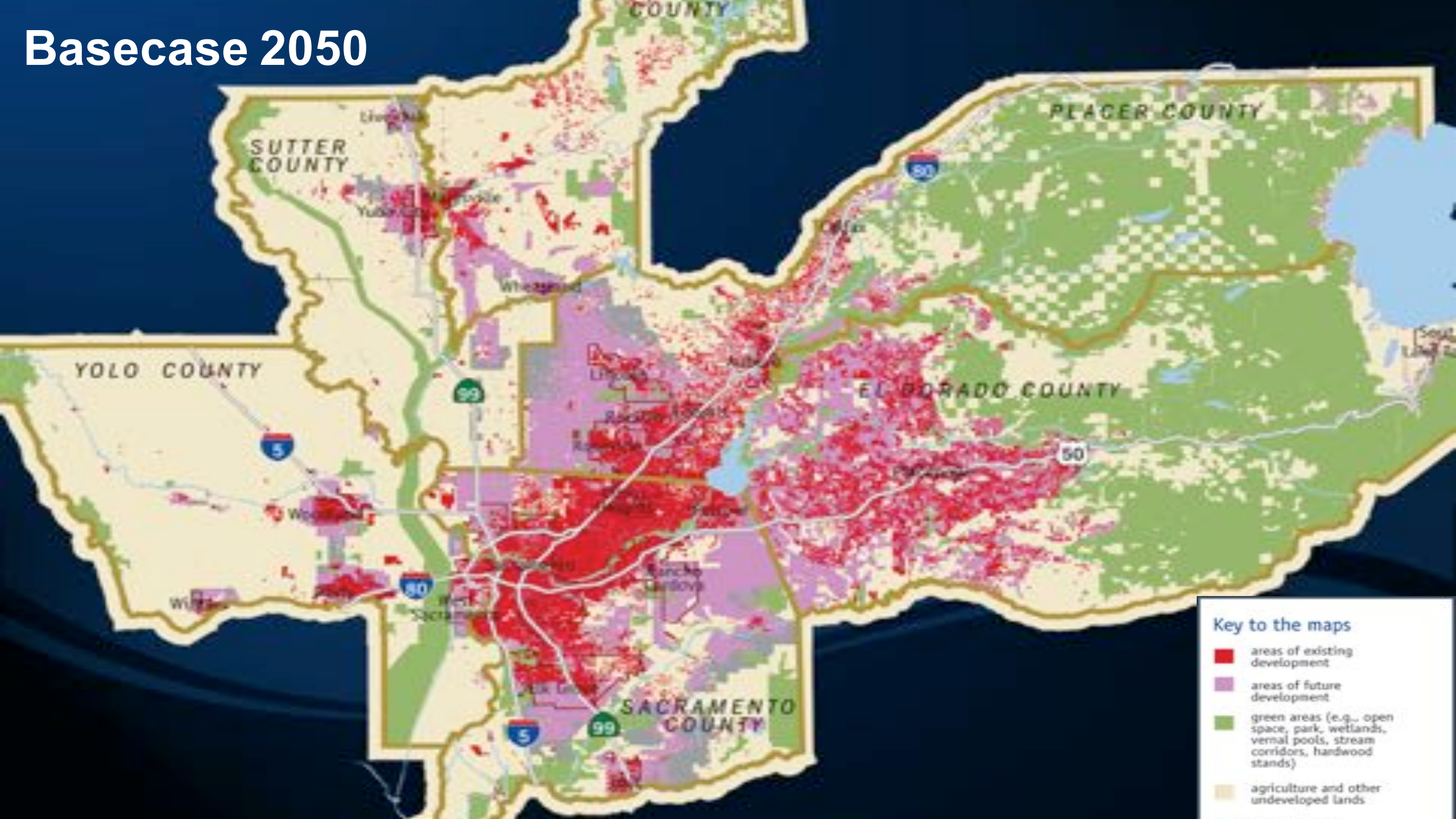
What's the future and how do we prepare for it?

Public-Private partnerships?

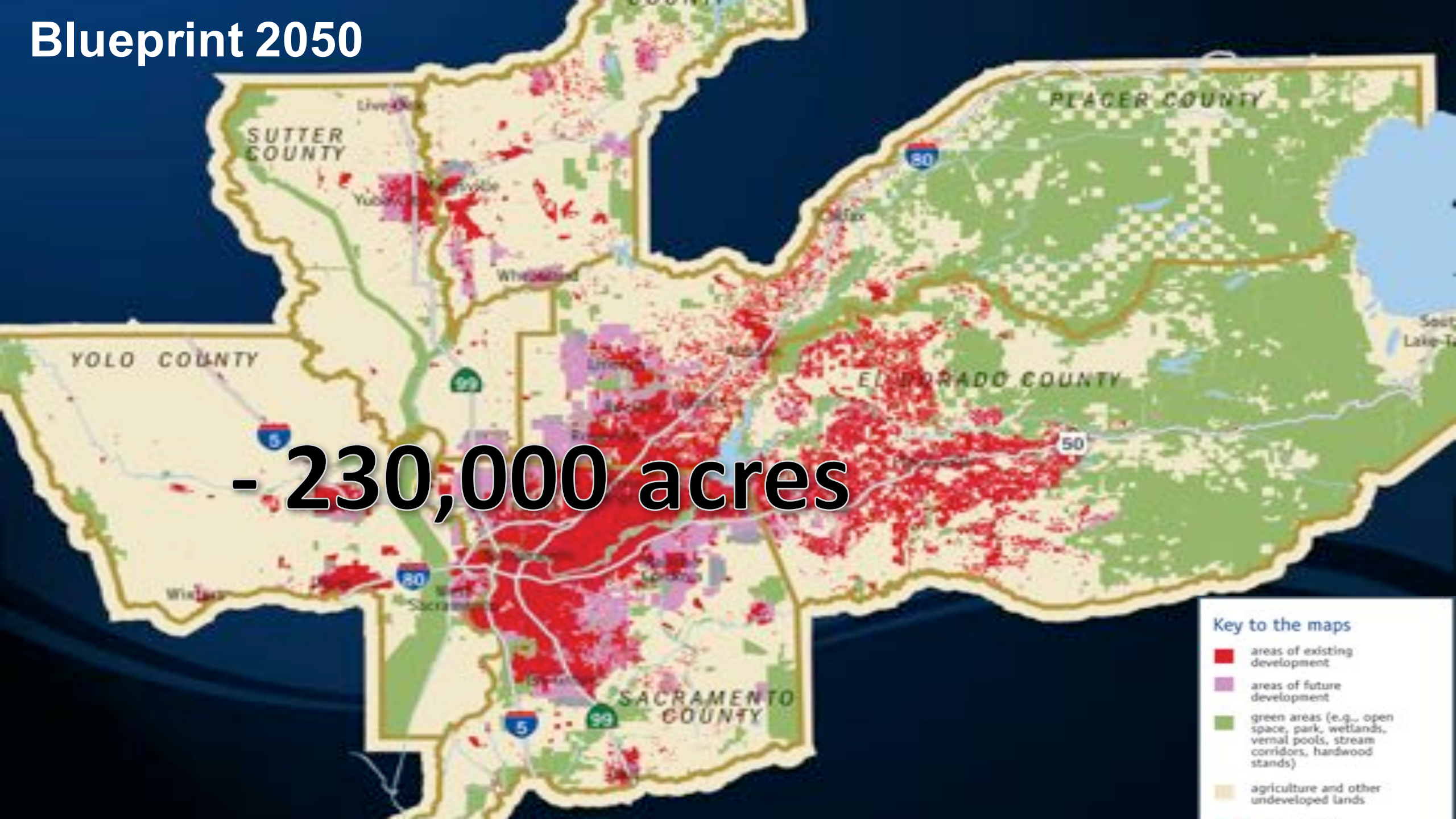
Rural-Urban connections?



Basecase 2050



Blueprint 2050



- 230,000 acres

Key to the maps

- areas of existing development
- areas of future development
- green areas (e.g., open space, park, wetlands, vernal pools, stream corridors, hardwood stands)
- agriculture and other undeveloped lands

Land Use-Transportation Plan

For every 1,000 new residents:

1988-2005

333

acres

2008-2035

42

acres

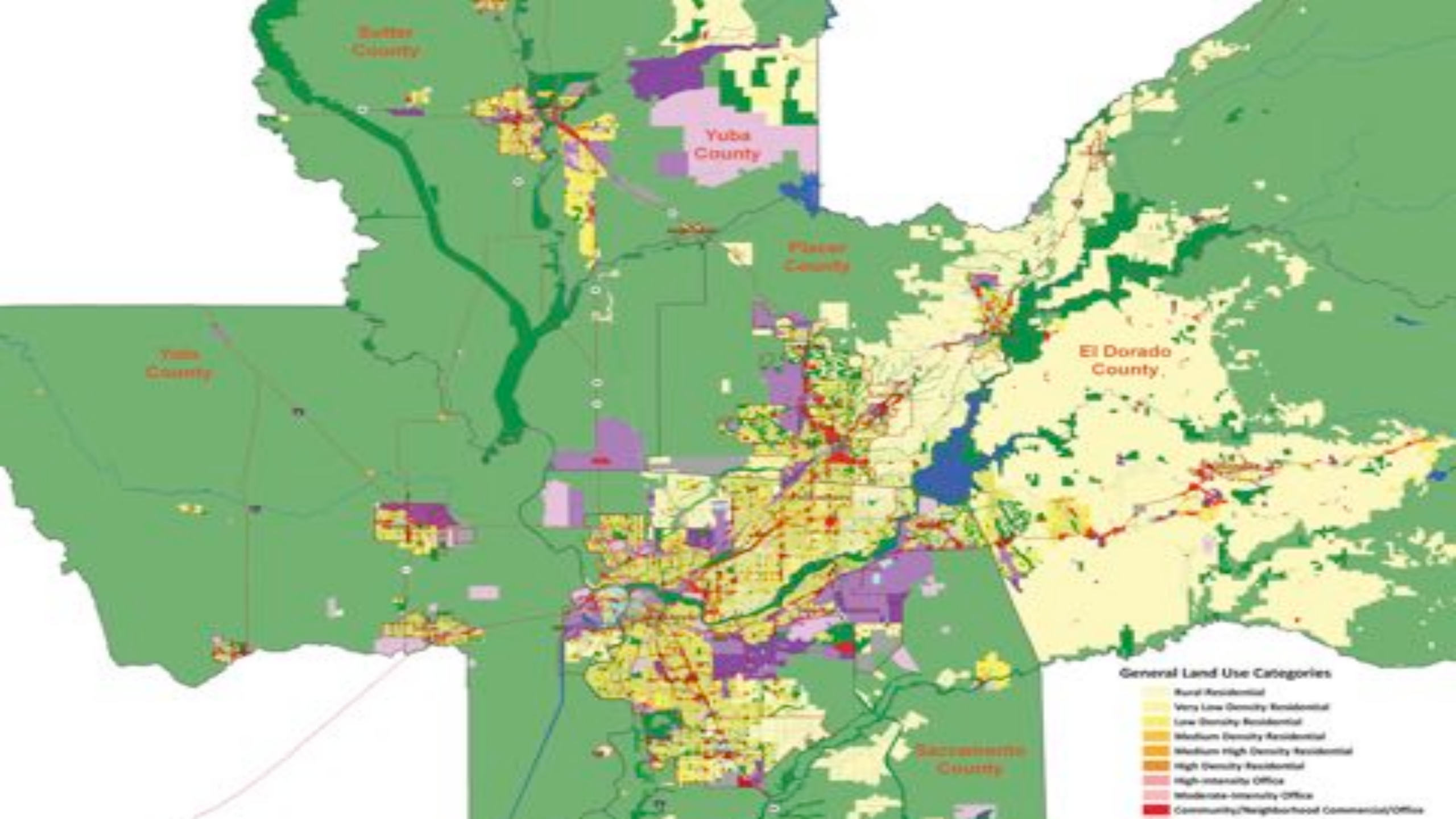


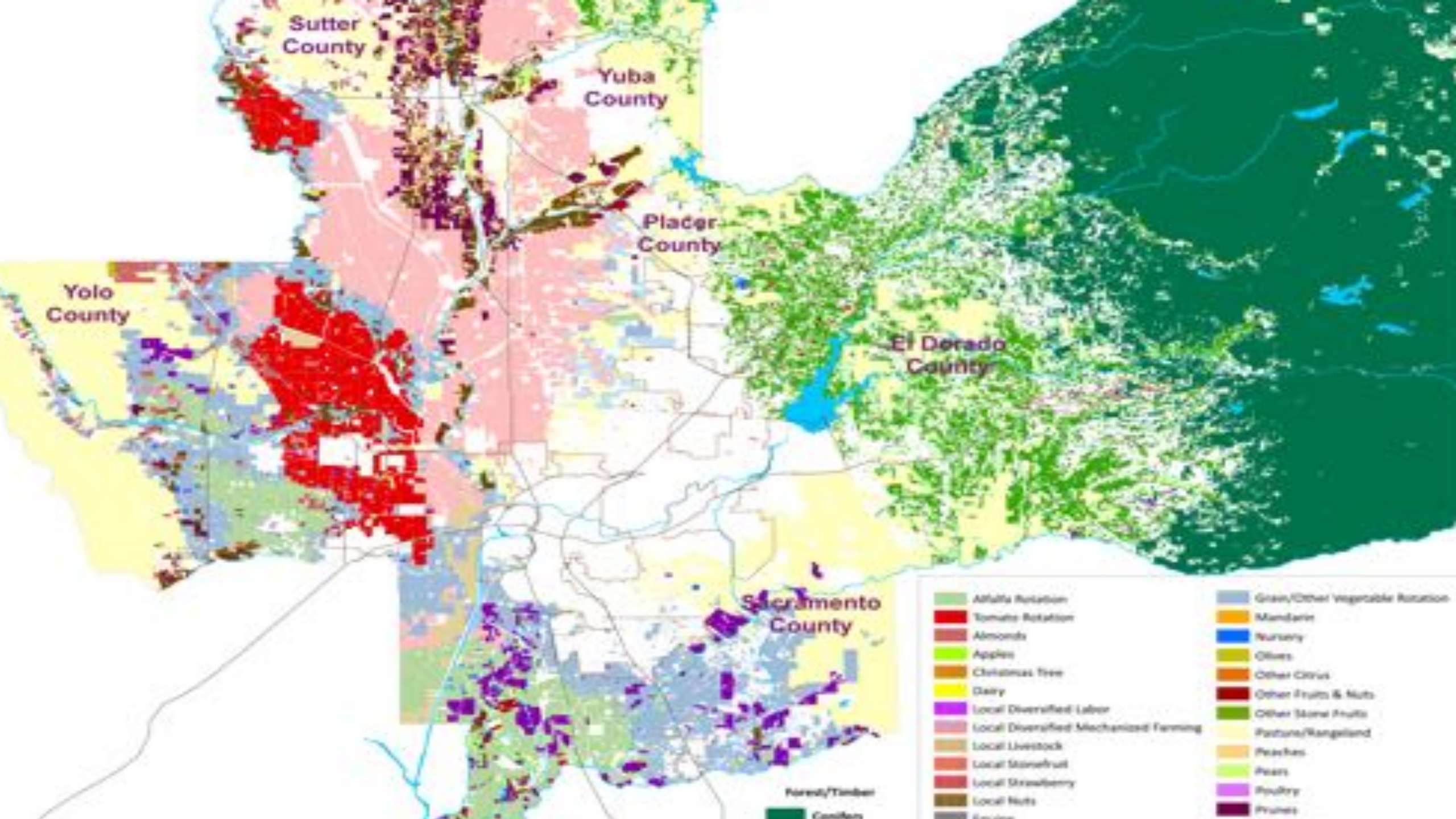
Rural-Urban Connections Strategy



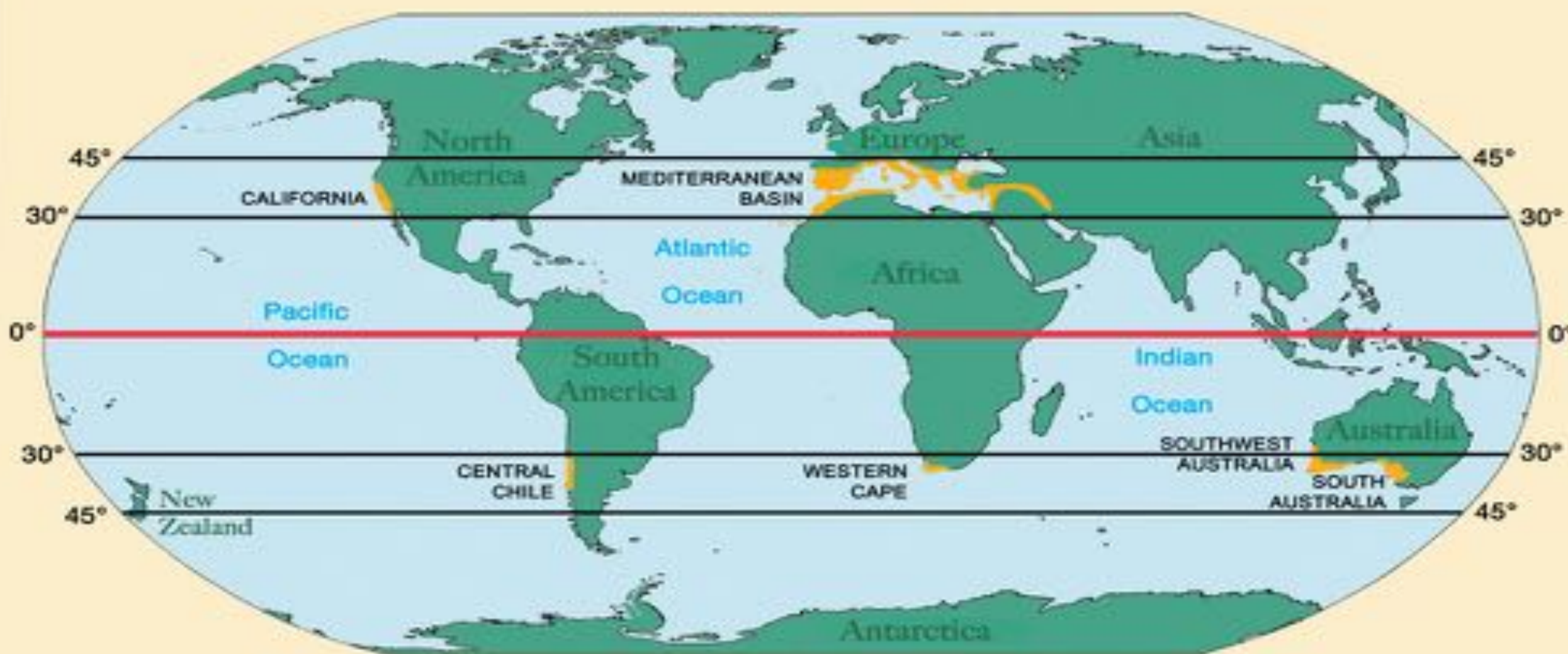
Enhancing rural economic viability and environmental sustainability







Mediterranean Climate Regions of the World



Source: *Plant Life in the World's Mediterranean Climates*, by Peter Dallman, 1998
(Adapted from DiCasteri, et. al., 1981)

Existing Agricultural Assets

Soil



Water



Knowhow



Value

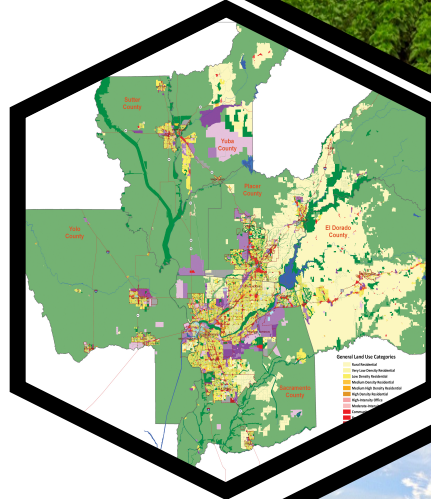


RUCS Topics

Land Use and
Conservation



Forest Management



Infrastructure for
Agriculture



Market Opportunities



Land Use Policies That Support Agriculture



Smaller Lots, Infill and Redevelopment



- 230,000 ac. of Farmland Loss

Reduce Urban – Rural Conflicts

- Buffers
- Ag Parks
- Right-to-Farm
- Policy Boundaries
- City-County Agreements

Ag Land Conservation and Viability

- Infrastructure investments
- Supportive Zoning
- Voter Initiatives
- Open Space Plans
- Easements, TDRs, etc.

Export Markets





Local & Regional Markets



- 10 million residents between Sacramento and Bay Area regions
- Together consume 12.5 billion pounds of food each year
- Demand for locally grown food increasing 9% year over year
- Price premiums of around 20% for local food



What is Local?



Ag & Food System Spending



Direct

Ag & Food Cluster

Multiplier

Opportunities & Challenges

Export Markets



- Natural assets
- Rising demand
- Value added products
- Lack of infrastructure
- Water, labor supply
- Regulations
- Climate change
- ***Position the region***
- ***Attract investment***

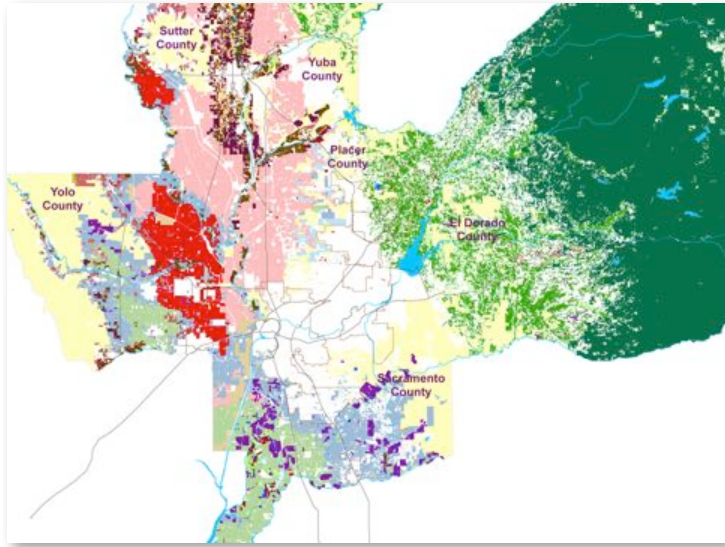
Local Markets



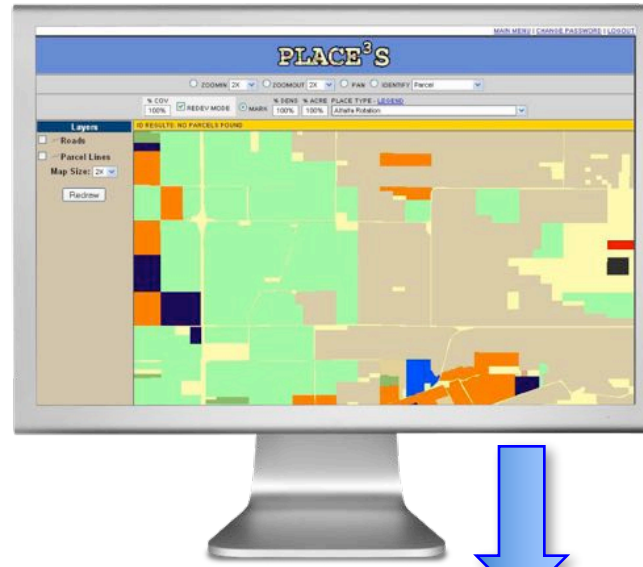
RUCS Toolkit



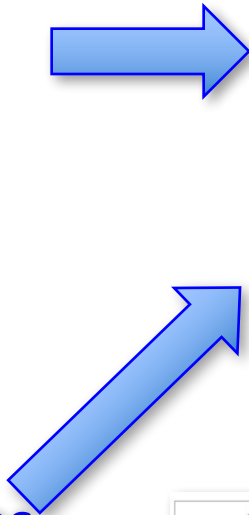
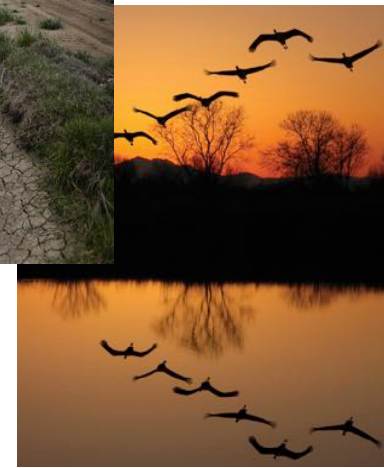
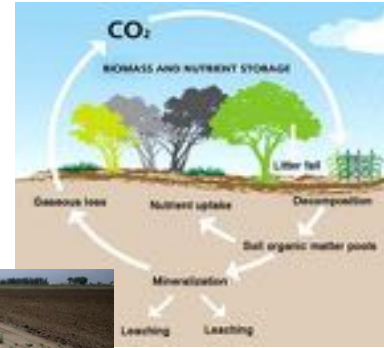
RUCS Crop Map



RUCS Scenario Analysis Tool



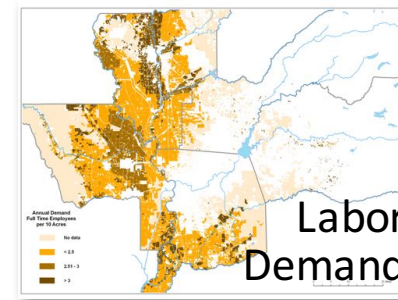
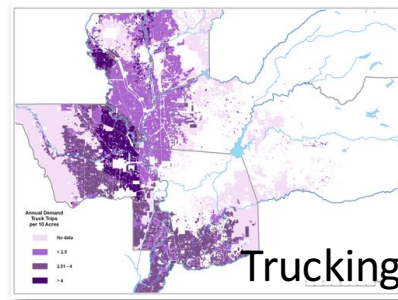
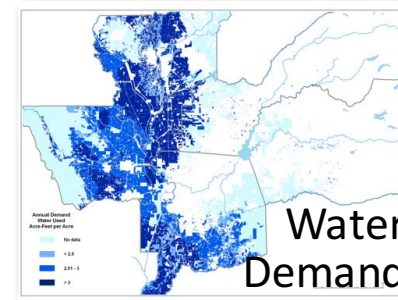
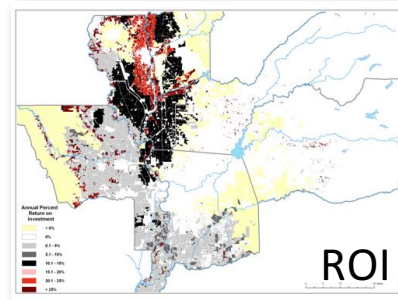
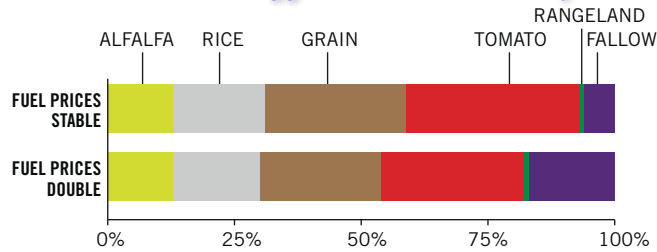
Ecosystem Services



Scenario Results

Modules Informing Scenarios

Market Affects on Crops



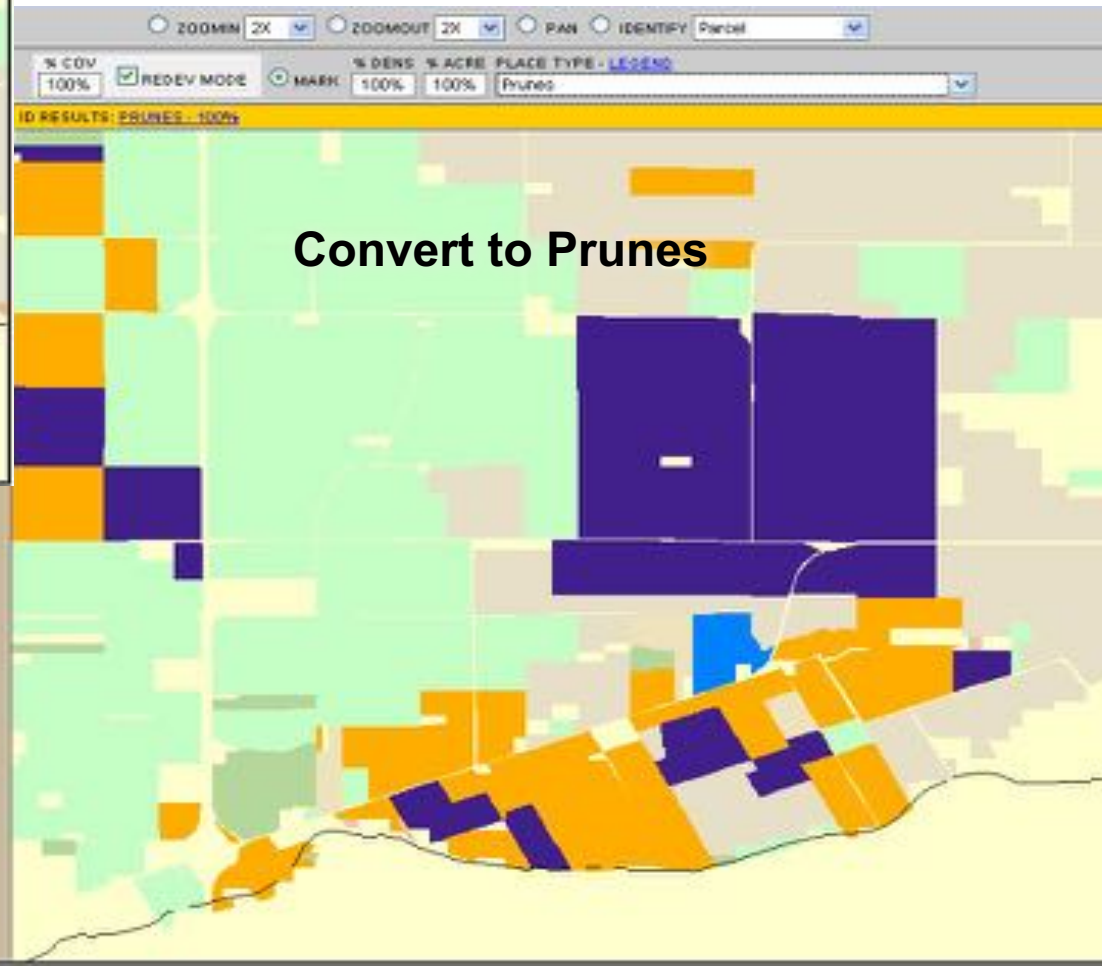
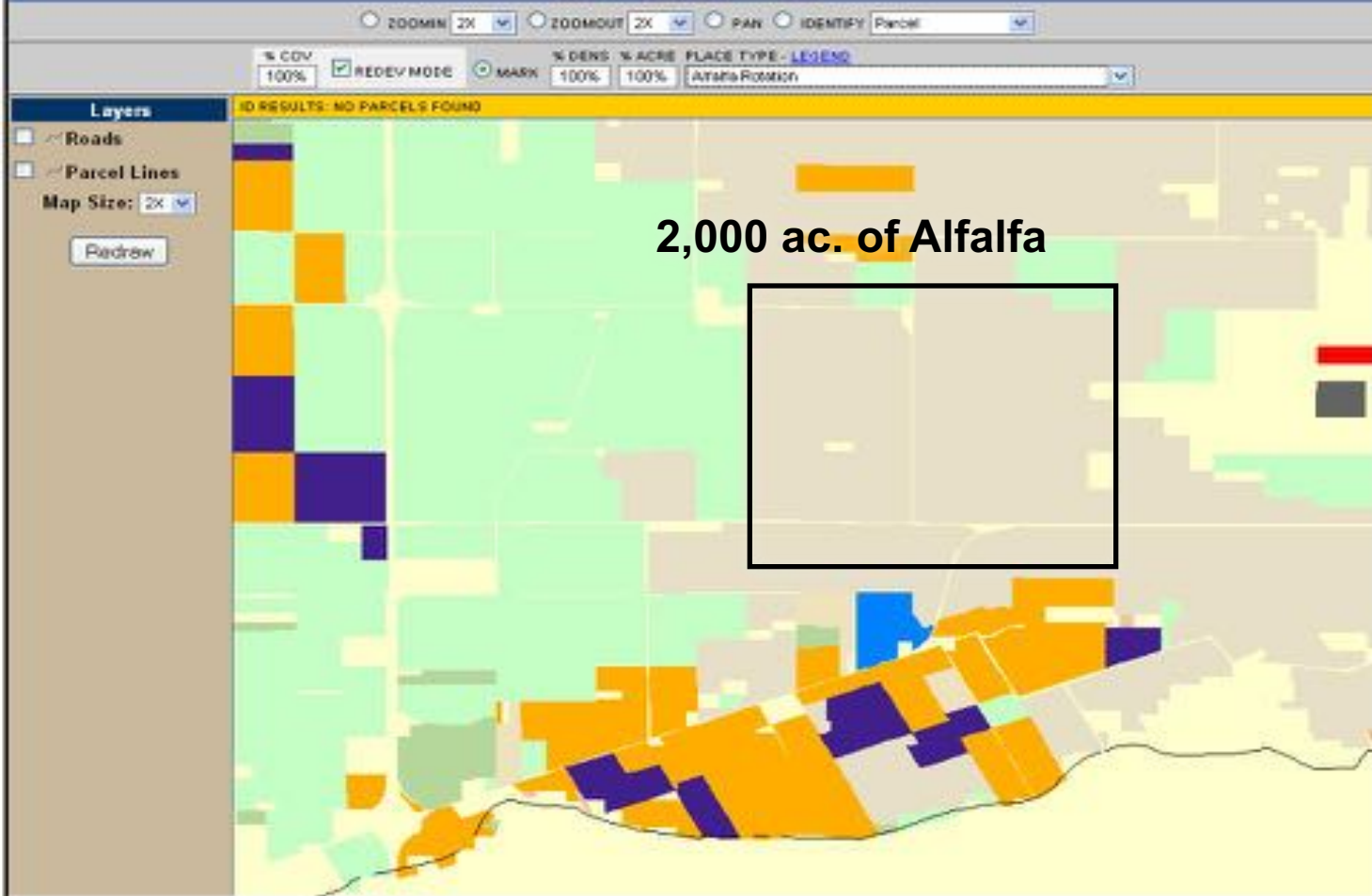
Food System Multiplier Study



Local Market Food Production



Crop Change Scenario: Alfalfa to Prunes



COMPARE SCENARIOS - RESULTS

CURRENT PROJECT: YOLO SOC SCENARIO 2 PROJECT TYPE: NEIGHBORHOOD LEAD ORGANIZATION: SACOG STUDY AREA: CUSTOM STUDY SHAPEFILE

CURRENT SCENARIO: BASE CASE

SCENARIO COMPARISON

SCENARIO NAME	TOTAL ACRES	AG ACRES	AG VALUE	AG COST	AG RETURN	AG PCT RETURN	AG WATER ACRES / FEET	AG LABOR FTE	AG TRUCK TRIPS
BASE CASE	0	562,360.4	\$708,969,323	\$567,227,852	\$141,741,471	25.0%	995,064	2,677.1	112,912
ALFALFA TO PRUNE	0	562,360.4	\$711,029,876	\$568,792,417	\$142,237,459	25.0%	994,567	2,686.9	112,865

JOB DIVERSITY CHART

HOUSING DIVERSITY CHART

LOGGED IN AS LIBR02123

CONTACT SITE [HELP](#) [EXIT](#)

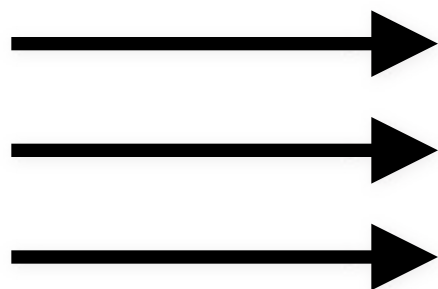
Value: + \$2M

Return: + \$500,000

Water: -500 ac-ft

Labor: + 10 workers

Trucks: - 47 trips

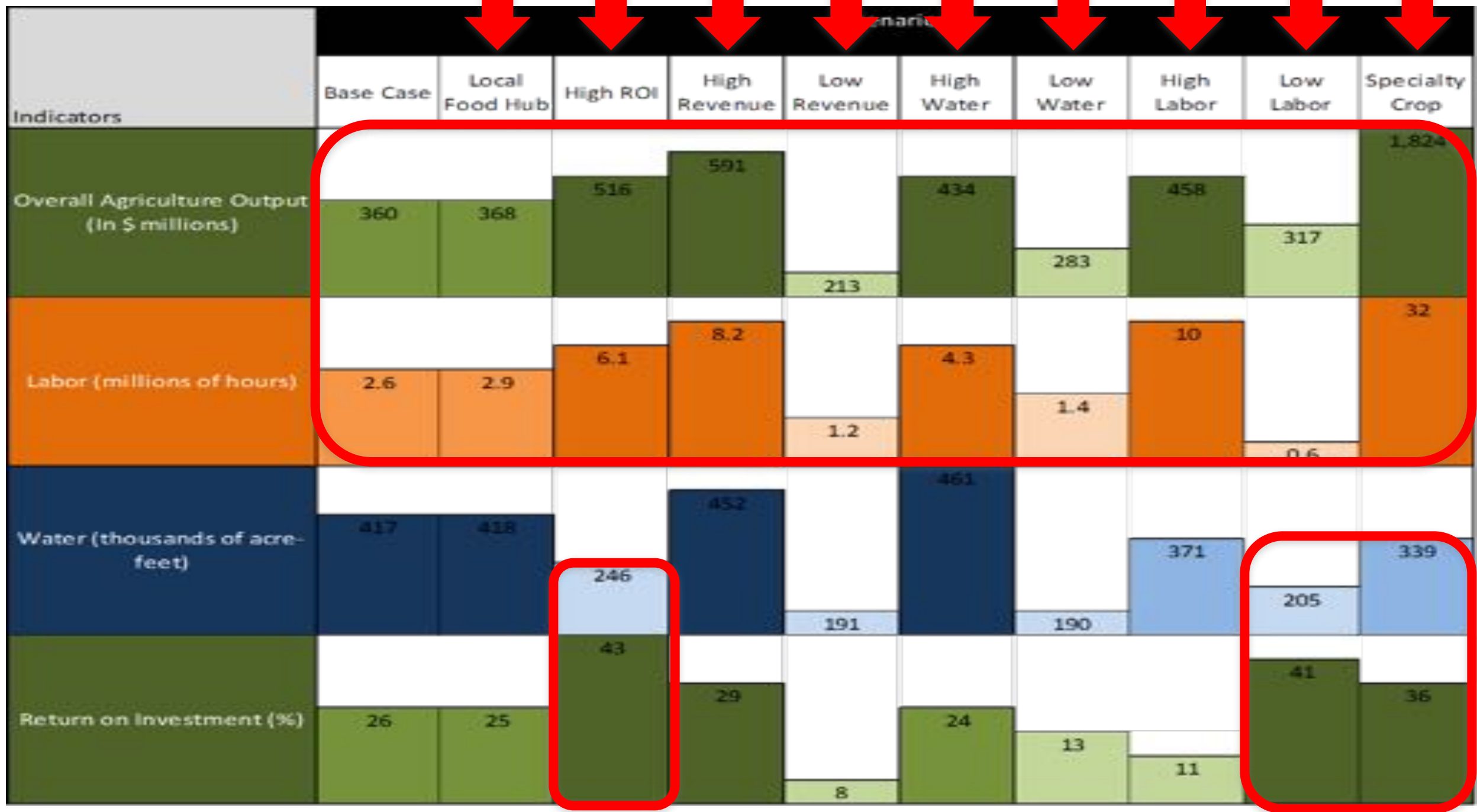


GHGs?

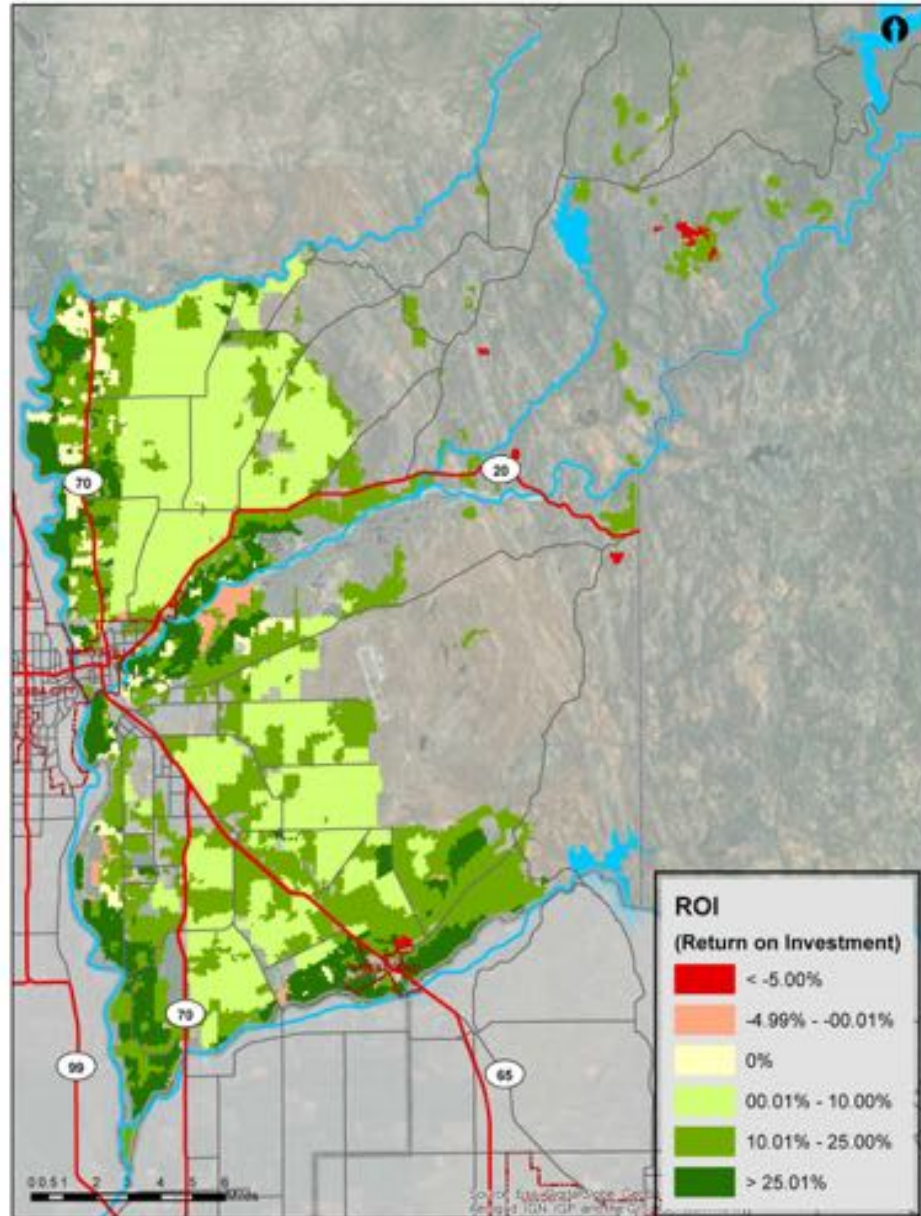
GW Recharge Potential?

Habitat Potential?

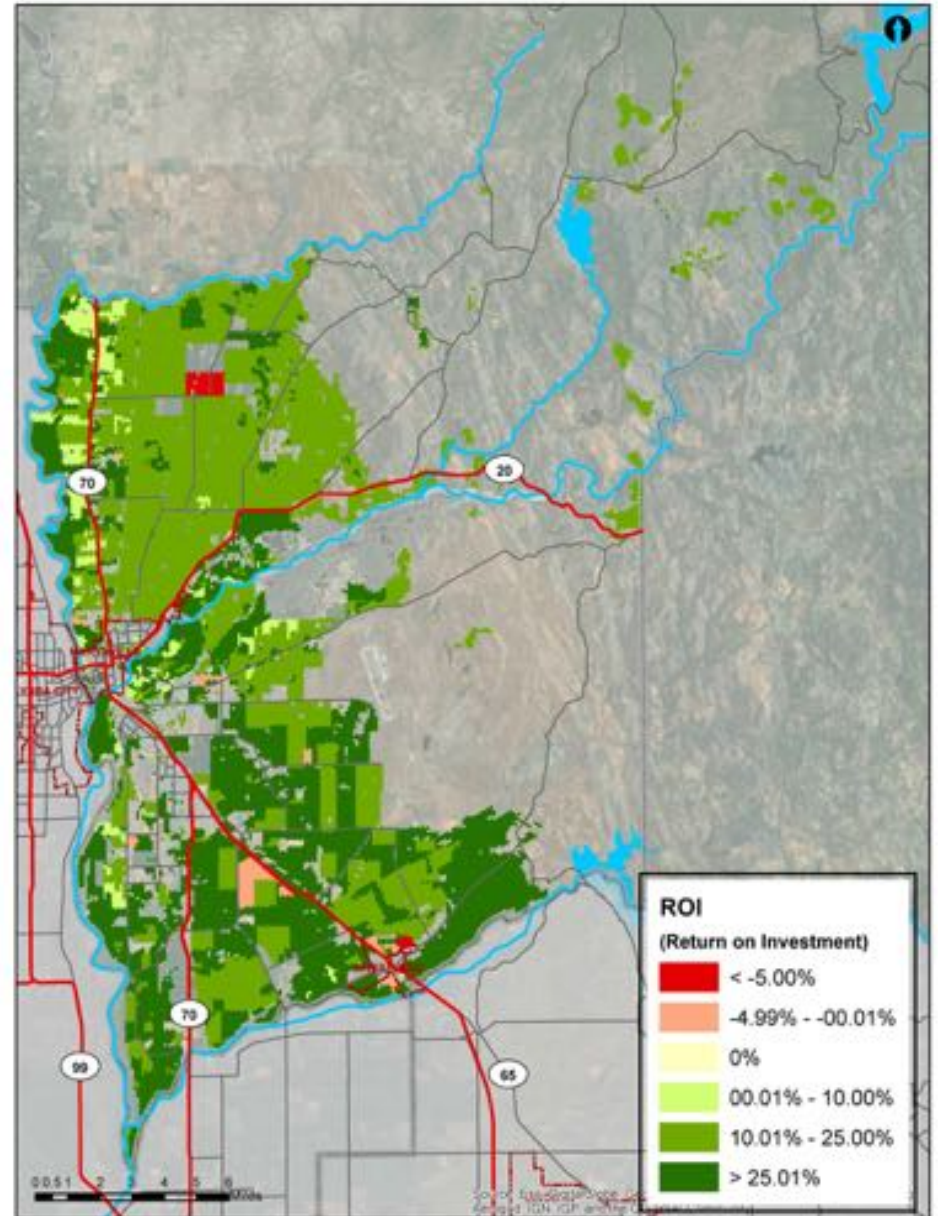
What's the impact on the region?



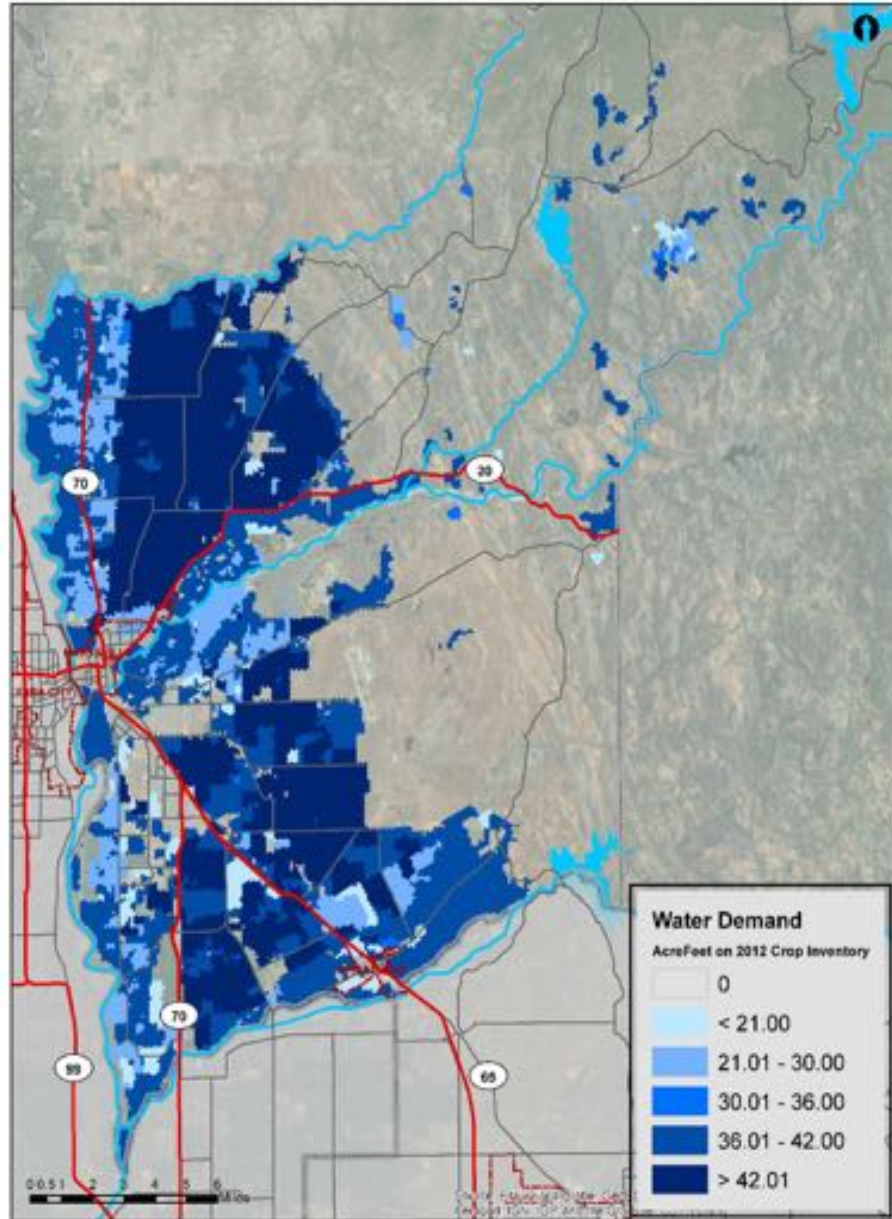
Base Case



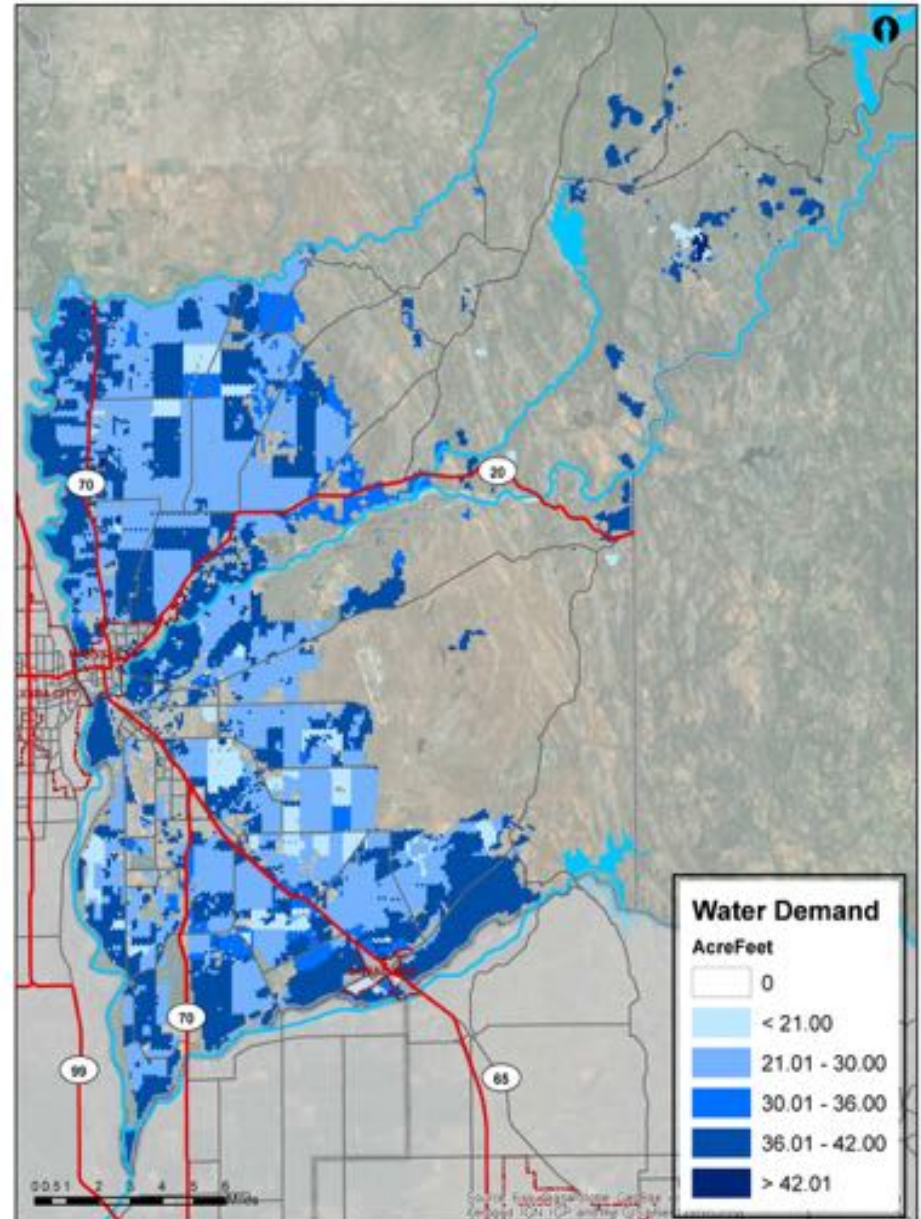
Specialty Crop Scenario



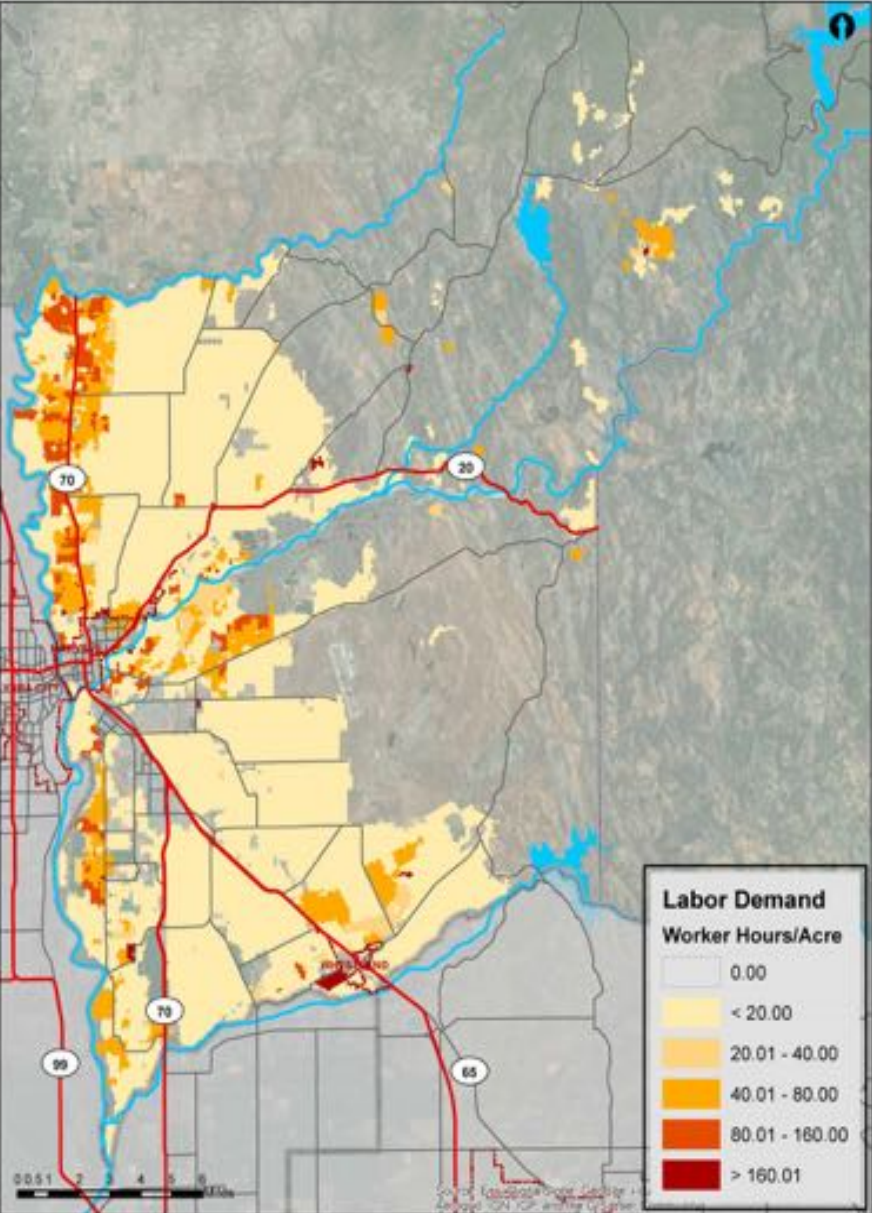
Base Case



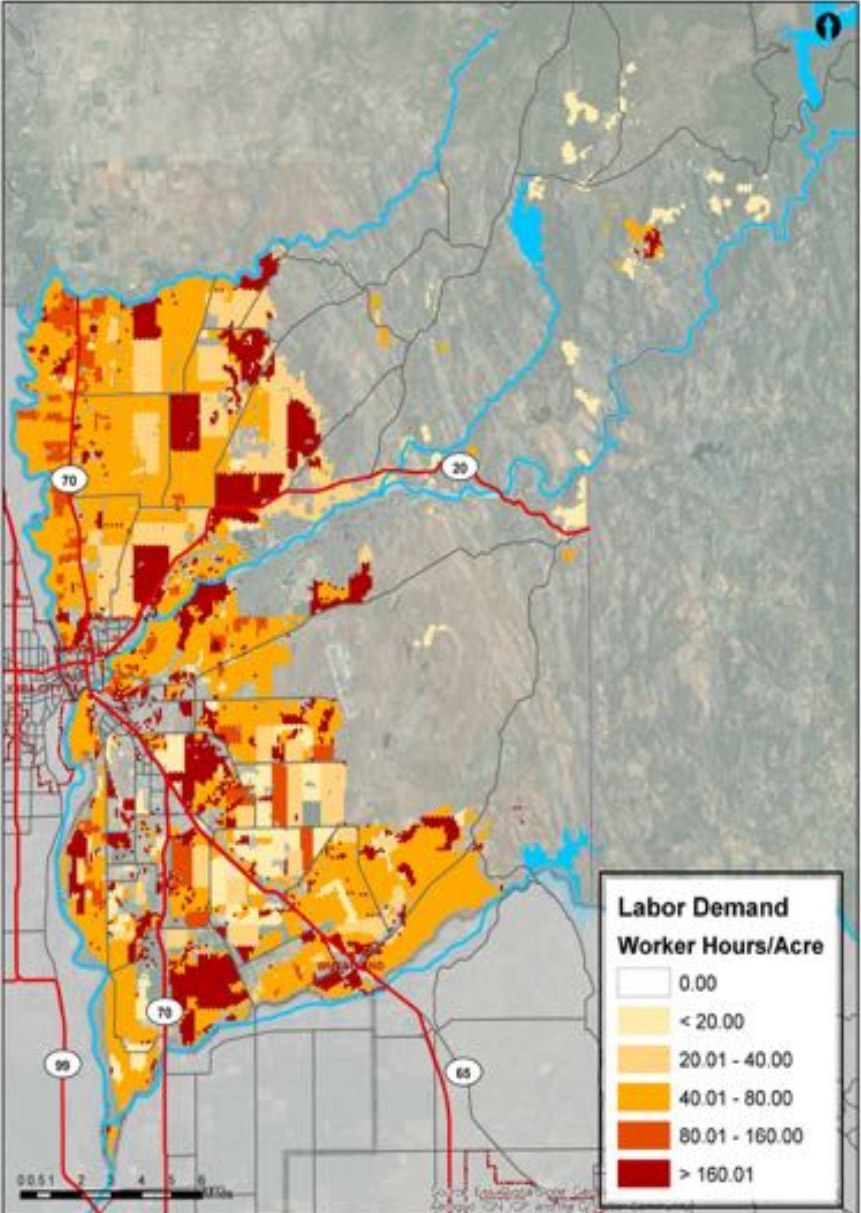
Specialty Crop Scenario



Base Case



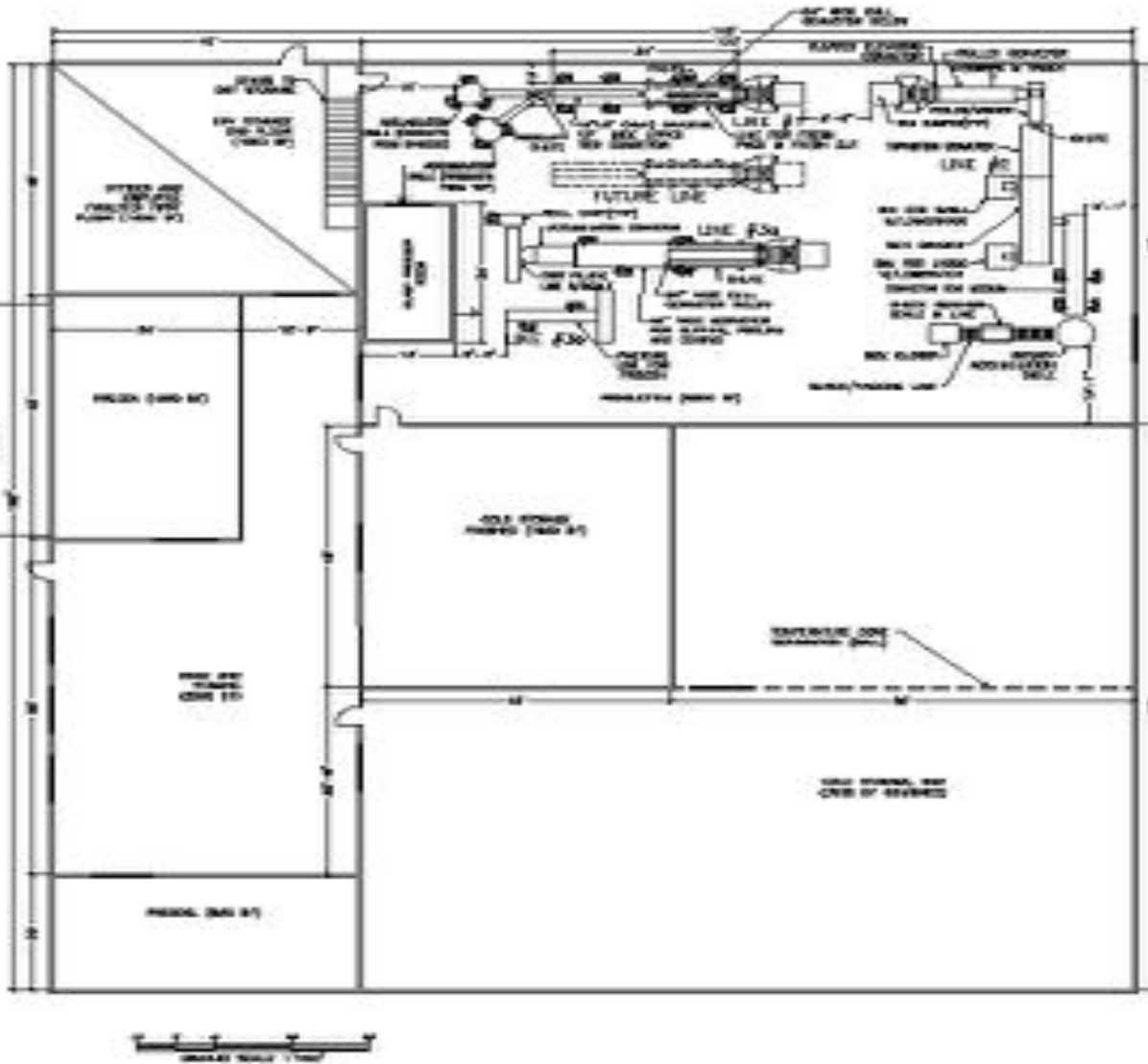
Specialty Crop Scenario



Food Hub Business Plan



PACKING/PROCESSING CENTER LAYOUT



Food Hub Prototype Facility

- 23,000 square feet
- Capital costs of \$6.5 million (\$3.5 million upfront)
- Volume of 7,800 tons per year (at scale)
- Advisory role at facility to assist farmers



Food Hub Operations Phasing

	Year 1	Year 4	Year 6	Year 8	Year 15
Number of hub processing lines	-	2 Cut	3 Dry	4 Freeze	4
Annual tons	312	2,059	5,830	7,787	7,787
Net Cash Flow	\$503,645	\$248,700	\$1.12 M	\$1.43 M	\$1.43 M
Internal Rate of Return				6%	22%
Ag Acres Needed	27	171	539	743	743
People Fed (at 25% of fruit & veg consumption)	2,635	16,700	52,600	72,500	72,500

Ag & Food Economic Multiplier

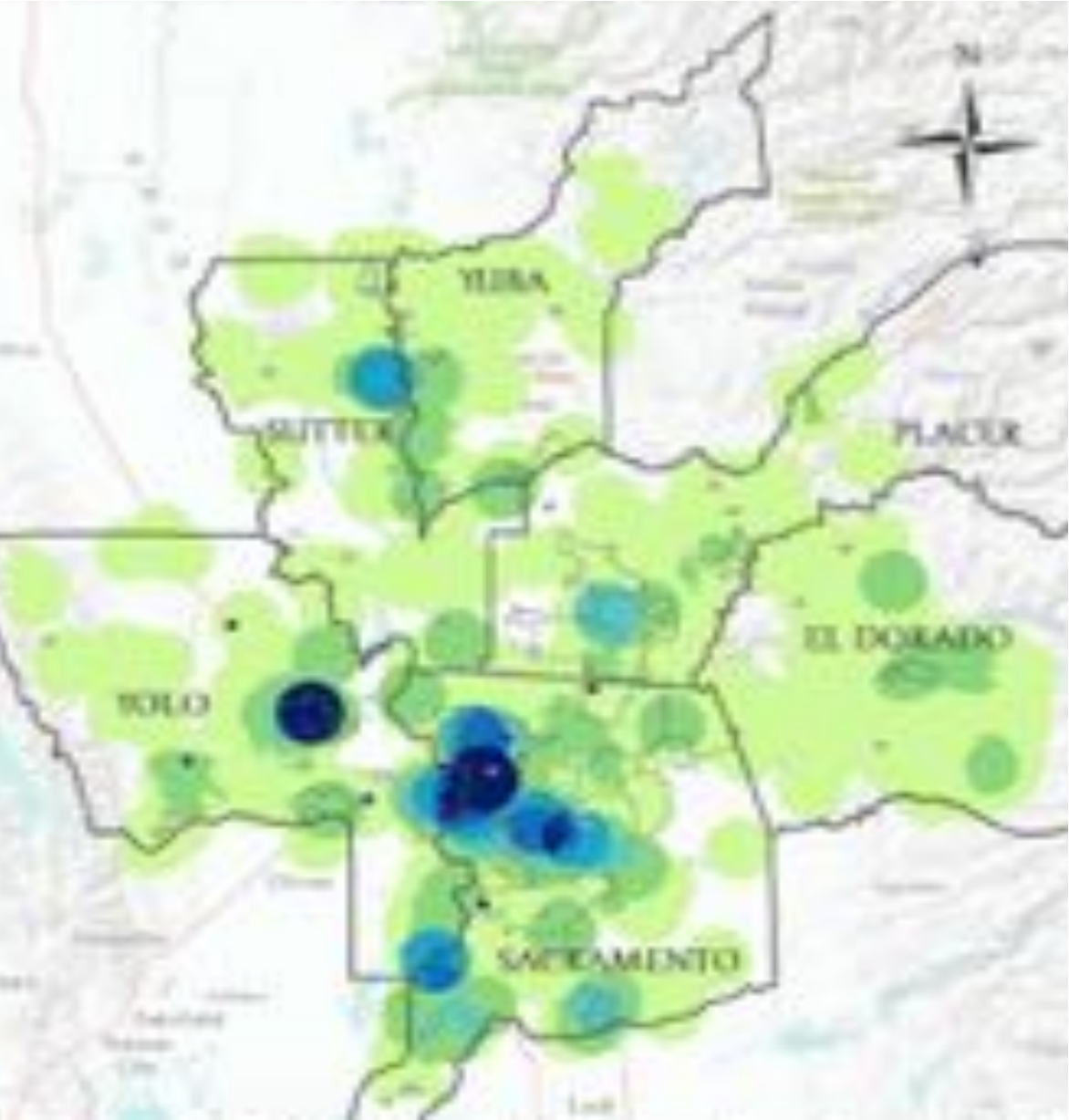


Specialty Crop Cluster Multiplier Study



CLUSTER	EMPLOYMENT MULTIPLIER	VALUE ADD MULTIPLIER
Manufacturing	2.3	2.06
Construction	1.98	1.93
Specialty Crop Cluster	1.82	1.9
Professional & Scientific Services	1.75	1.82
Finance, Insurance, & Real Estate (F.I.R.E)	1.7	1.52
Health	1.67	1.63
Legal	1.63	1.41
Retail	1.34	1.55

More Cluster Jobs in Urban vs. Rural Areas



Food Systems and Air Quality





Yolo Co. Processing Study

Emissions Performance

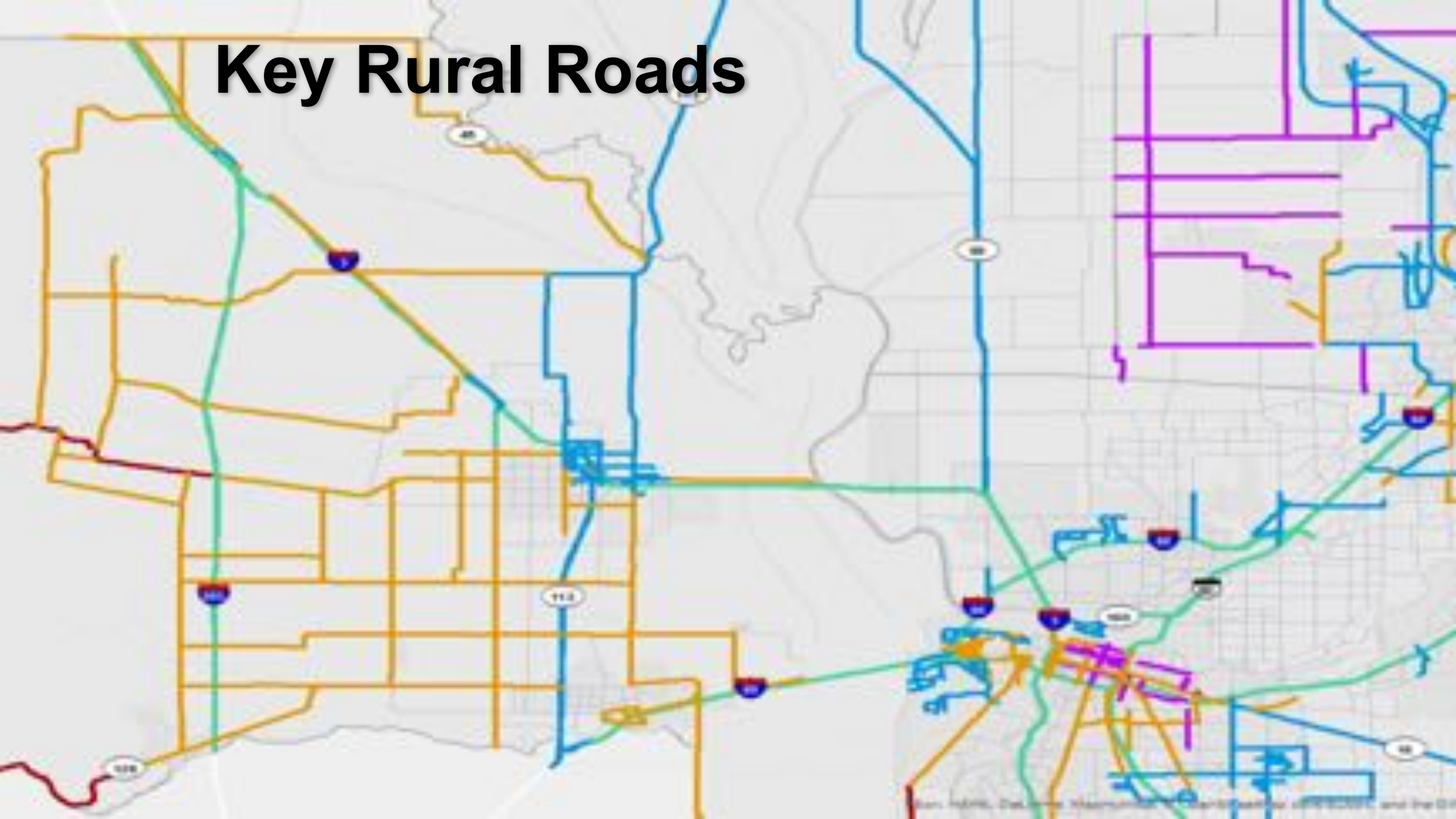
	Tomato Rotation (Base Case)	Tomato Rotation (No PCP)
Total VMT/year	545,000	5,447,000
Transportation CO2	850	8,000
On-filed CO2	25,000	25,000
Tomato Processing CO2	36,000	29,000
Total CO2	61,850	62,000
CO2 Change (Crops + Processing)	--	0.20%
CO2 Change (Just Crops)	--	--



“Our analysis finds that per acre greenhouse gas emissions from urban land uses average **58** times greater than those from crop production. This compares favorably with the multiple of **70** found by Jackson, et al.”

Source: A New Comparison of Greenhouse Gas Emissions from California Agriculture and Land Use, May 2015

Key Rural Roads





Land Use Fiscal Analysis

Economic and Fiscal Benefits of Yuba County's Agriculture Conservation

National Costs and Revenues

200+ examples nationally:

- Agriculture
\$0.45 in costs per \$1 in revenue
- Residential
\$1.21 in cost per \$1 in revenue

Yuba Co. Policy Results

- 10,000 acres conserved
- Keeps \$32 MM in ag value
- Avoid \$40 MM in O&M costs

SACOG Study Results

- Ag value on same land can increase greatly
- Production → Processing
- Denser dev'l show further cost savings

Possible Growth Patterns

	Infill Focused	Compact Growth	Low Density
Total Acres	5,225	9,596	15,137
New Residents	83,388	85,919	85,428
New Jobs	64,462	66,265	66,989

Economic Impact on Ag

	Infill Focused	Compact Growth	Low Density
Converted Ag Acres	2,623	6,169	11,127
Lost Ag Value (base)	\$5.6 MM	\$11.2 MM	\$17.3 MM
Lost Ag Value (specialty crops)	\$39.5 MM	\$93 MM	\$150 MM

Development Cost



	Infill Focused	Compact Growth	Low Density	Pays For:
Public Sector	\$500 MM	\$530 MM	\$600 MM	<ul style="list-style-type: none">• Off-Site streets• Sewer trunk, collection & treatment• Parks Infrastructure
Developer	\$700 MM	\$1.2 B	\$1.8 B	<ul style="list-style-type: none">• Local streets• Sewer laterals• Water & Stormwater laterals, collection & detention
Total	\$1.2 B	\$1.8 B	\$2.5 B	

Annual Cost and Revenue



	Infill Focused	Compact Growth	Low Density
Annual O&M	\$78 MM	\$85 MM	\$89 MM
Annual Revenue	\$100 MM	\$94 MM	\$80 MM
Net Revenue	\$22 MM	\$9 MM	-\$9 MM



Ecosystem Services

- Habitat
- Groundwater Recharge
- Water Resources
- Flood Control
- Carbon Sequestration
- Air Quality
- Market-based solutions
- ***Working Landscapes Project***





Water



Rural Communities



Labor



**Recreation/
Tourism**

WORKING LANDSCAPES PILOT STUDY: AGRICULTURE AND HABITAT

Sacramento & Yolo County Delta

