

Rural-Urban Connections Strategy



RUCS Project Overview

Rebecca Thornton Sloan

RUCS Link to MTP, TCM, and NEPA

- MTP 2035 EIR mitigation measure for impacts to agricultural resources; greenhouse gas emissions
- Research project as part of the Transportation Control Measure Program
- Supports the NEPA Streamlining effort

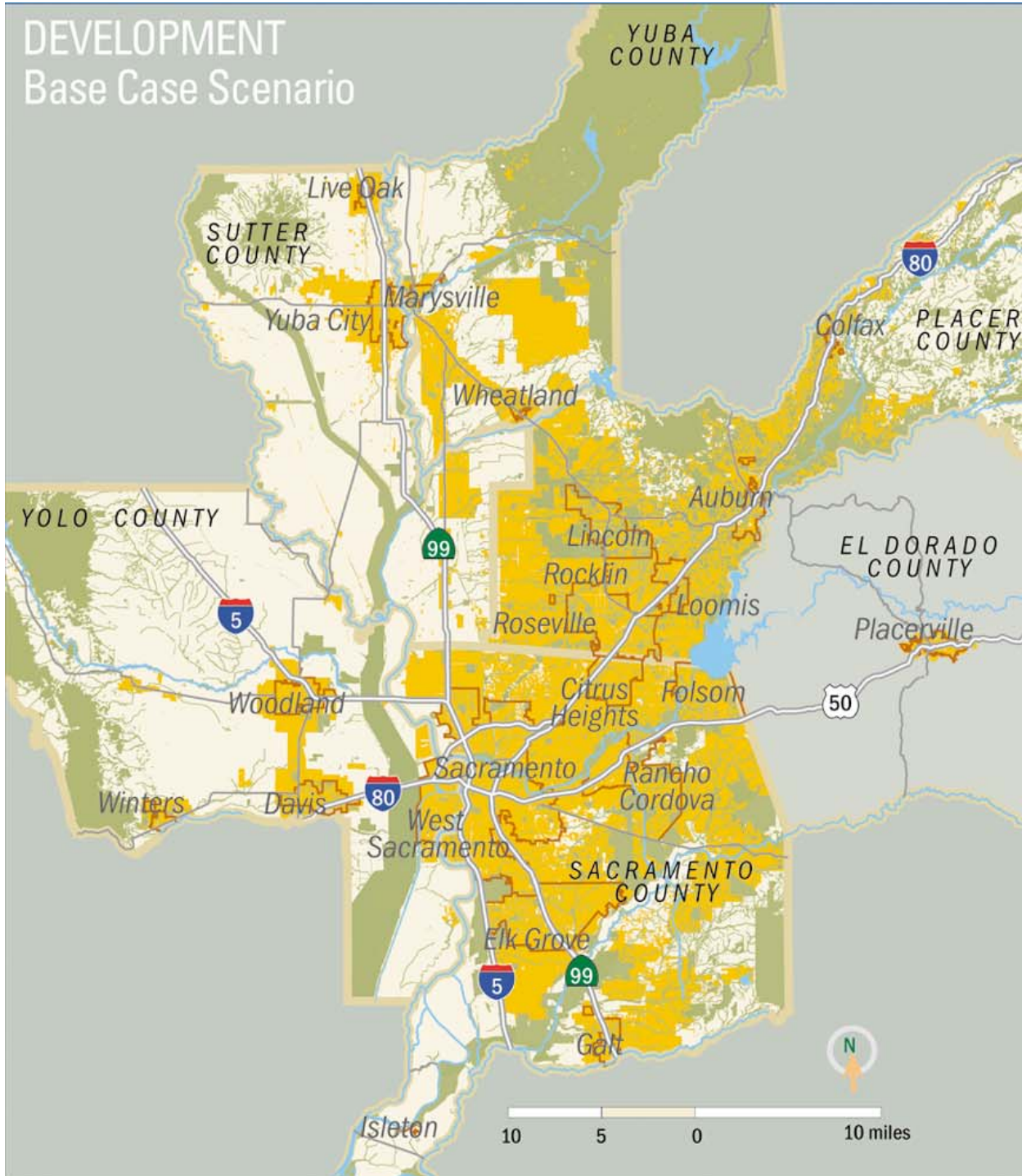
RUCS Objectives

- Look more closely at unique issues in rural areas
- Economic and environmental sustainability
- Develop tools to help answer questions
- Engage the region in a conversation
- Develop strategies

Blueprint Principles

- Housing Choice
- Transportation Choice
- Compact Development
- Use Existing Assets
- Mix Uses
- High Quality Design
- ***Protect Natural Resources***

DEVELOPMENT Base Case Scenario

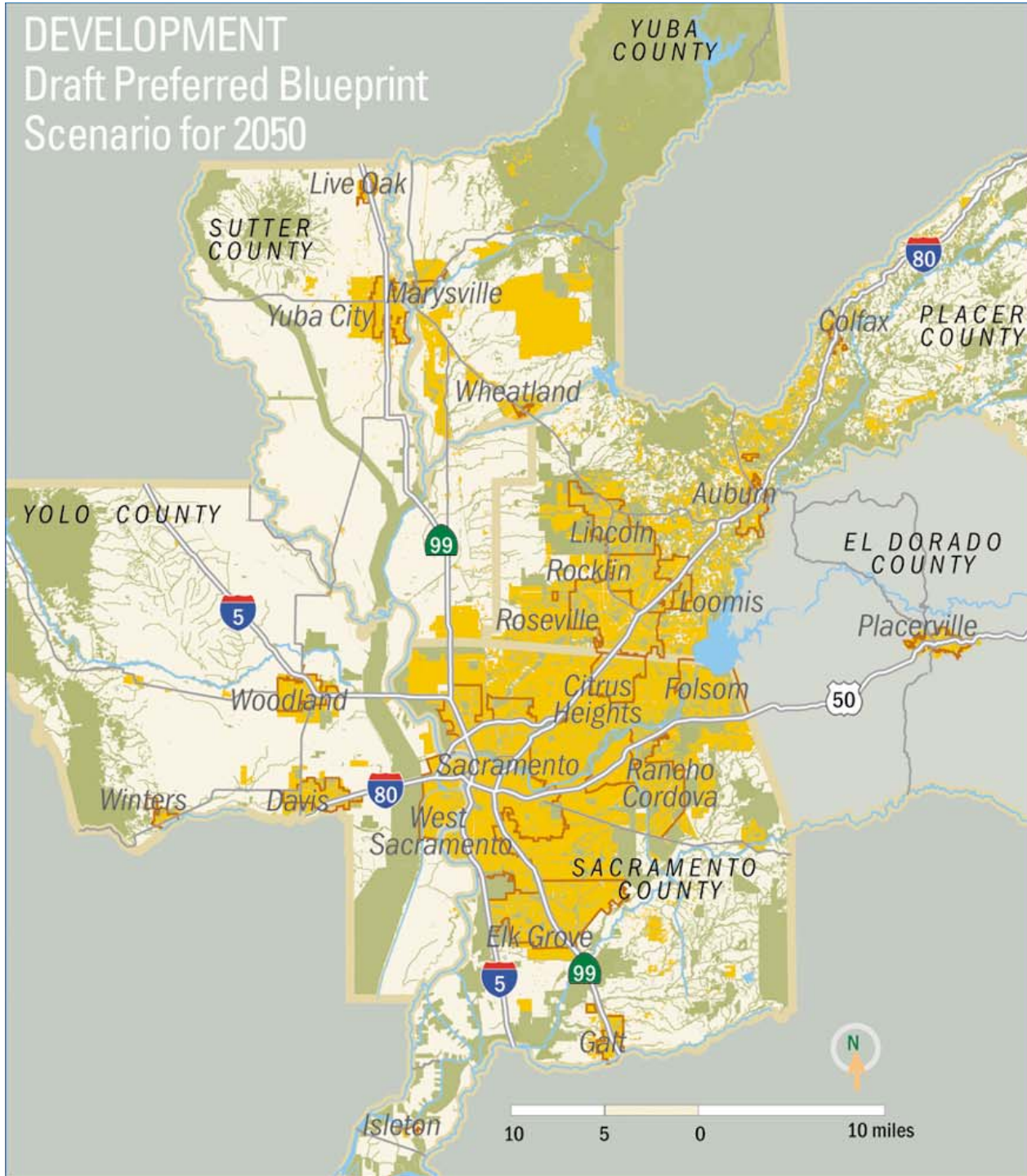


Key to the Map

- areas of existing and future development
- green areas (e.g. open space, parks, wetlands, vernal pools, stream corridors, hardwood stands)
- agriculture and other undeveloped lands
- rivers, streams and lakes
- city boundaries
- highways
- county boundaries

Note: Some vernal pools in Yuba, Sutter and southwest Placer counties are preserved, but are not shown on these maps.

DEVELOPMENT Draft Preferred Blueprint Scenario for 2050



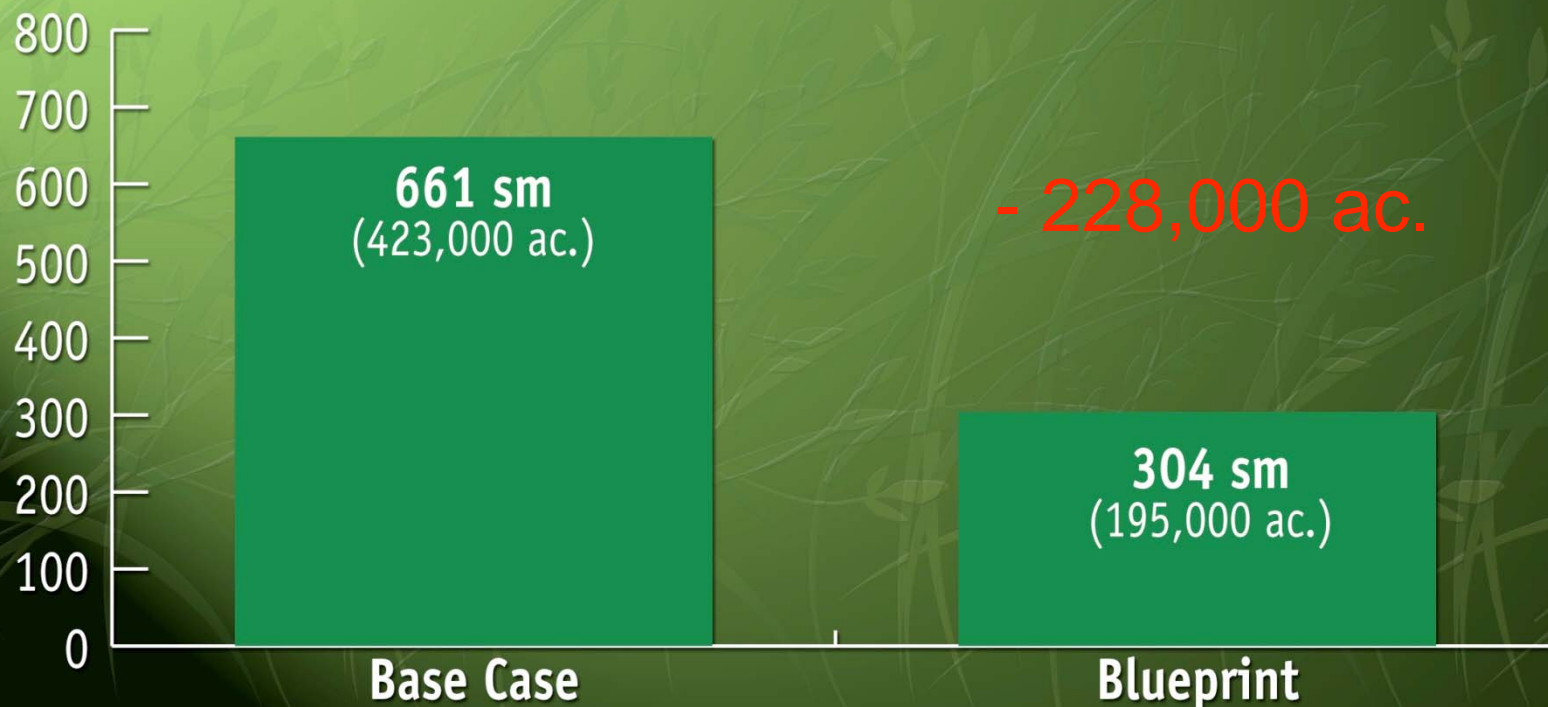
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Land Developed for Urban Uses

Through 2050
in square miles (ac.)



Impacts on Resources

- Vernal Pools
 - 46,200 ac. (43% of resource)
- Hardwoods
 - 95,500 ac. (20% of resource)
- Annual Water Use
 - 271,000 ac.-ft. (31% reduction)
- Development in Floodplain
 - 9,000 ac. (17% reduction)

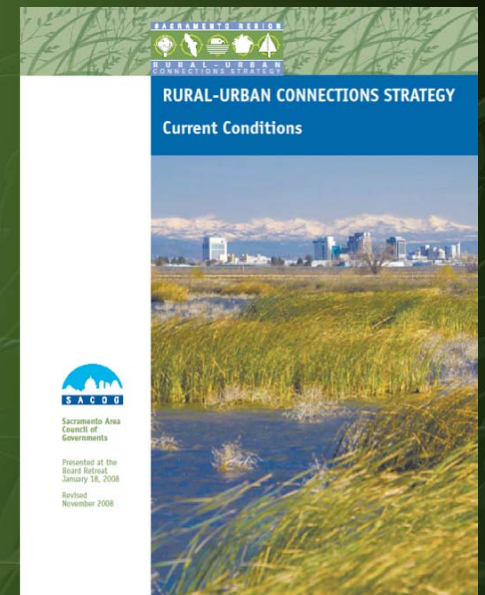
Enhancing Rural Economic Viability

Challenges & Opportunities



Topic Areas

1. Land Use and Conservation Policies and Plans
2. The Infrastructure of Agriculture
3. New Economic Opportunities
4. Forest Management
5. Regulations



Topic Development Process

Current Conditions Paper (Challenges & Opportunities)

- Current Conditions Workshop + Wiki
- Innovations Paper
 - Innovations Workshop + Wiki
 - Summary Report
 - Implementation



• JOHN DEERE 225HP MFWD ROW CROP TRACTOR •

• FRONTIER 750/18 PTO GRAIN CART •



• \$170,000 TRACTOR
• \$25,000 GRAIN CART
• \$195,000 TOTAL PACKAGE

ANNUAL USAGE TRACTOR
ANNUAL USAGE GRAIN CART
100 DAYS/YR
45 TO / OR





















S A C R A M E N T O R E G I O N



R U R A L - U R B A N
C O N N E C T I O N S S T R A T E G Y

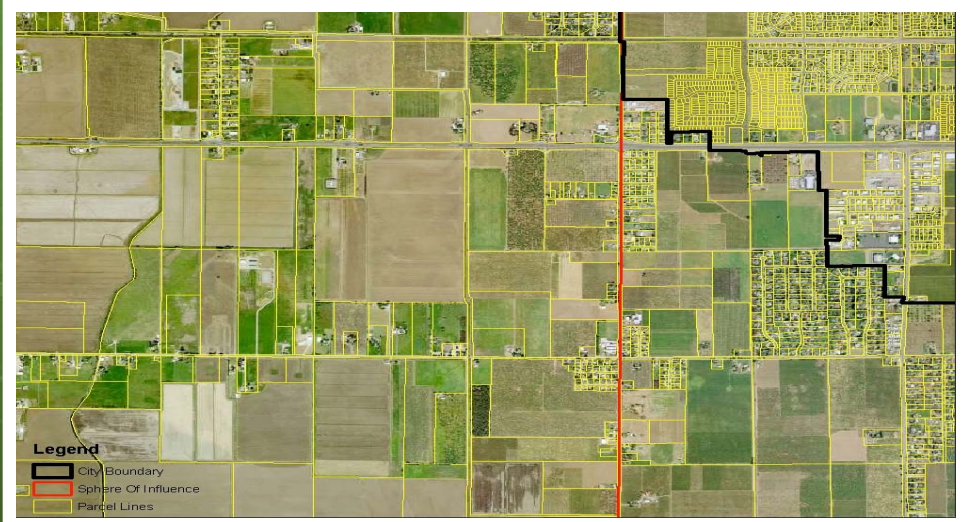
Land Use

Rural-Urban Interface

“Hard Edge”



“Soft Edge”



Rural-Urban Interface

“Hard Edge”

“Soft Edge”



Reducing Conflict

RURAL

- Dust
- Spray
- Noise
- Odor

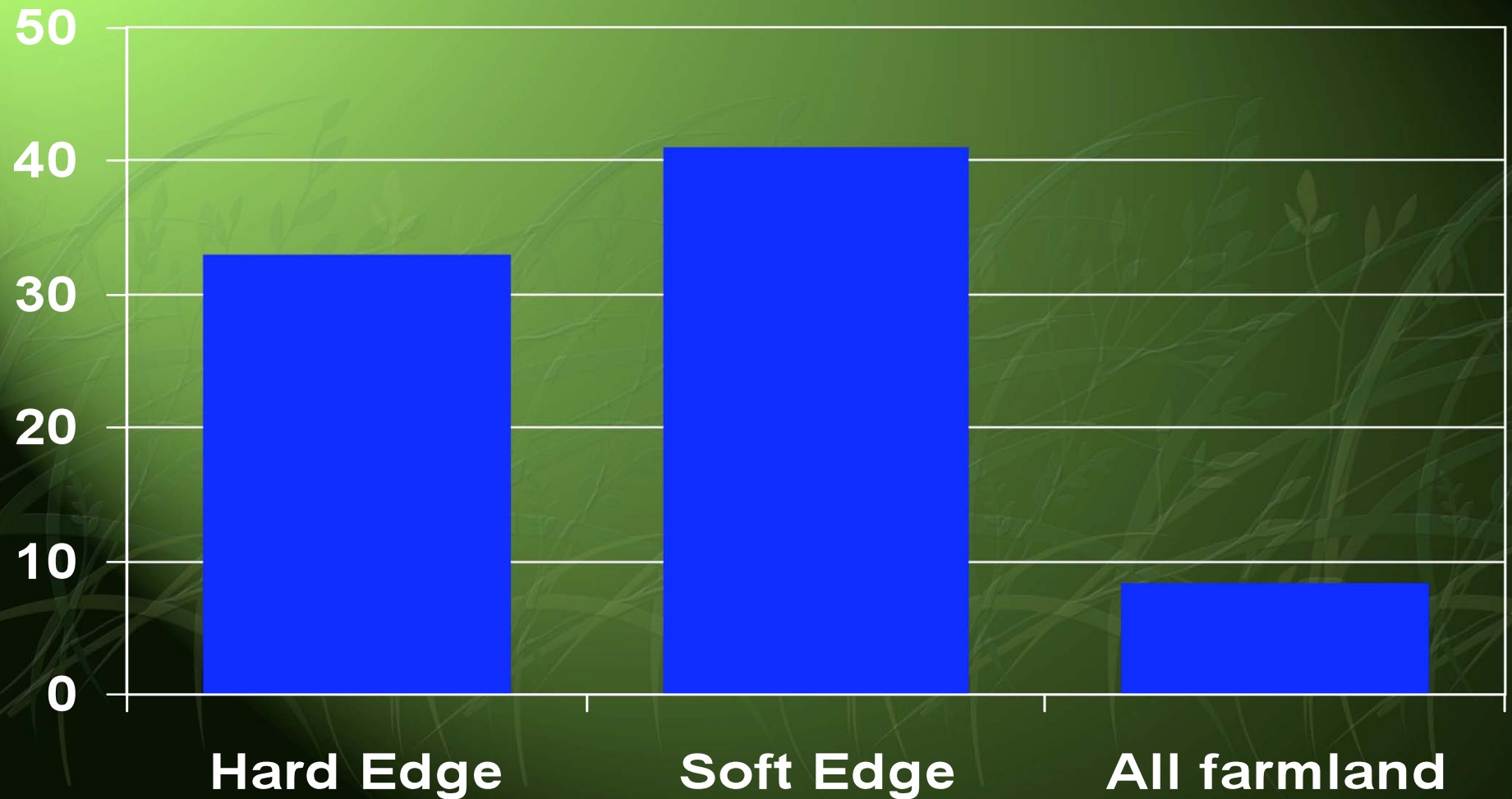


URBAN

- Traffic
- Pets
- Invasive plants
- Theft
- Vandalism

Rural-Urban Interface:

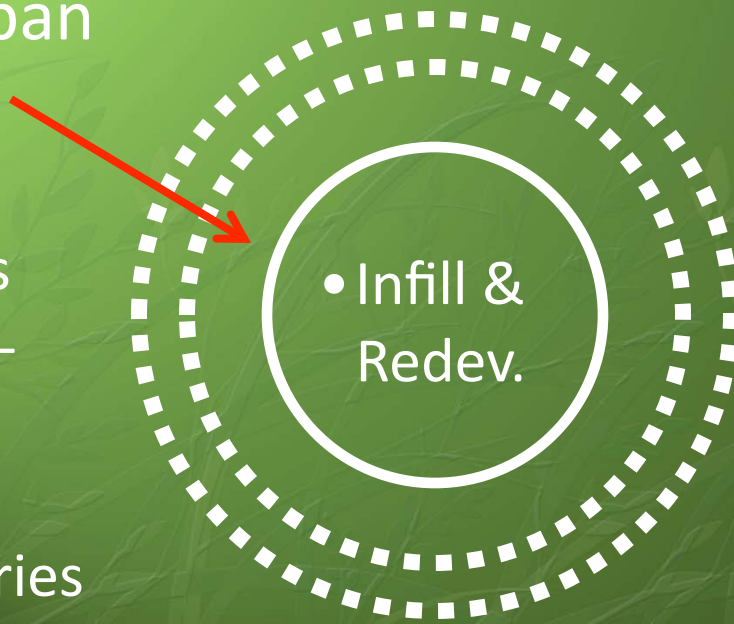
Percent likelihood of following at...



Innovations at the Edge and Beyond

Rural-Urban Edge

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



Supporting Ag Viability Beyond the Edge

- City-County Agreements
- Voter Initiatives
- Supportive Zoning
- Open Space Plans
- Easements, TDRs, etc.



Innovations at the Rural-Urban Edge

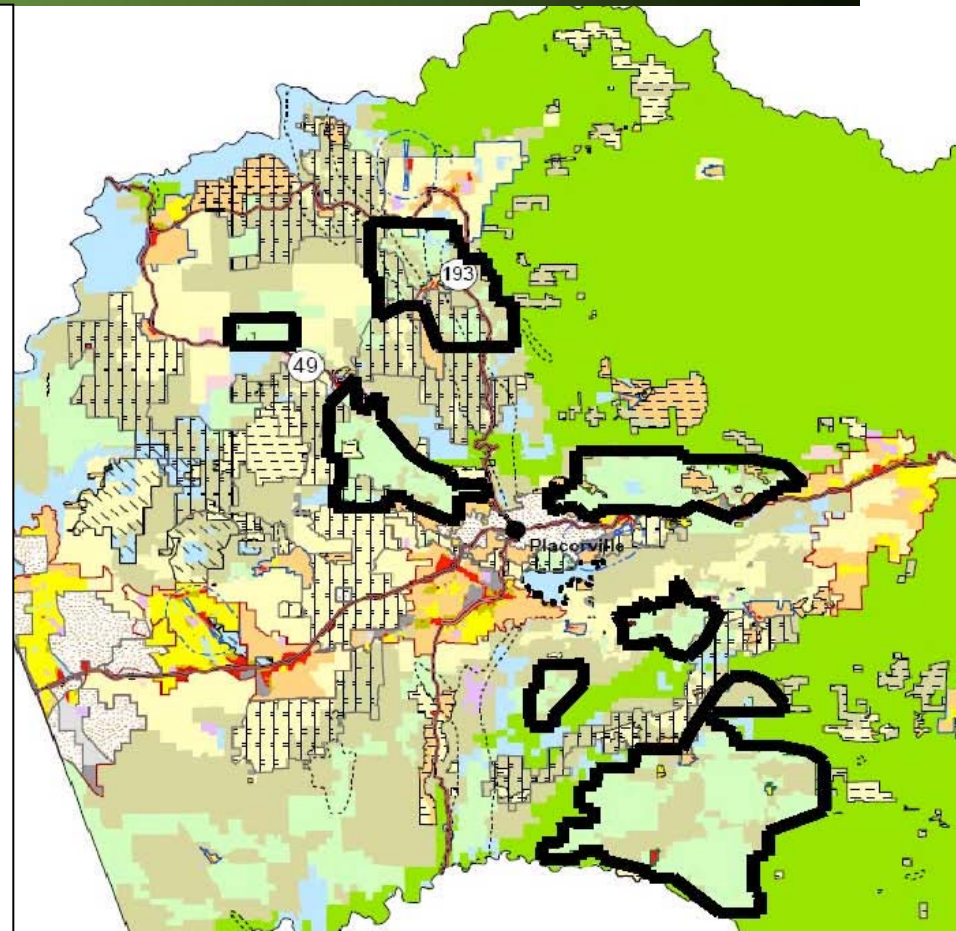
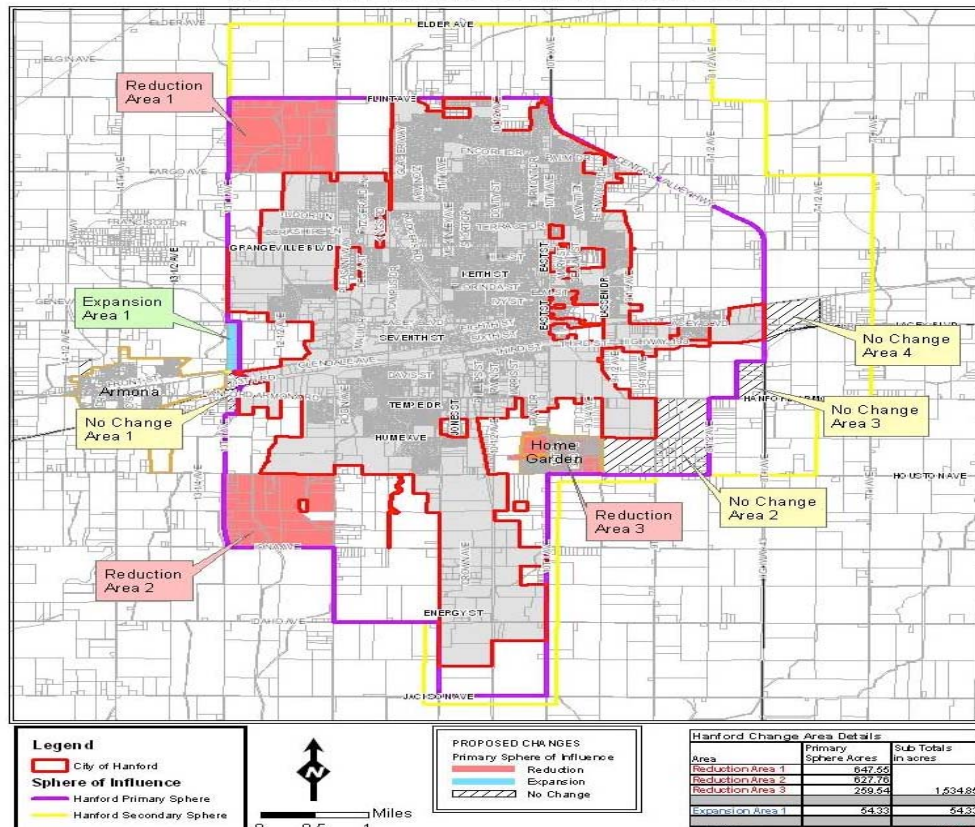
Land Use Innovations: Buffers, Ag Parks, Right-to-Farm



Land Use Innovations: Policy Boundaries

Growth Boundaries, Spheres, Districts

**CITY OF HANFORD
RECOMMENDED SPHERE CHANGES**

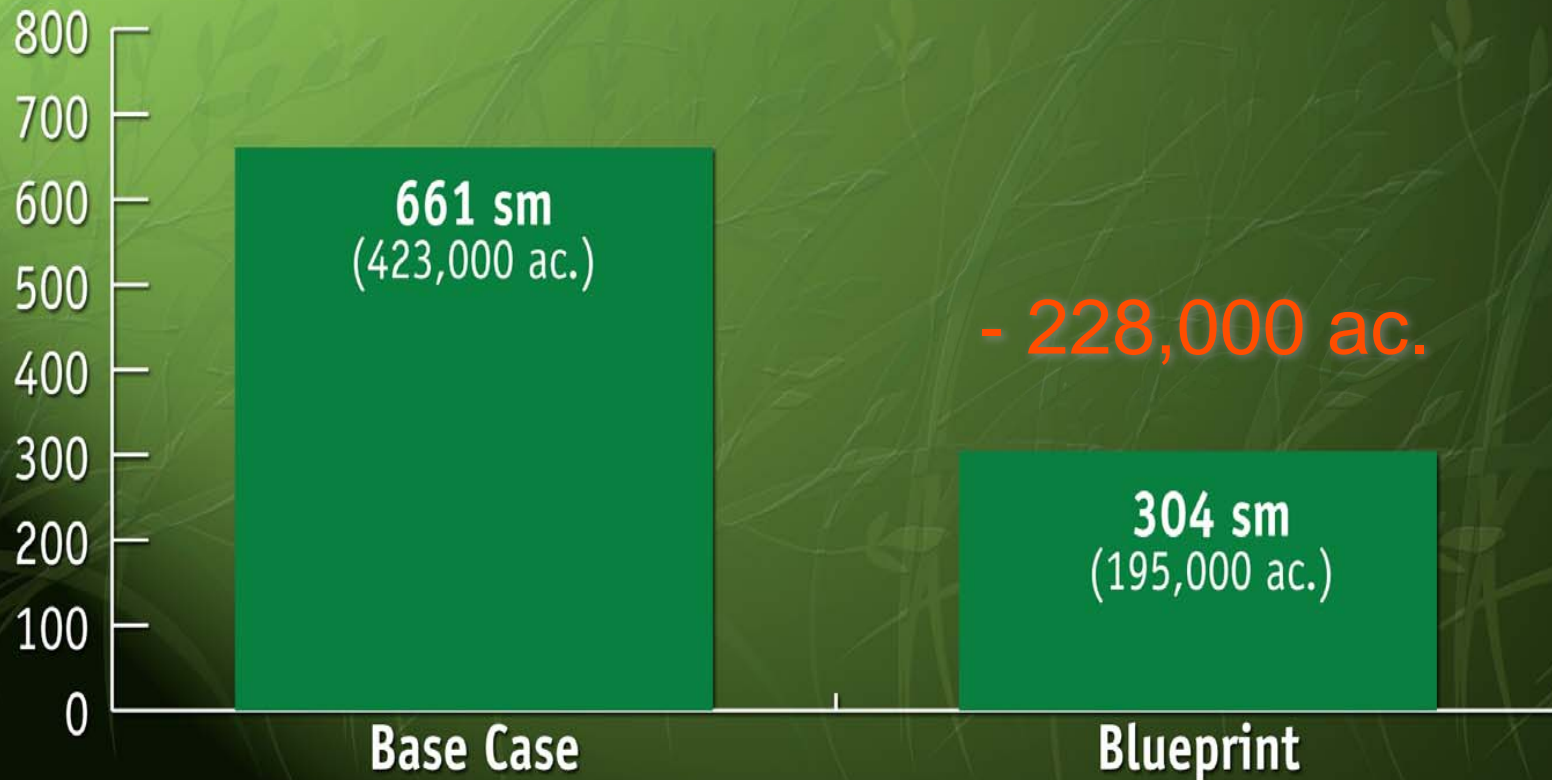


Land Use Innovations: Rural housing zoning regulations



Infill and Redevelopment

Through 2050
in square miles (ac.)



Land Use Innovations: City-County Agreements





Innovations Beyond the Edge

Land Use Innovations: Rural Housing

- City-County Agreements
- Ag Zoning and “farm home” sites
- Rural Residential evaluation criteria

Land Use Innovations: Economic Development/ Relief



Land Use Innovations: Preserve Open Land



Top innovations from Stakeholder Workshops

- Growth boundaries
- Public-private collaboration
- Less restrictive zoning
- Limitations on parcelization for new ranchette development

Ag Land Conversion Analysis: Vehicle CO₂ Emissions

For every 10 acres:

- Agriculture = 0.5-1.0 ton / **YEAR**
- Development = 0.5-1.0 ton / **DAY**

S A C R A M E N T O R E G I O N



R U R A L - U R B A N
C O N N E C T I O N S S T R A T E G Y

The Agriculture Economy

Estimating Market Impacts

Purpose: Understand future risks and uncertainties that affect agriculture

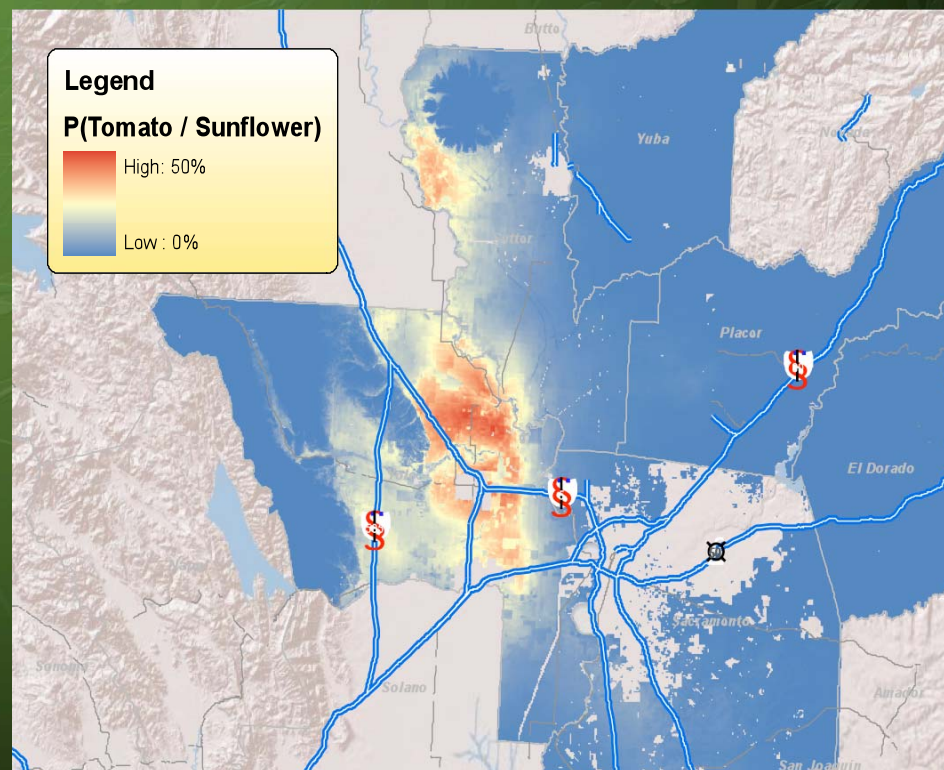
- Global markets' affect on local producers?
- What factors most affect which crops?
- Possible changes in crop patterns?

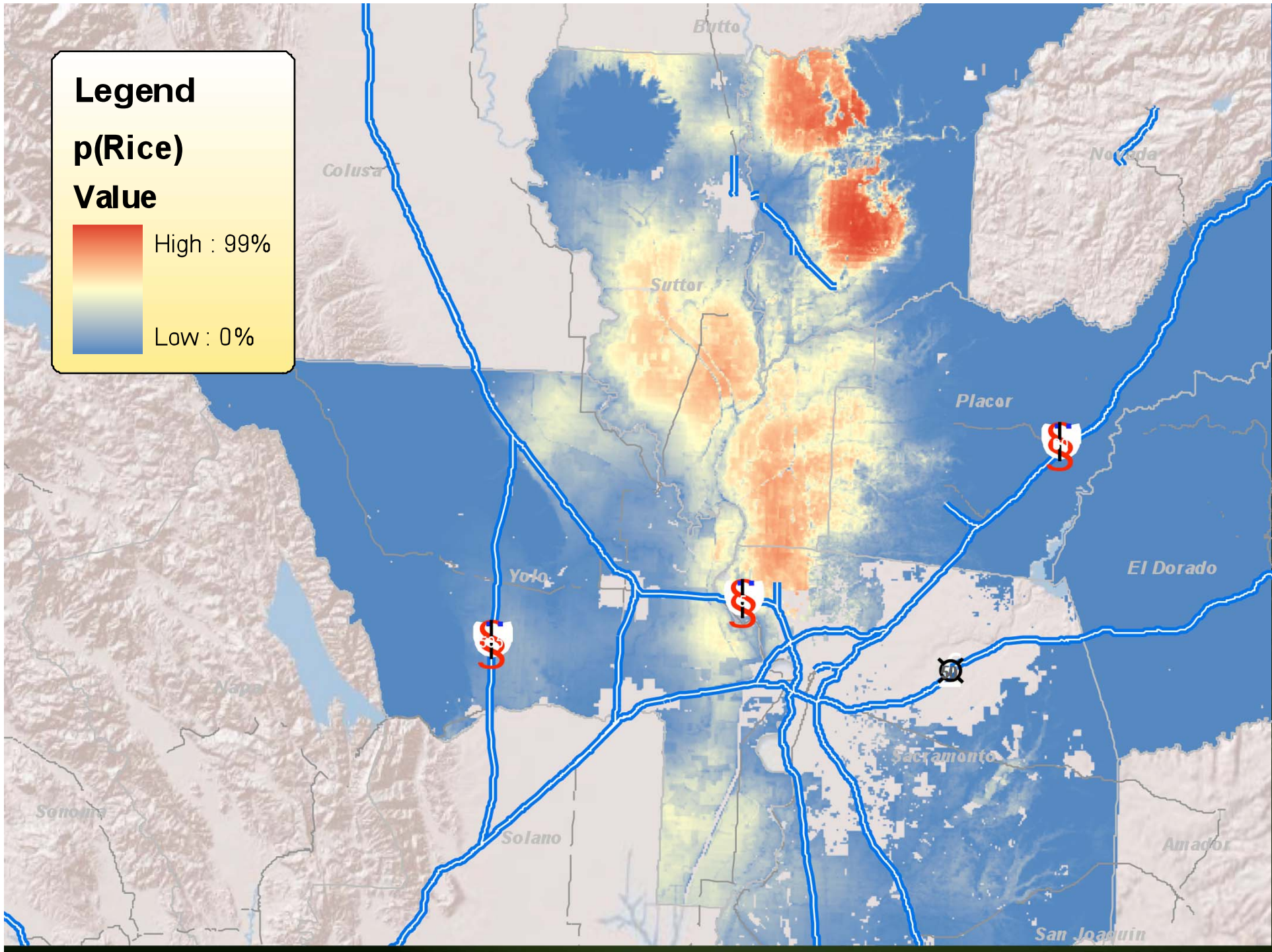


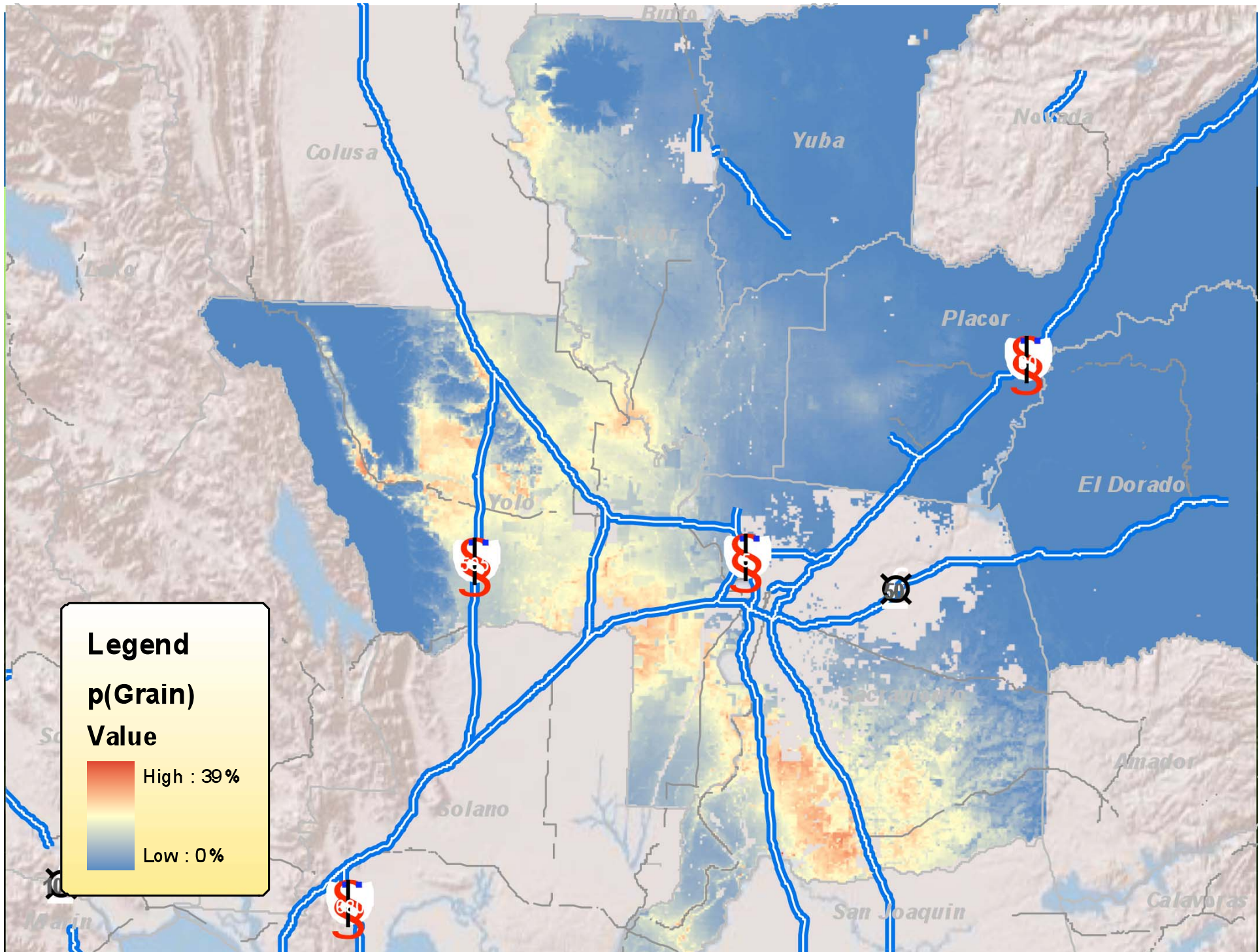
Determining Crop Probabilities

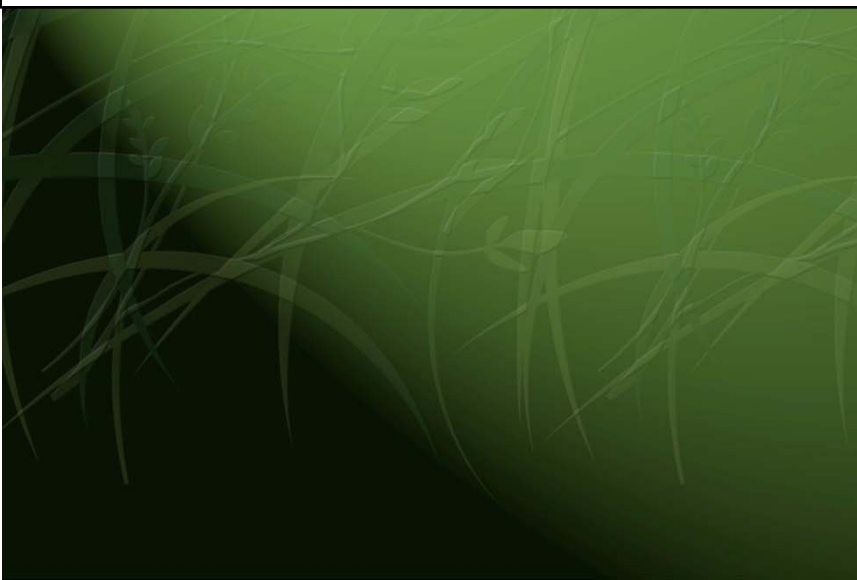
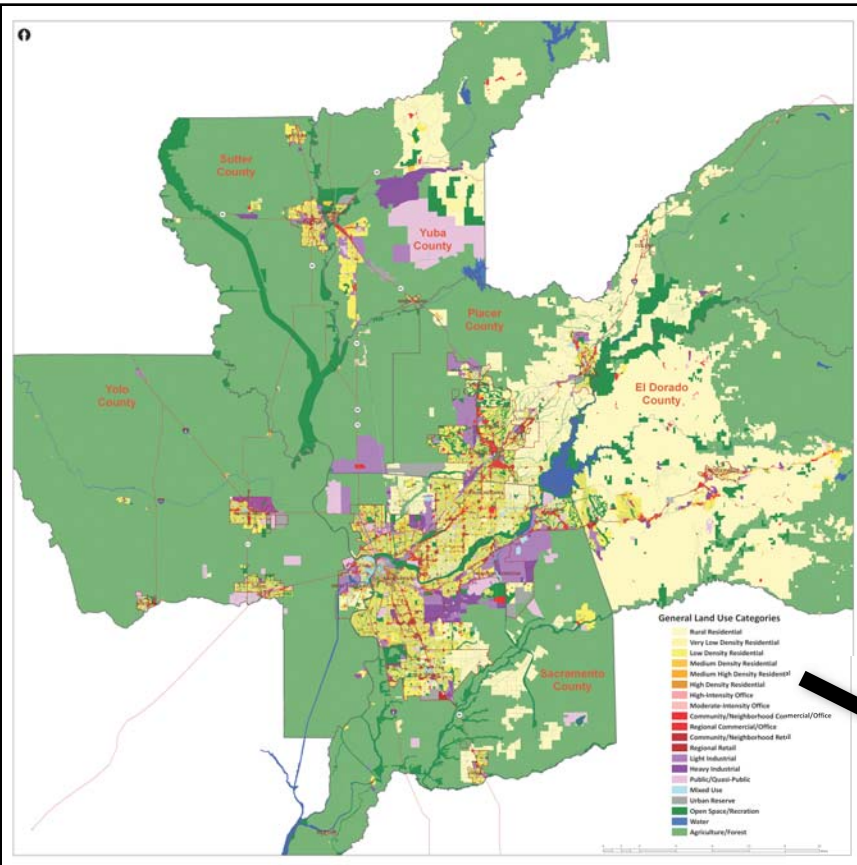
Factors in crop decisions:

- Temperature
- Precipitation
- Soil quality
- Elevation & slope
- Proximity to roads, rivers, cities
- Water & weather
- Costs and prices

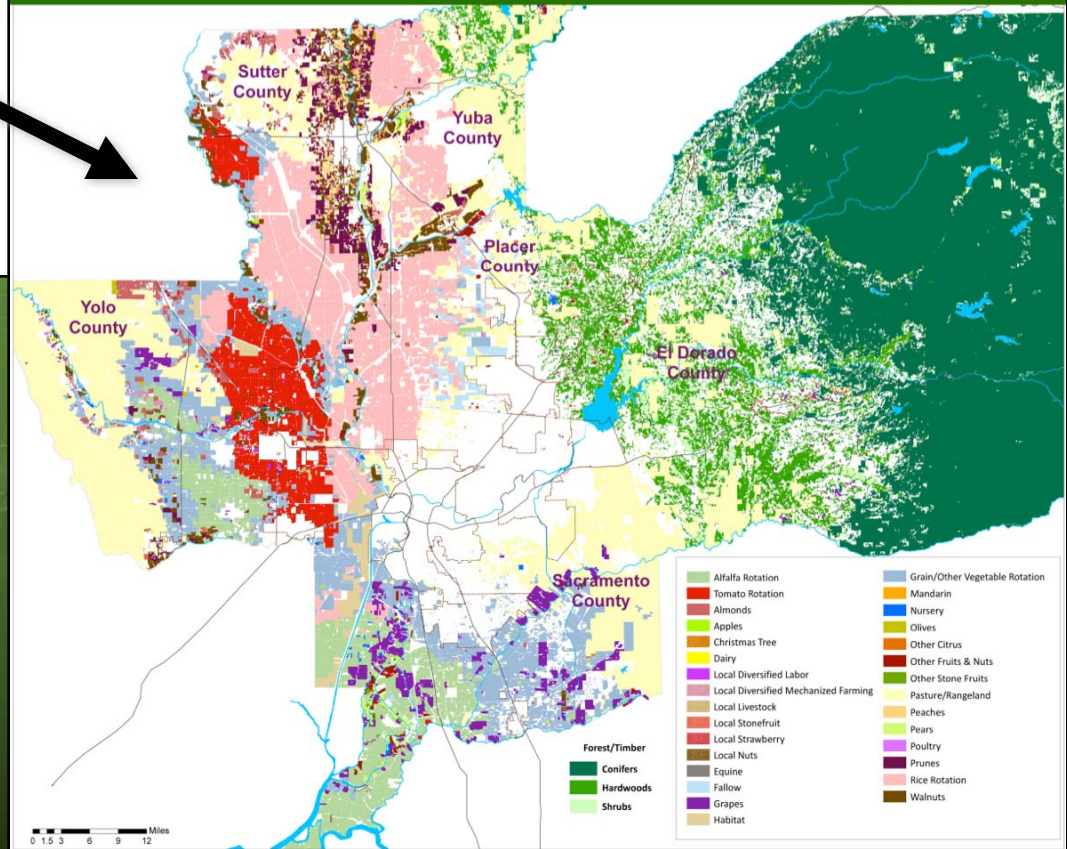








Farmland and Forestry



Forecasting Model: Factors affecting viability

- Variables affecting crops:
 - Chemicals
 - Equipment
 - Fertilizer
 - Fuel
 - Irrigation
 - Labor
 - Seed
 - Commodity Prices



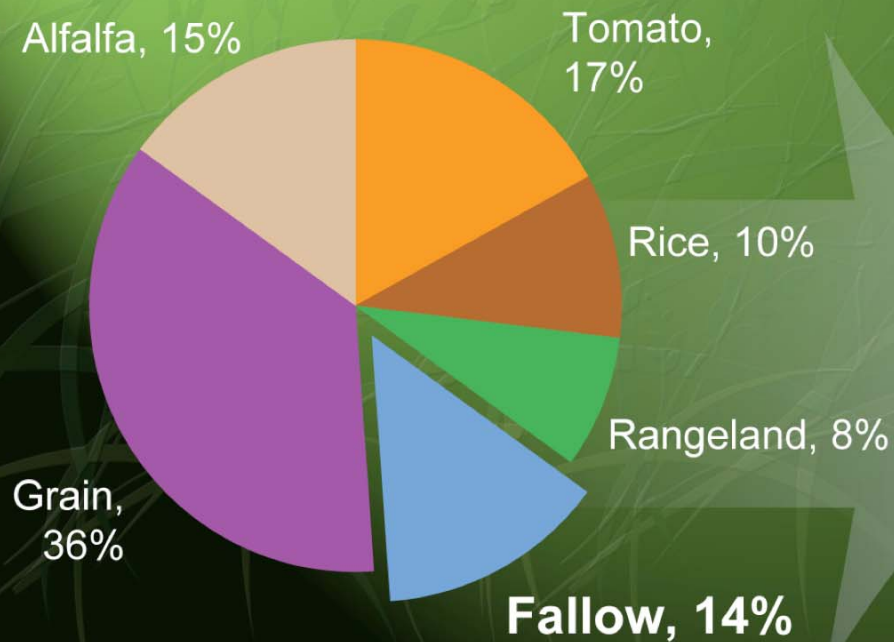
Forecasting Model: Scenario Examples

- Russian drought and fire reduce wheat harvest
→ *Grain prices increase*
- Oil resources become more scarce
→ *Fuel, chemical and fertilizer prices increase*
- Construction industry heats up again
→ *Labor prices increase*
- Drought persists
→ *Surface water decrease, Irrigation costs increase*

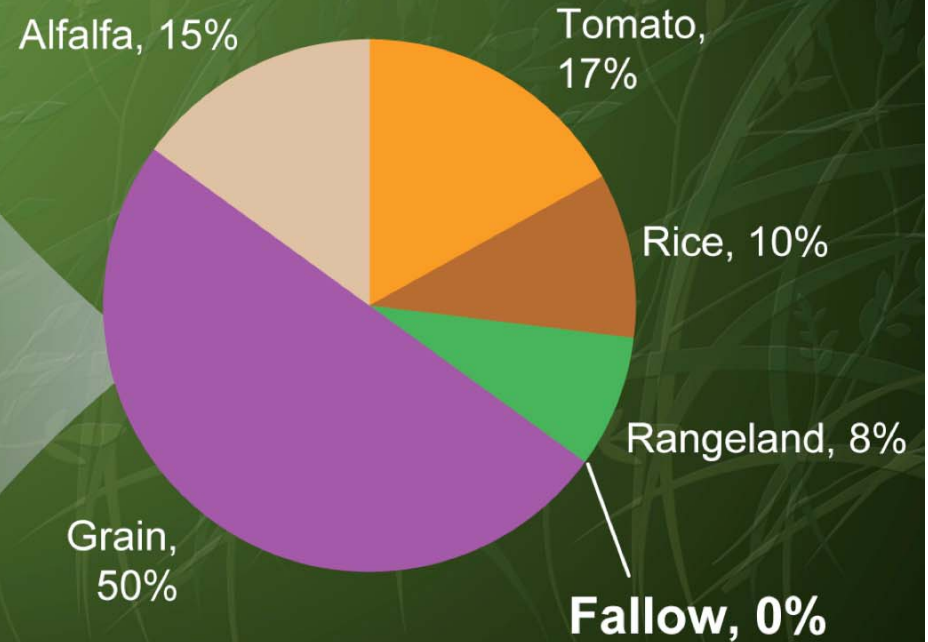
Forecasting Model: Scenario Examples

Crop Type: Grain

Grain Prices: Stable



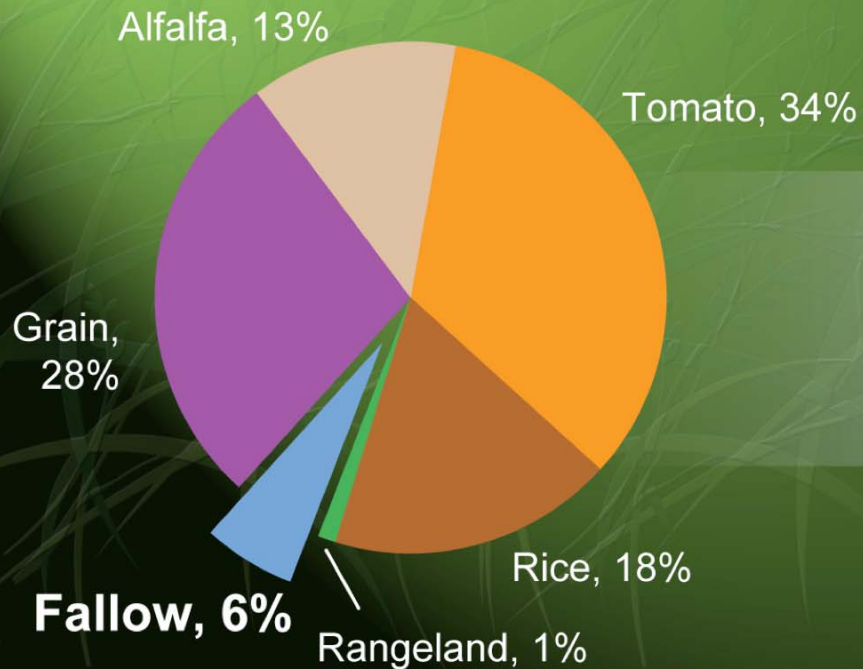
Grain Prices: Double



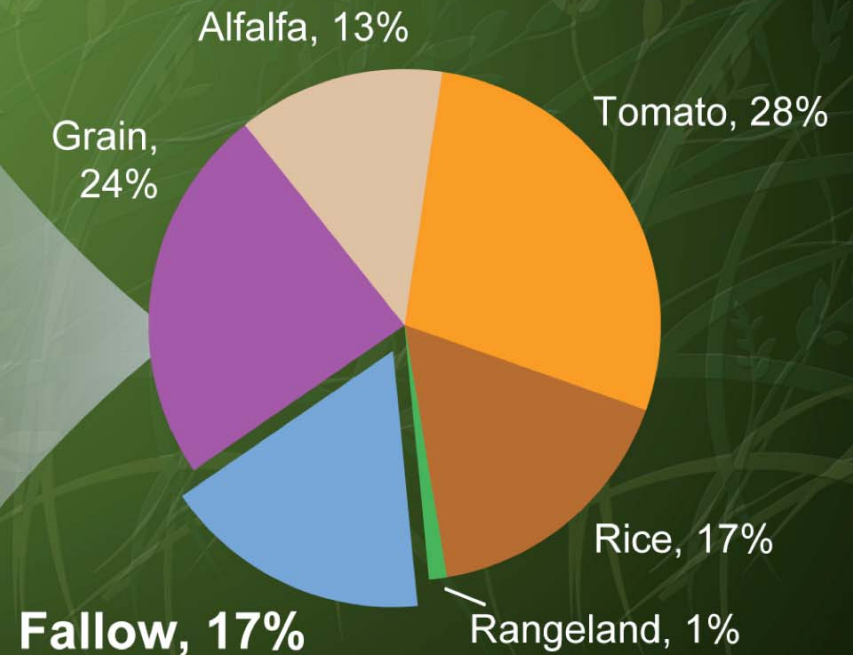
Forecasting Model: Scenario Examples

Crop Type: Tomato

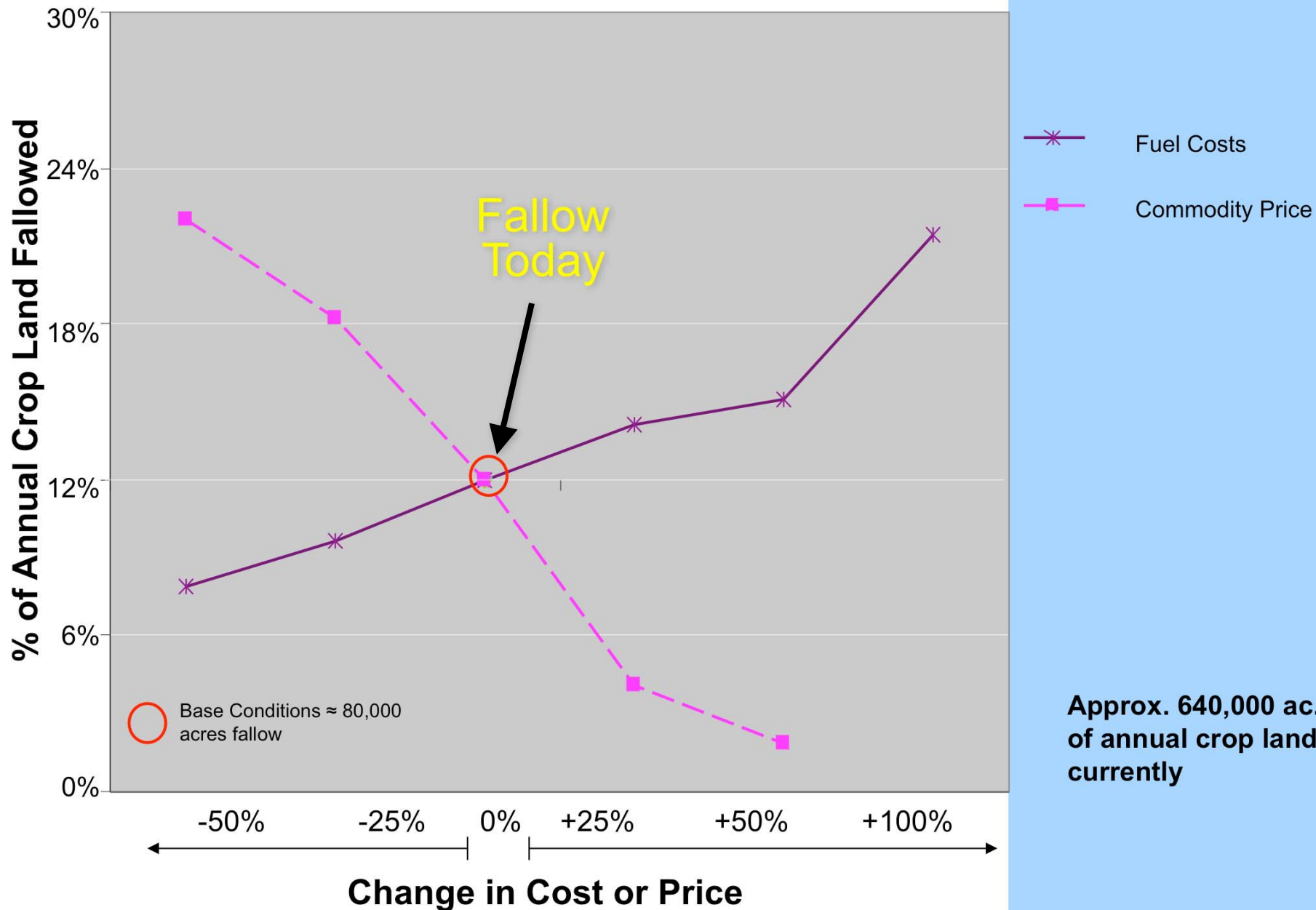
Fuel Prices: Stable



Fuel Prices: Double



Change in Fallowing on Annual Crop Land due to Change in Cost or Price



PLACE³S RUCS Module: Return On Investment Analysis

Purpose: Understand agricultural viability by using "what if" scenarios:

- Market changes
- Cropping patterns
- Farm practices
- Planning that supports agriculture

Example: Changing alfalfa rotation to dried plums improved economic return

PLACE³S Model Design

Model Inputs

- Current or future crops
- Costs (labor, fuel, fertilizer, etc.)
- Crop yield and price
- Other factors (e.g., habitat, easement value)

Model Outputs

- Crop value
- Demand for inputs (water, seed, trucking, etc.)
- Profit (Revenue – Cost)

PLACE³S

ZOOMIN 2X ZOOMOUT 2X PAN IDENTIFY Parcel

% COV 100% REDEV MODE MARK % DENS 100% % ACRE 100% PLACE TYPE - [LEGEND](#)
ALFALFA ROTATION- 100% FUEL CHANGE

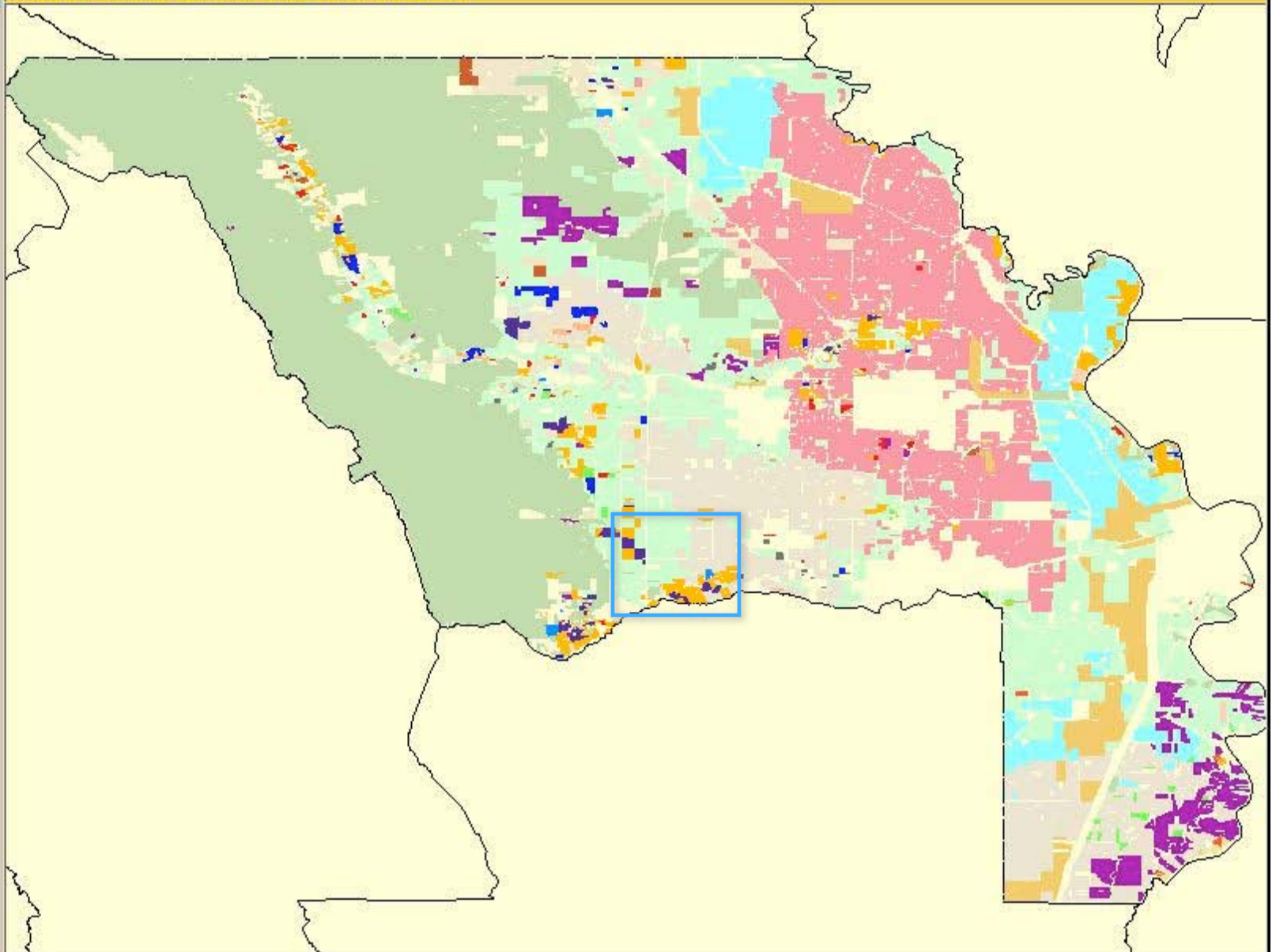
Layers

- ~ Roads
- ~ Parcel Lines

Map Size: 2X

Redraw

CLICK ON THE MAP TO PERFORM THE SELECTED ACTION



PLACE³S

ZOOMIN 2X ZOOMOUT 2X PAN IDENTIFY Parcel

% COV 100% REDEV MODE MARK % DENS 100% % ACRE 100% PLACE TYPE - [LEGEND](#) Alfalfa Rotation

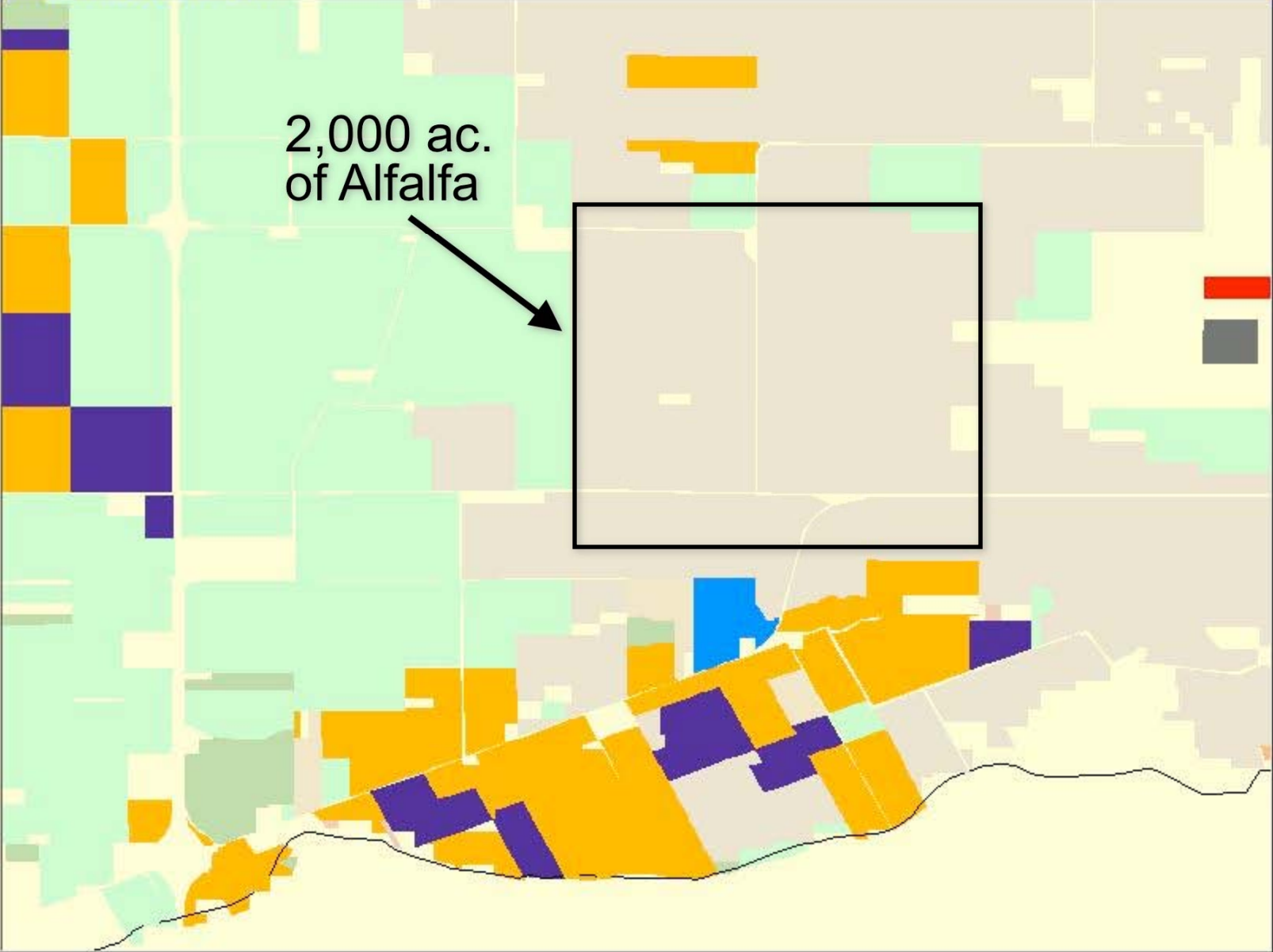
Layers

- Roads
- Parcel Lines

Map Size: 2X

Redraw

ID RESULTS: NO PARCELS FOUND



PLACE³S

ZOOMIN 2X ZOOMOUT 2X PAN IDENTIFY Parcel

% COV 100% REDEV MODE MARK % DENS 100% % ACRE 100% PLACE TYPE - LEGEND Prunes

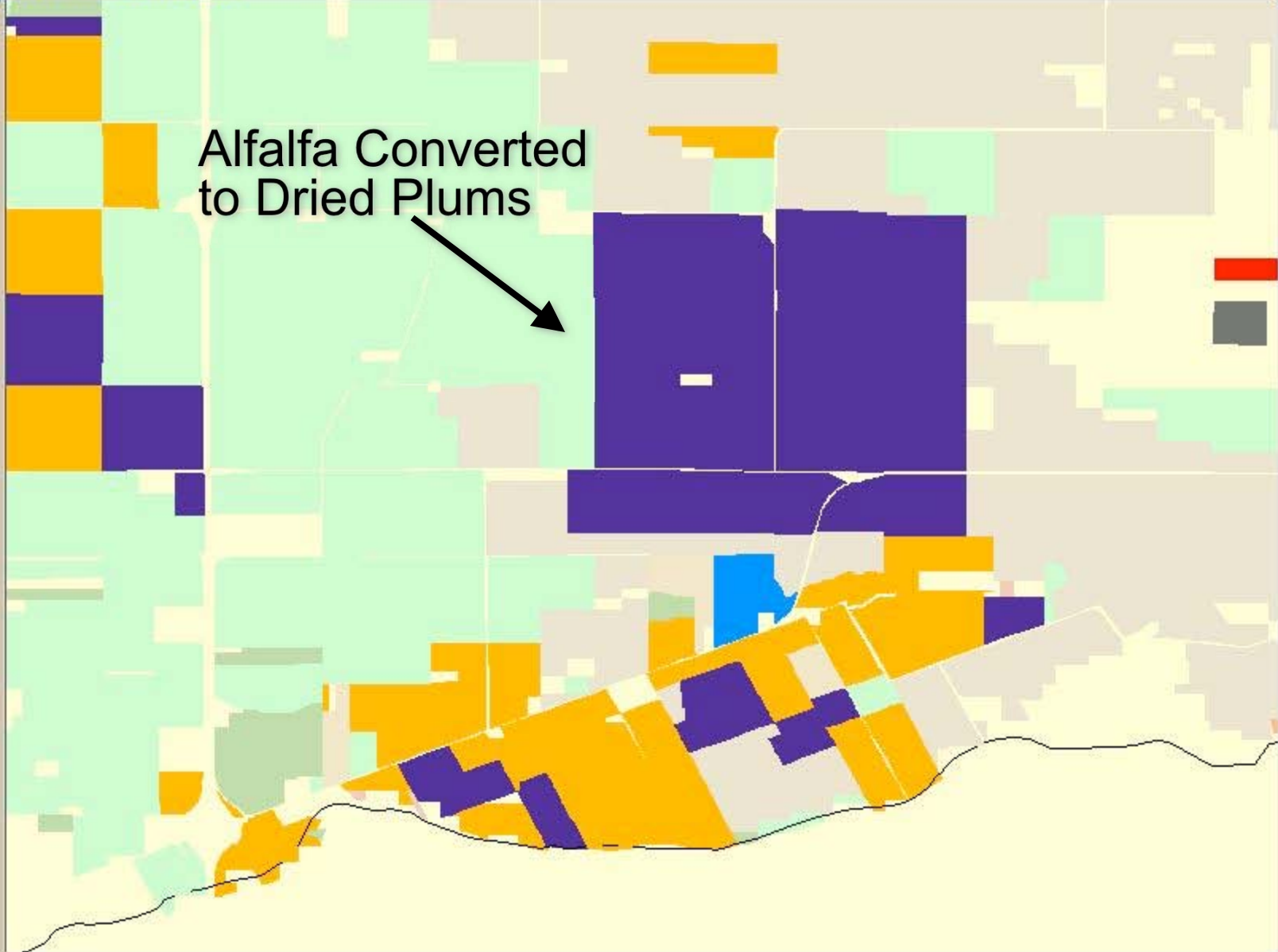
Layers

- // Roads
- // Parcel Lines

Map Size: 2X

Redraw

ID RESULTS: PRUNES - 100%



Alfalfa Converted to Dried Plums

PLACE³S

COMPARE SCENARIOS - RESULTS

CURRENT PROJECT
[RUCS YOLO DAVID](#)

PROJECT TYPE
 NEIGHBORHOOD

LEAD ORGANIZATION
 SACOG

STUDY AREA
 CUSTOM STUDY SHAPEFILE

CURRENT SCENARIO : [ALFALFA TO DRIED PLUMS](#)

SCENARIO COMPARISON

SCENARIO NAME	TOTAL ACRES	AG ACRES	AG VALUE	AG COST	AG RETURN	AG PCT RETURN	AG WATER ACRE / FEET	AG LABOR FTE	AG TRUCK TRIPS
BASE CASE	259,715	555,346.0	\$600,156,047	\$506,819,215	\$93,336,832	18.4%	662,613	1,989.2	99,939
ALFALFA TO DRIED PLUMS	261,653	555,344.7	\$608,653,171	\$513,458,345	\$95,194,826	18.5%	663,557	2,025.4	99,689

[JOB DIVERSITY CHART](#)

[HOUSING DIVERSITY CHART](#)

LOGGED IN AS [SHABAZIAN](#)

[CONTACT SITE](#) | [HELPDESK](#)

**Less Than
0.5% of County
Ag Land:**

Value: + \$8M

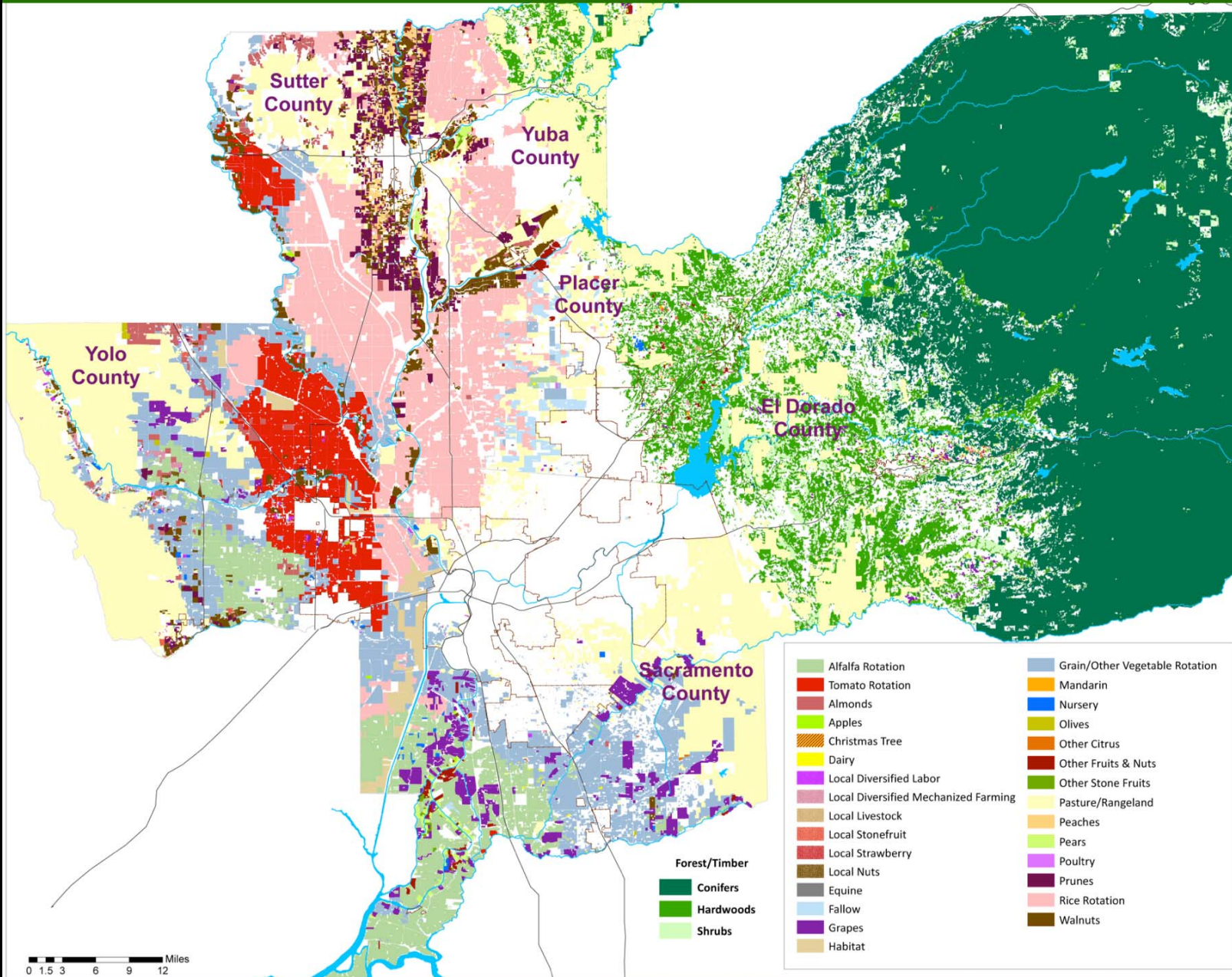
Return: + \$2M

Water: + 1,000 ac-ft

Labor: + 35 workers

Trucks: - 250 trips

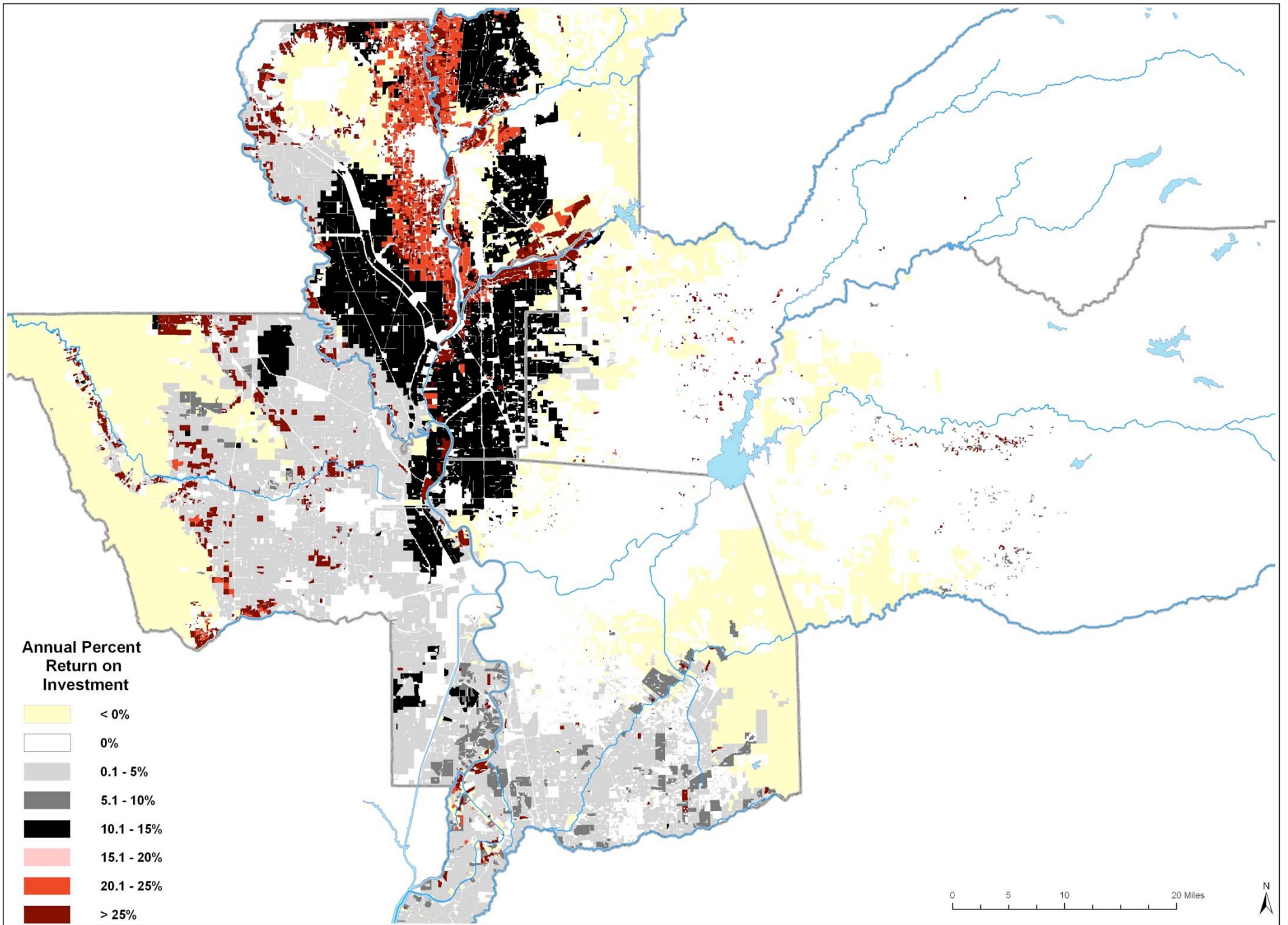
Farmland and Forestry

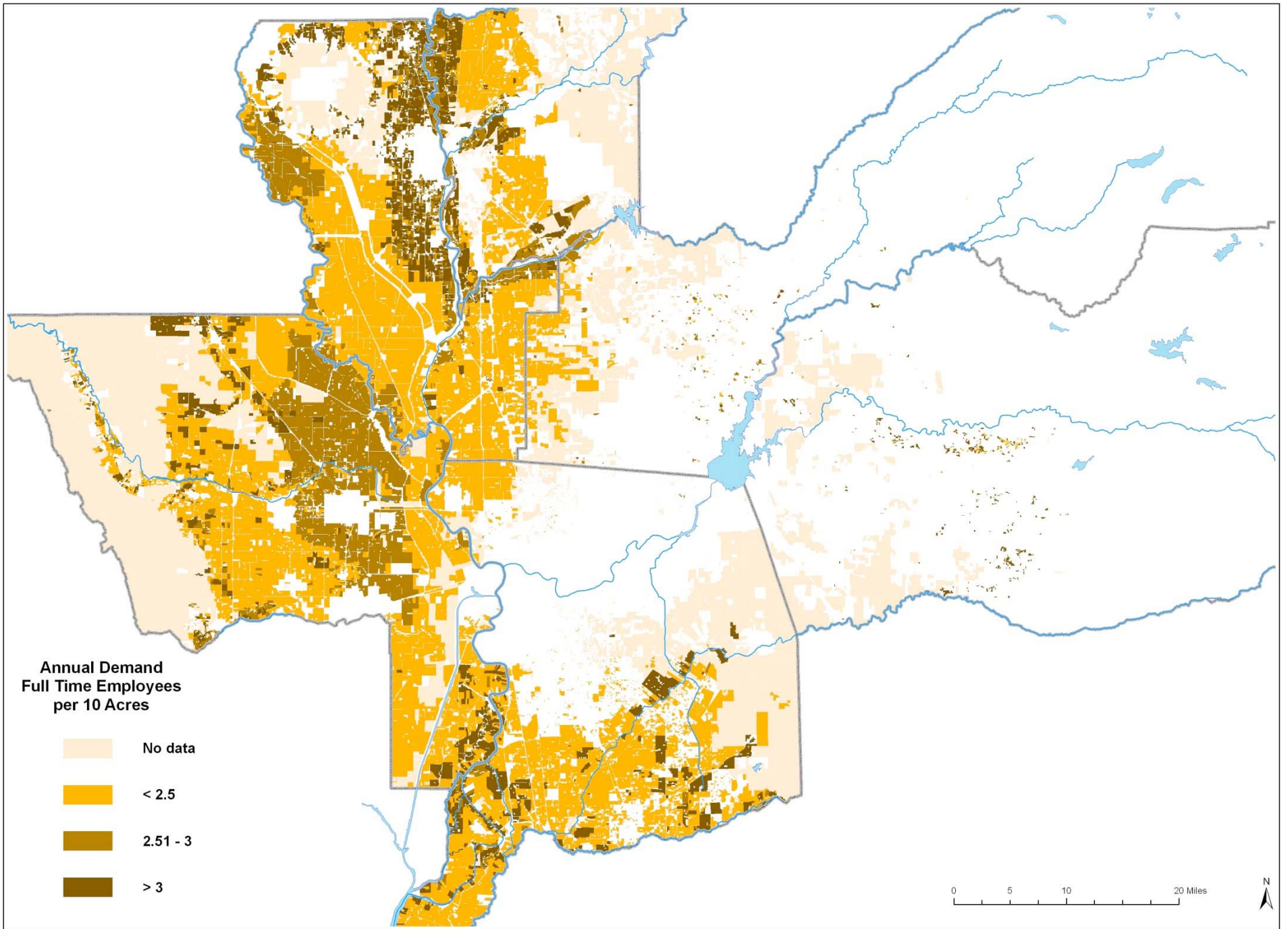


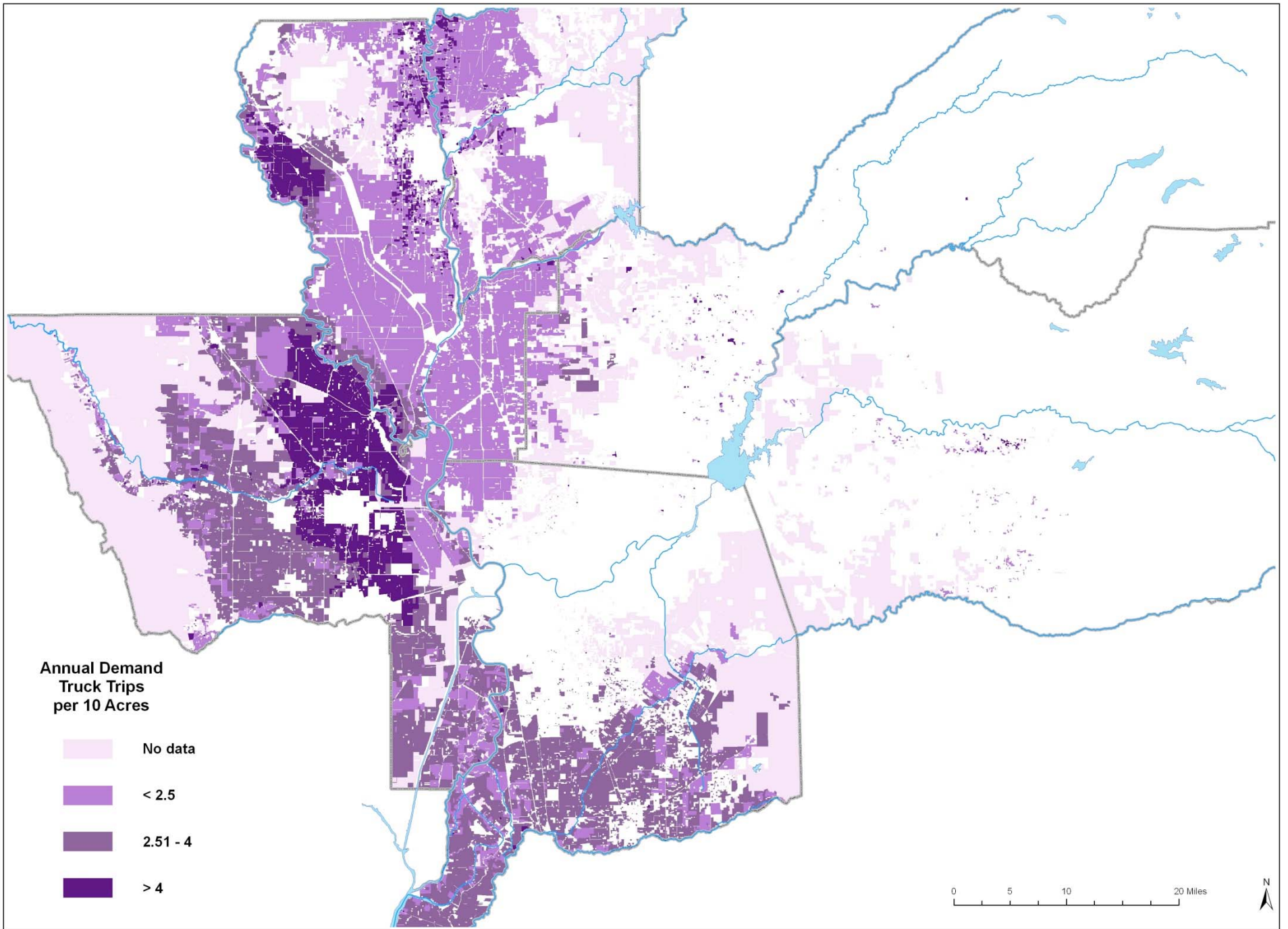
- | | |
|--------------------------------------|--------------------------------|
| Alfalfa Rotation | Grain/Other Vegetable Rotation |
| Tomato Rotation | Mandarin |
| Almonds | Nursery |
| Apples | Olives |
| Christmas Tree | Other Citrus |
| Dairy | Other Fruits & Nuts |
| Local Diversified Labor | Other Stone Fruits |
| Local Diversified Mechanized Farming | Pasture/Rangeland |
| Local Livestock | Peaches |
| Local Stonefruit | Pears |
| Local Strawberry | Poultry |
| Local Nuts | Prunes |
| Equine | Rice Rotation |
| Fallow | Walnuts |
| Grapes | |
| Habitat | |

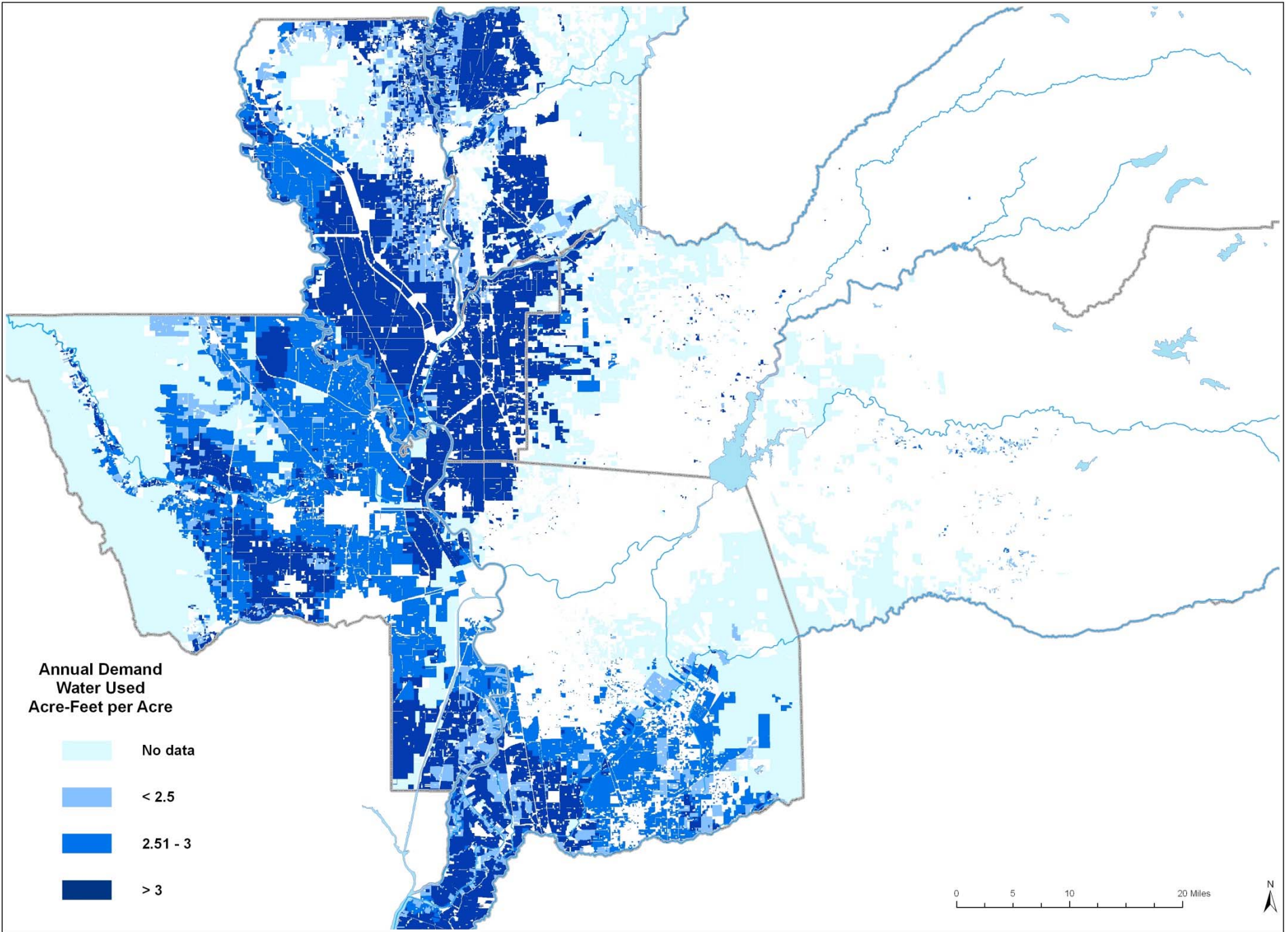
- Forest/Timber**
- Conifers
 - Hardwoods
 - Shrubs

0 1.5 3 6 9 12 Miles









S A C R A M E N T O R E G I O N



R U R A L - U R B A N
C O N N E C T I O N S S T R A T E G Y

The Local Food System

Local Food System

Purpose: Estimate supply and infrastructure needs to meet consumer demand for locally grown food

- Changing diets
- Expanded direct markets
- New wholesale and institutional markets
- Retail and value-added markets



Production and Consumption

- Total Production = 3.4 M tons/year
- Total Consumption = 2.2 M tons/year
- Less than 2% from local growers

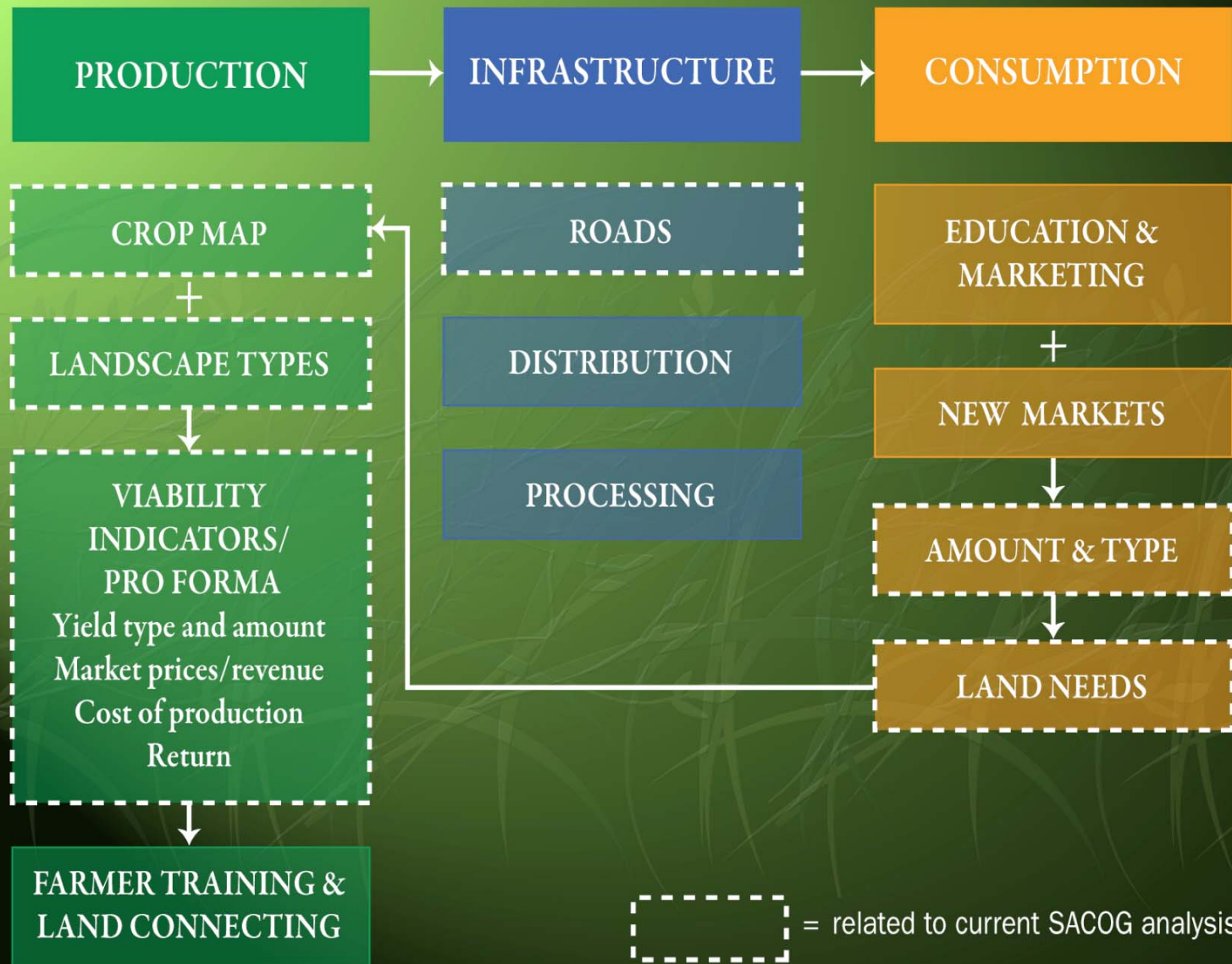
Value of the Food System

- Regional Farm Gate Value: ~ \$1.6 billion
(Total of ~ \$3.3 billion in econ. activity)
- 180 wholesalers ~ \$3.3 billion
- 849 stores ~ \$4.7 billion
- 4,206 food service outlets ~ \$2.1 billion

Local Market Advantages

- Direct sales and local distribution and processing increase profit, create jobs
- Local consumers connect to local producers
- International market fluctuations less disruptive

Local Food System Analysis

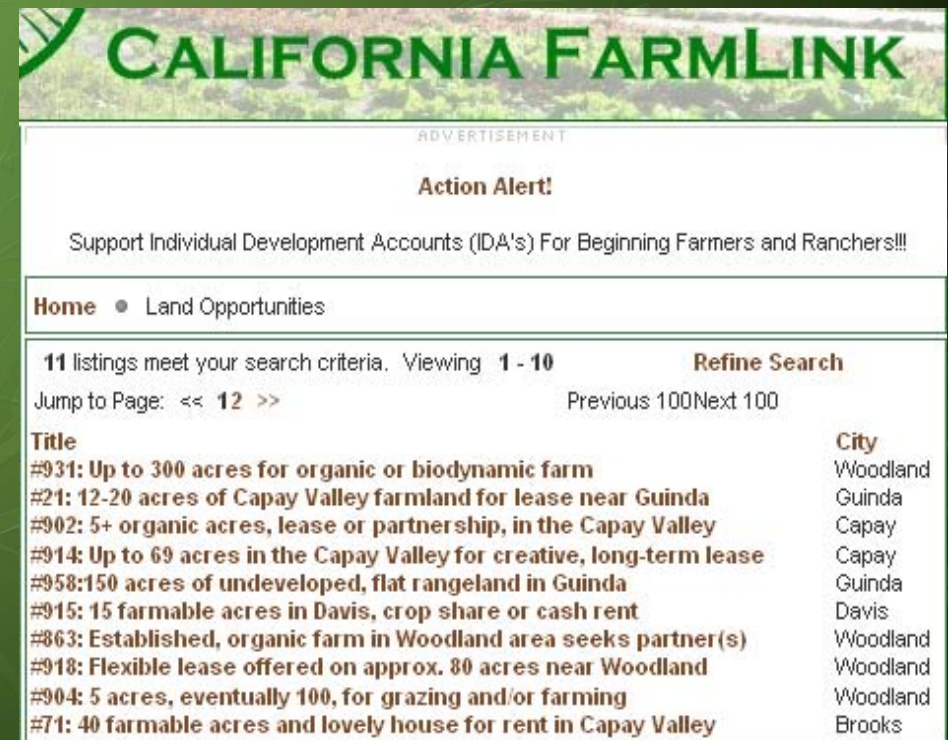


Local Market Objectives

1. Connect Farmers to Available Land
2. Provide Farmer Business Training Opportunities
3. Expand Local Distribution
4. Increase Local Processing
5. Expand Farm-to-Institution Programs
6. Increase Number & Type of Local Food Outlets
7. Promote Agritourism
8. Increase Consumer Education and Marketing

1. Connect Farmers to Available Land

- Agriculture parks
- Connecting organizations
- Inventory and map available land



CALIFORNIA FARMLINK

ADVERTISEMENT

Action Alert!

Support Individual Development Accounts (IDA's) For Beginning Farmers and Ranchers!!!

[Home](#) • [Land Opportunities](#)

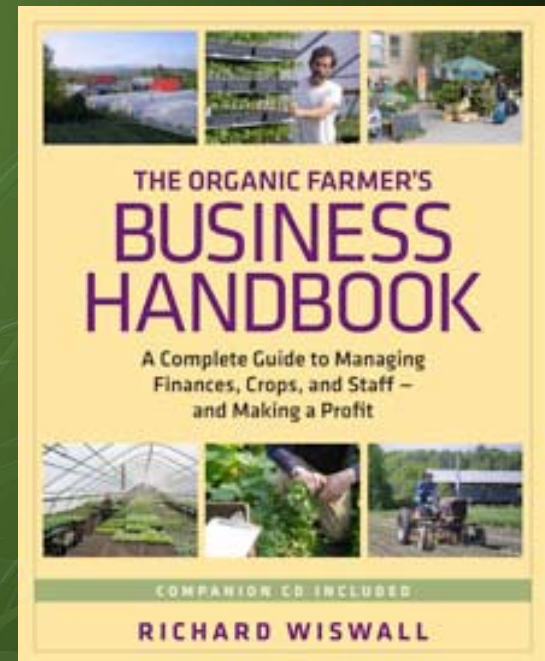
11 listings meet your search criteria. Viewing 1 - 10 [Refine Search](#)

Jump to Page: << 12 >> [Previous 100](#) [Next 100](#)

Title	City
#931: Up to 300 acres for organic or biodynamic farm	Woodland
#21: 12-20 acres of Capay Valley farmland for lease near Guinda	Guinda
#902: 5+ organic acres, lease or partnership, in the Capay Valley	Capay
#914: Up to 69 acres in the Capay Valley for creative, long-term lease	Capay
#958: 150 acres of undeveloped, flat rangeland in Guinda	Guinda
#915: 15 farmable acres in Davis, crop share or cash rent	Davis
#863: Established, organic farm in Woodland area seeks partner(s)	Woodland
#918: Flexible lease offered on approx. 80 acres near Woodland	Woodland
#904: 5 acres, eventually 100, for grazing and/or farming	Woodland
#71: 40 farmable acres and lovely house for rent in Capay Valley	Brooks

2. Provide Farmer Business Training

- Production and business assistance offered by:
 - FarmLink
 - UC Co-op Extension
 - Agricultural Resource Center



3. Expand Local Distribution

- Shared or cooperative facilities
- Grower-owned rural aggregation center
- Distributor-owned aggregation center
- Co-op Aggregation Warehouse
- Electronic (web-based) broker



4. Increase Local Processing Capacity

- Shared or cooperative facilities
- Repurpose existing processing
- Commercial kitchens
- Mobile processing



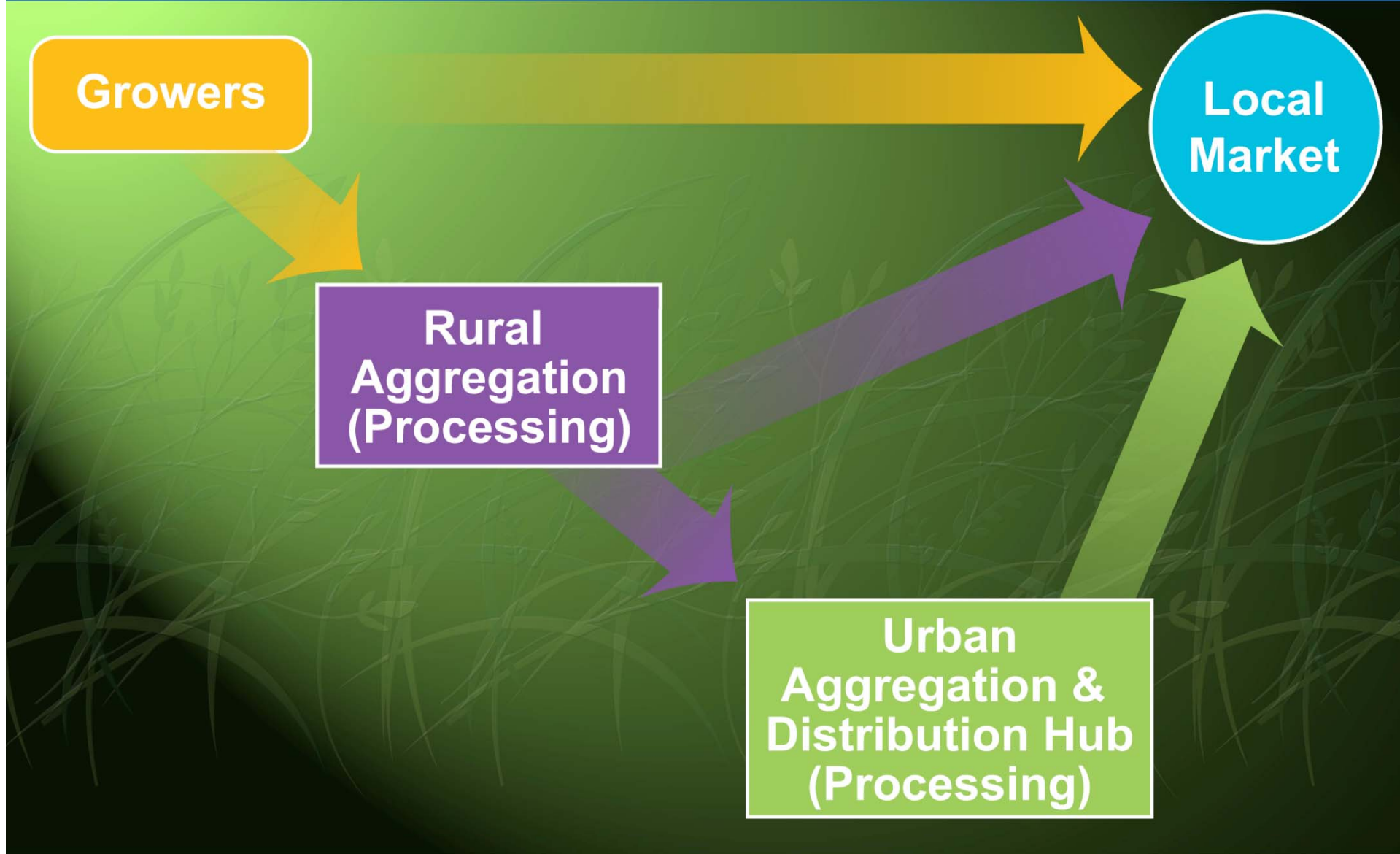
Local Food System

Growers

Local Market

Rural Aggregation (Processing)

Urban Aggregation & Distribution Hub (Processing)



Regional Food Hub

- For-profit – non-profit partnership
- Aggregate local produce
- Use existing distributors to get local food to market
- Volume for larger customers
- Marketing and labeling as “local”



5. Expand Farm-to-Institution Programs

- Schools
- Hospitals
- Correctional facilities



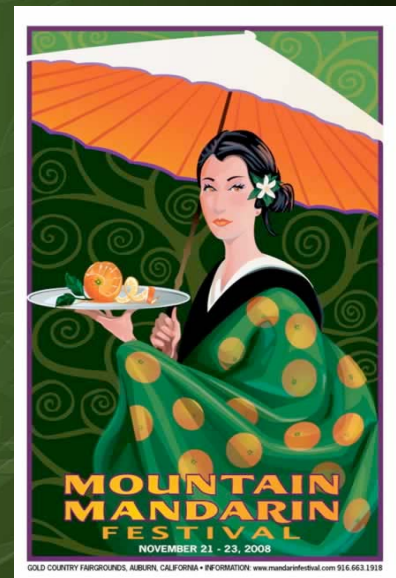
6. Increase Number & Type of Food Outlets

- Urban farm stands, farmers markets
- Hospitals, schools, churches, libraries
- Grocery stores
- Permanent Farmers Markets



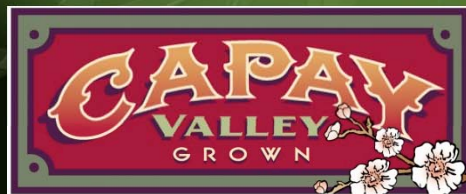
7. Promote Agritourism

- Regulations and permitting
- Improve access



8. Increase Education and Marketing

- Local and regional branding
- Education in schools and low-income communities
- Regional buyer's guide (Food Atlas)



S A C R A M E N T O R E G I O N



R U R A L - U R B A N
C O N N E C T I O N S S T R A T E G Y

Transportation

1. Urban Rural/Edge Travel: The Challenge

How will we deal with traffic conflicts along rural roads used by both agricultural vehicles and commuters?



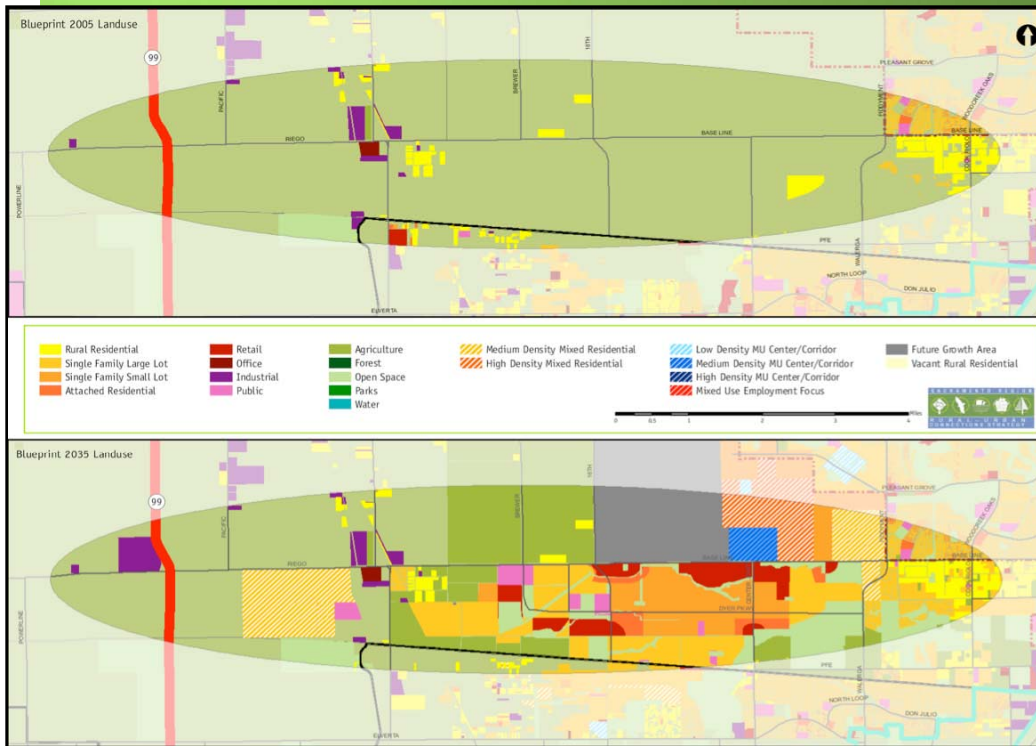
1. Urban Rural/Edge Travel: Existing Conditions

- High speed vs. low speed traffic
- Commuter traffic vs. goods movement traffic
- Urban road standards vs. rural road standards

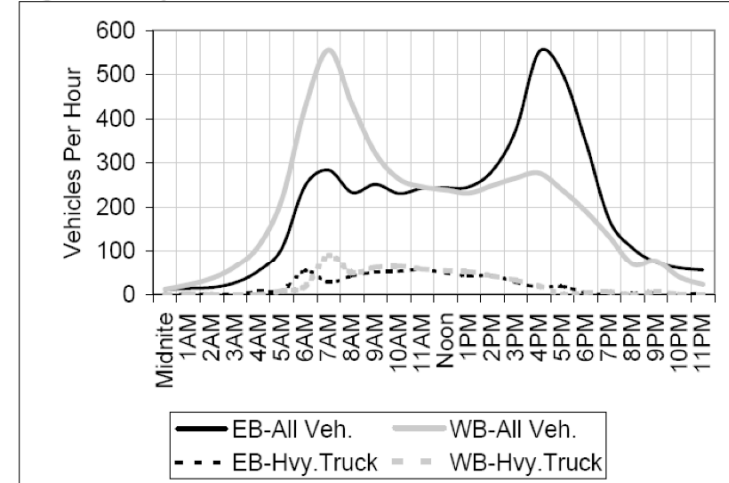


1. Urban Rural/Edge Travel: Innovations

- Rural Traffic Counts
- Safety Analysis
- 44% of fatal collisions vs. 13% of population



Average Weekday Traffic Distribution



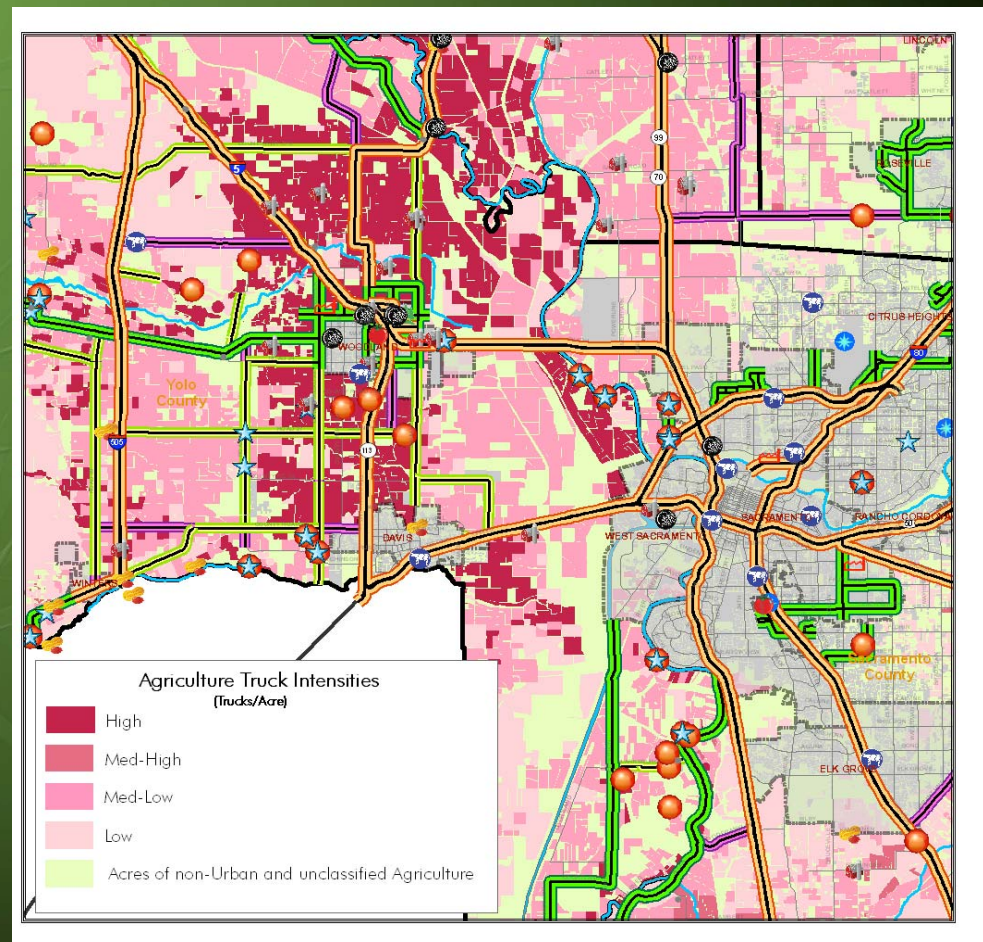
2. Farm-to-Market Travel: The Challenge

How will we plan and invest in a network of highways and rural roads to serve needs of production and local agricultural needs?



2. Farm to Market Travel: Existing Conditions

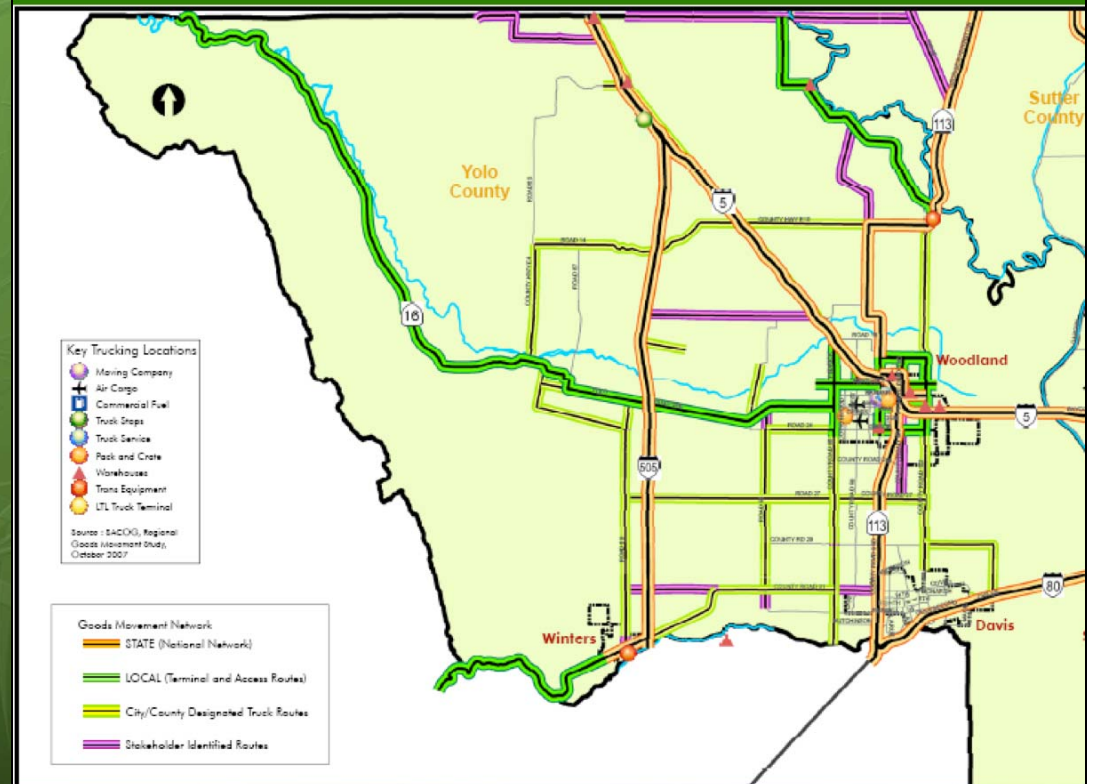
- Key Routes with Critical Improvement Needs
 - 48% of road miles vs. 13% of population
- Consolidation of Processing and distribution facilities outside the region = longer truck trips



2. Farm to Market Travel: Innovations

- Farm to Market Routes Identified
- Local Market Needs?
- Monitoring of Road Maintenance Conditions
- Funding for Additional Planning to Focus Future Improvements

Regional Goods Movement Network & Key Trucking Locations 2007 - Yolo



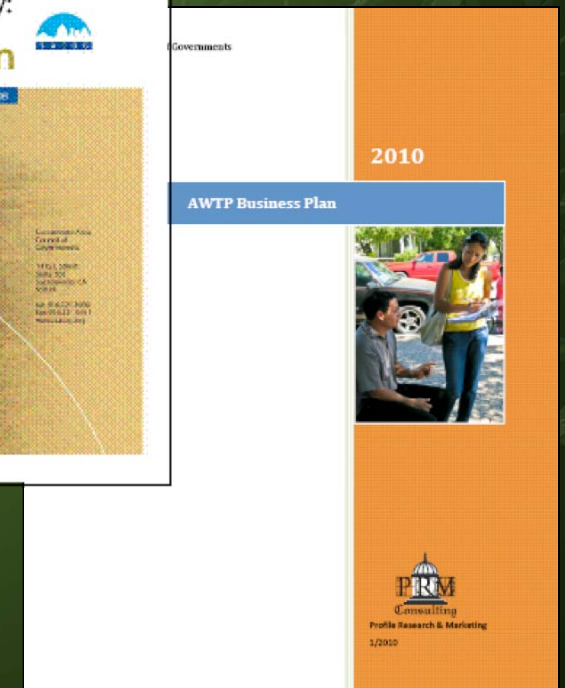
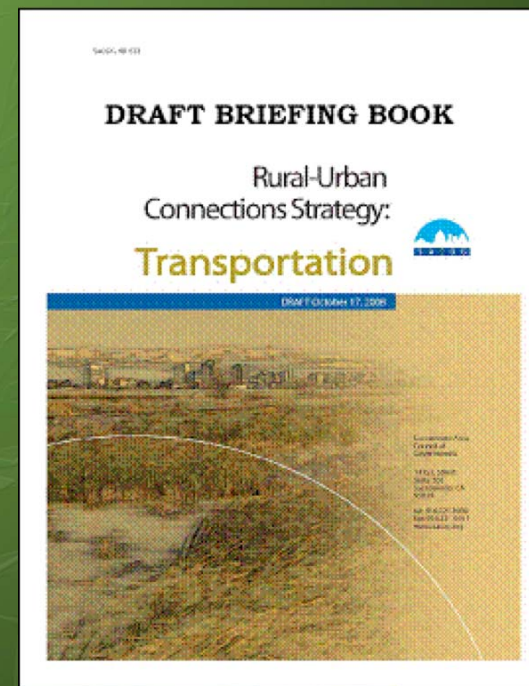
3. Expanded Mobility: The Challenge

Can we provide new and expanded travel options for rural and small town residents, including agricultural workers?



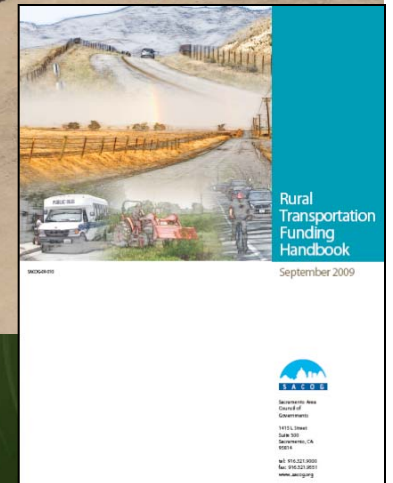
3. Expanded Mobility: Existing Conditions

- Unsafe & Unreliable Transportation for Agricultural Workers
 - 72% in statewide survey
- Demand for More Travel Options
- Constrained Funding Opportunities



3. Expanded Mobility: Innovations

- Agricultural Worker Transportation Program (AWTP)
- Increased Funding Information & Coordination of Transportation Services



S A C R A M E N T O R E G I O N



R U R A L - U R B A N
C O N N E C T I O N S S T R A T E G Y

www.sacog.org/rucs