SACRAMENTO REGION

RURAL–URBAN
CONNECTIONS STRATEGY

# Regional Planning in the Sacramento Region

# SACOG Region


**2.3 million people**

**6 Counties, 22 Cities**

**15% Urban / 85% Rural**

# Blueprint

## Transportation/Land Use Project

# Blueprint planning based on two key principles

**Information-based planning**

- Developed highest quality data and analytical tools
- Focused discussion on facts and education, not theology

**Active resident planning**

- Informed public = essential for healthy democracy
- Provided residents objective tools and information—listened carefully to what they told us

# Blueprint Growth Principles

**Housing Choices**

**Transportation Choices**

**Compact Development**

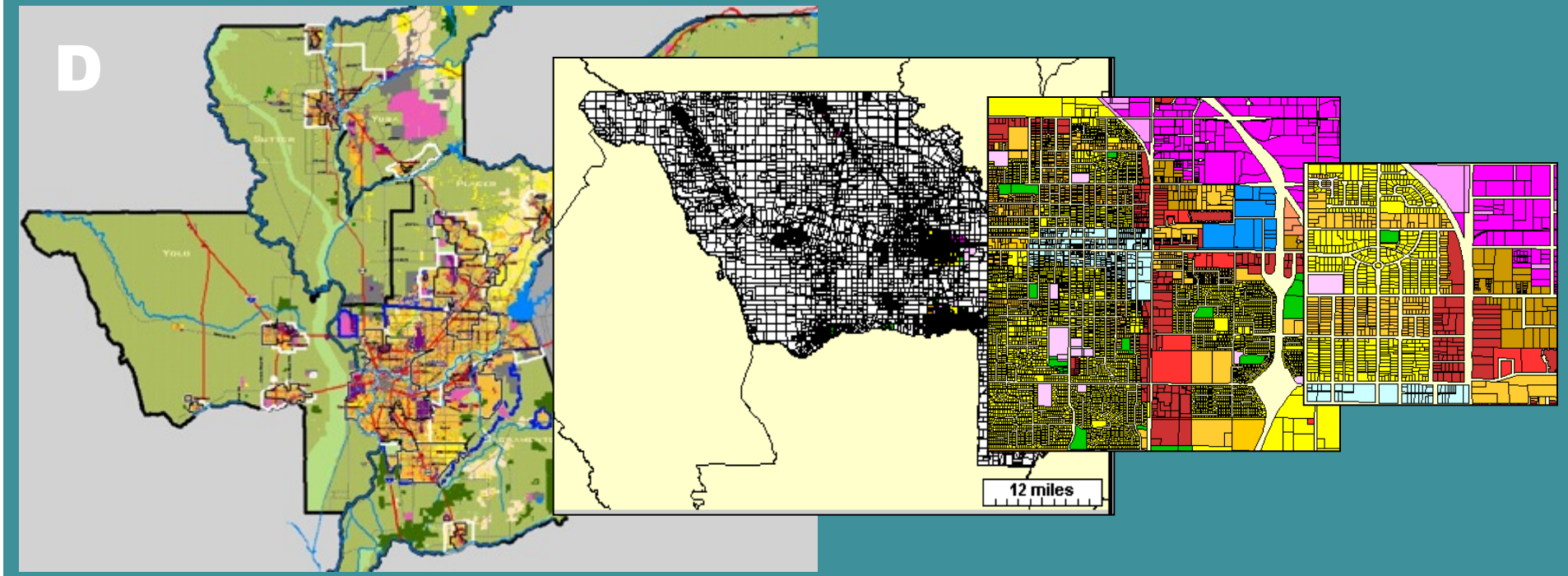
**Use Existing Assets**

**Mix Land Uses**

**High Quality Design**

**Protect Natural Resources**

# SACOG's Scenario Tool Needs



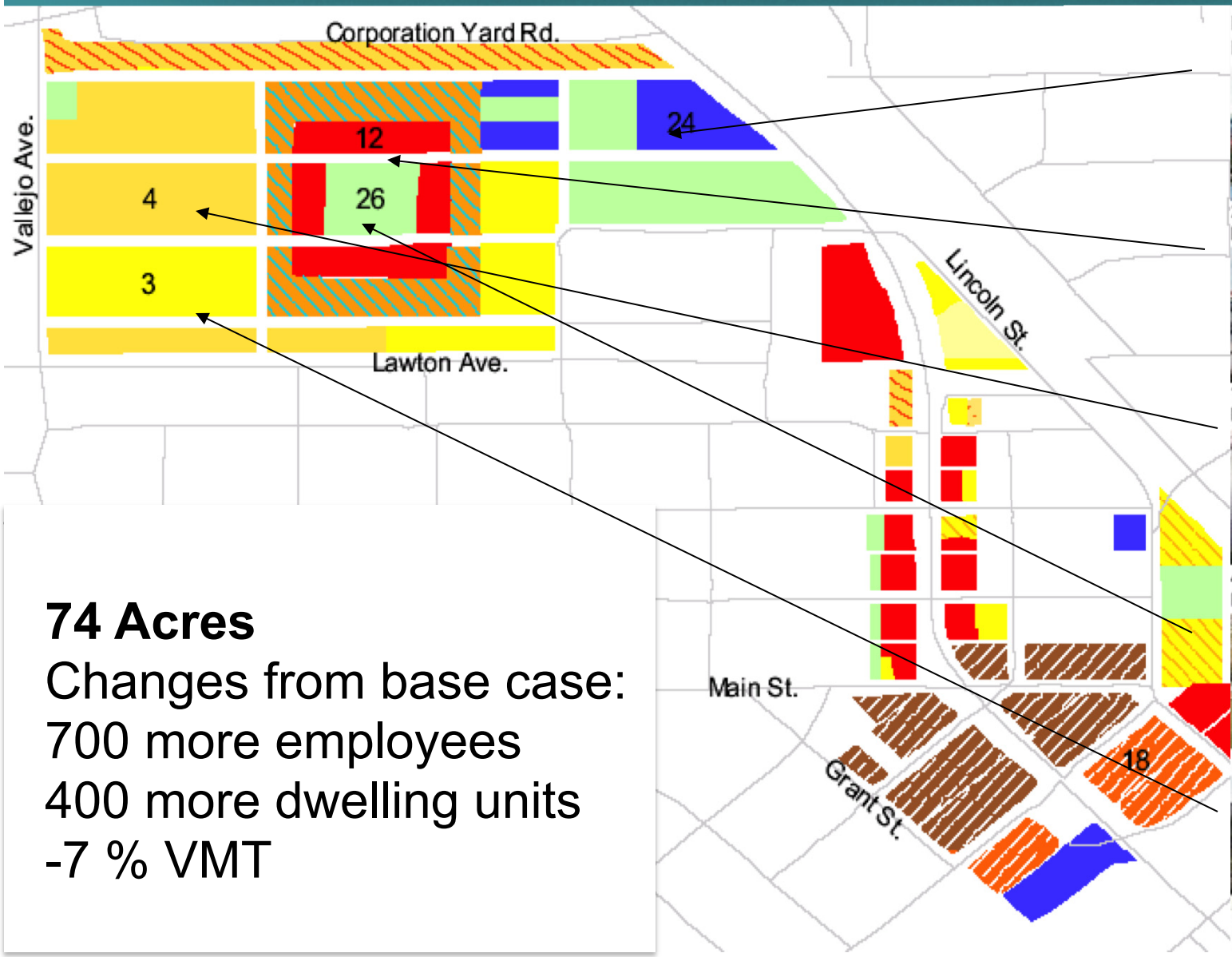

Regional ⟶ Jurisdiction ⟶ Neighborhood

# Economic Feasibility Test

**Analyze building type placed on every parcel for…**

- Expected costs vs. expected revenues
  - Development Costs & Fees and Rent Database
- Calculate ROI (Return on Investment)
- Use local data collected for the region

# Land Use Scenario




**74 Acres**

Changes from base case:

700 more employees

400 more dwelling units

-7 % VMT

**Key Land Uses Featured**

**24** Public/Civic/ Education

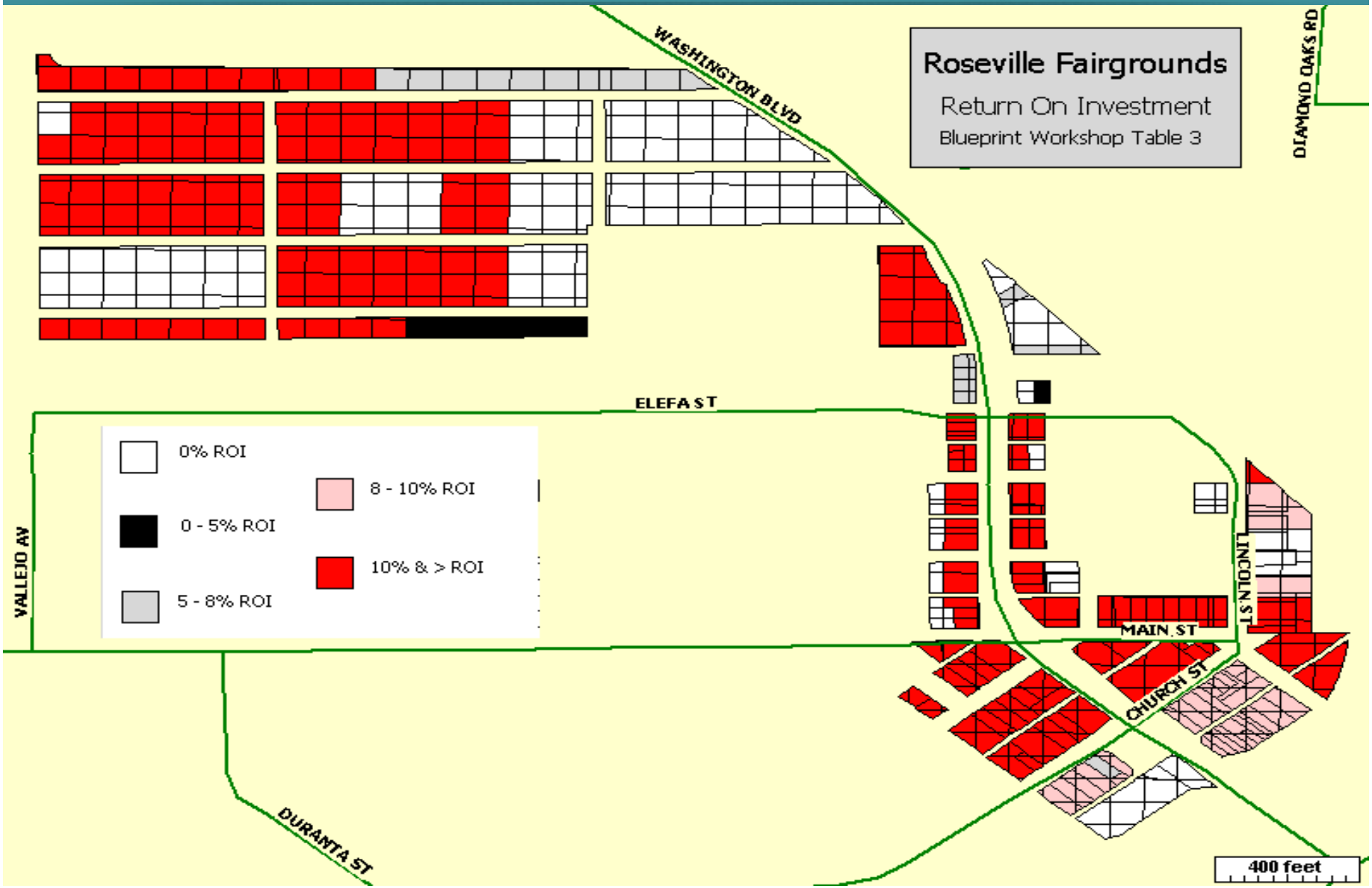
**12** Community/ Neighborhood Retail

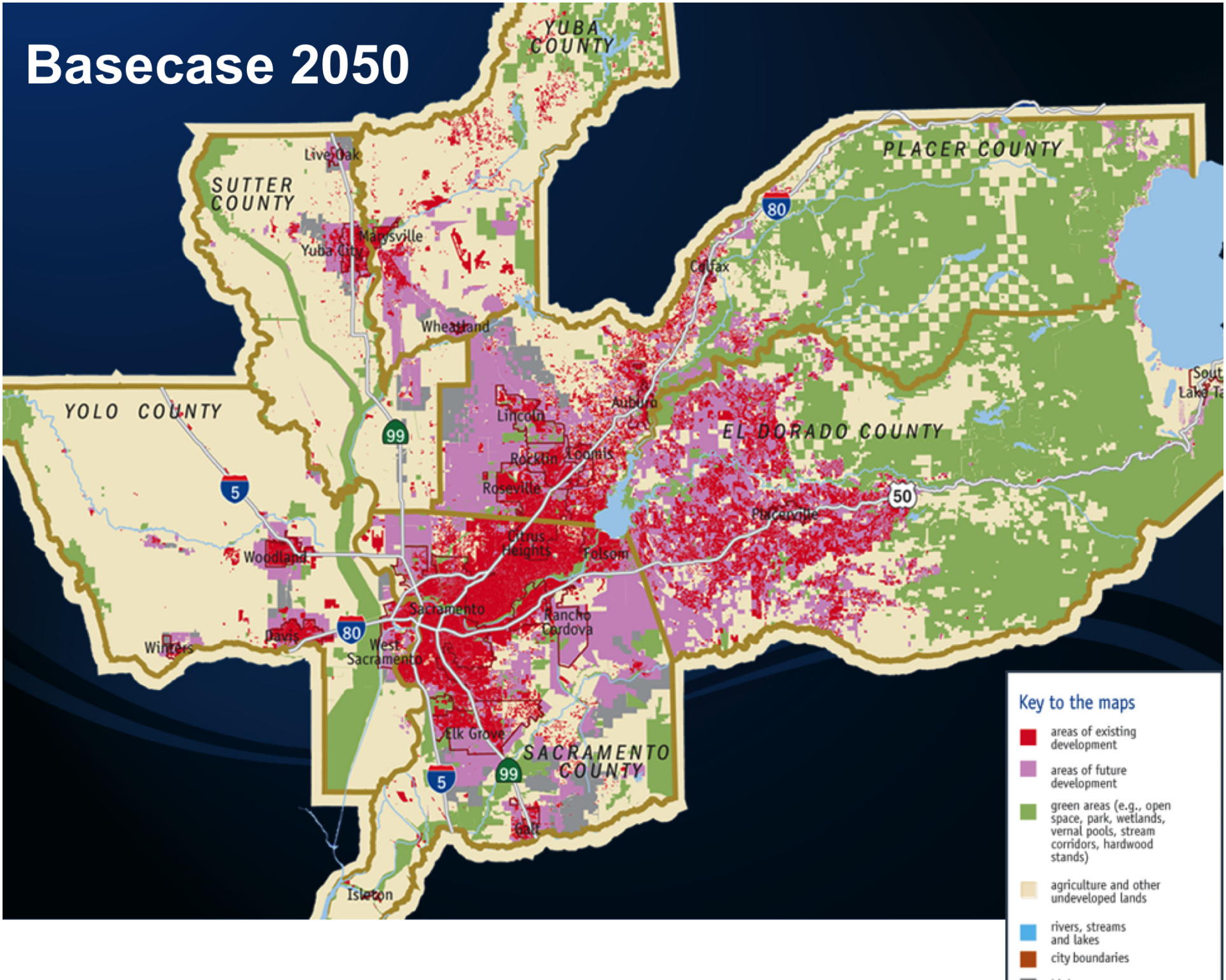
**4** Small Lot Single Family Residential

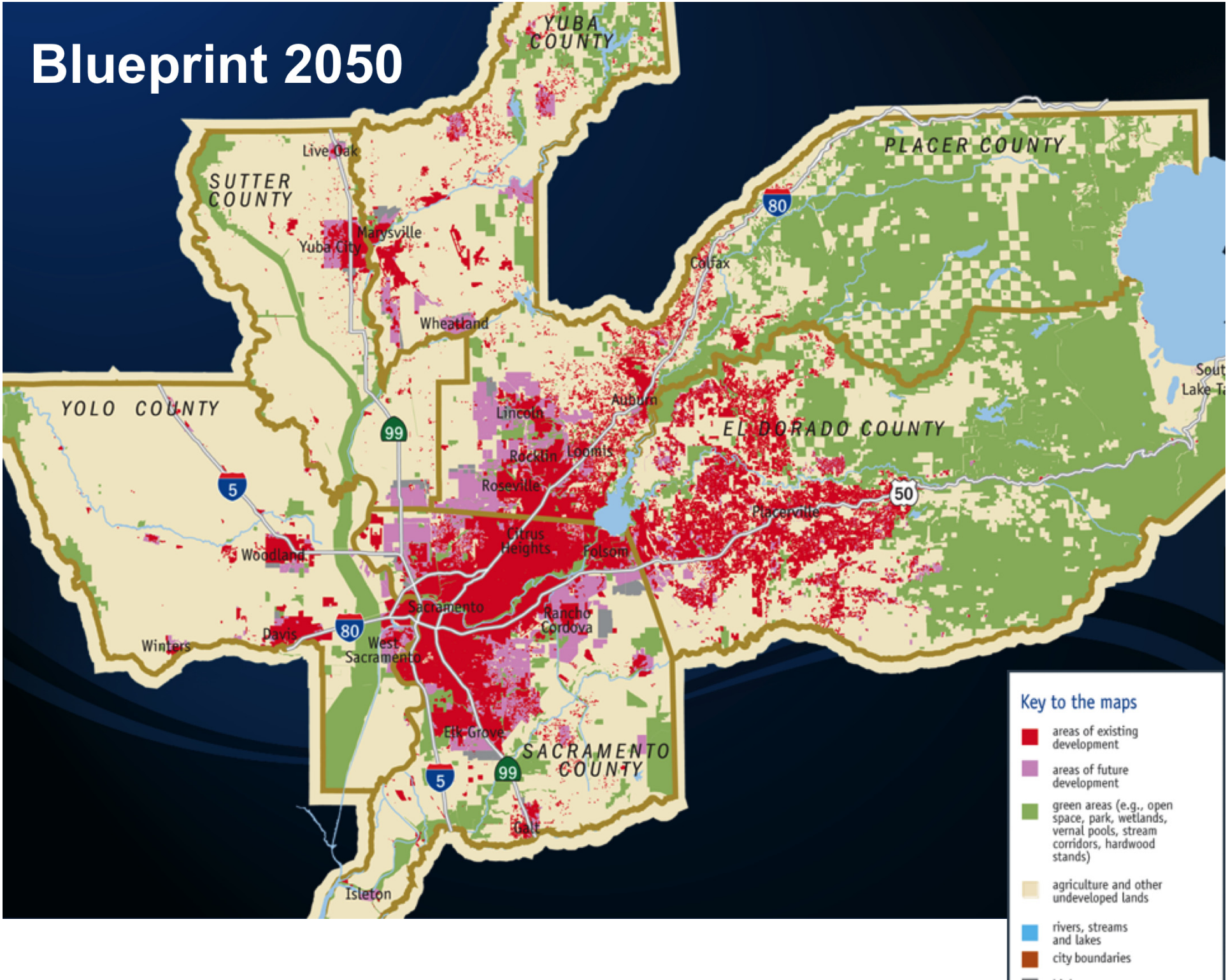
**26** Parks

**3** Medium Lot Single Family Residential

# Return on Investment




Basecase 2050
YUBA COUNTY
SUTTER COUNTY
PLACER COUNTY
YOLO COUNTY
EL DORADO COUNTY
SACRAMENTO COUNTY
Live Oak
Marysville
Yuba City
Wheatland
Colfax
Auburn
Lincoln
Rocklin
Loomis
Roseville
Placerville
Citrus Heights
Folsom
Woodland
Sacramento
Rancho Cordova
Davis
West Sacramento
Winters
Elk Grove
Galt
Isleton
80
99
5
50
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
rivers, streams and lakes
city boundaries


Blueprint 2050
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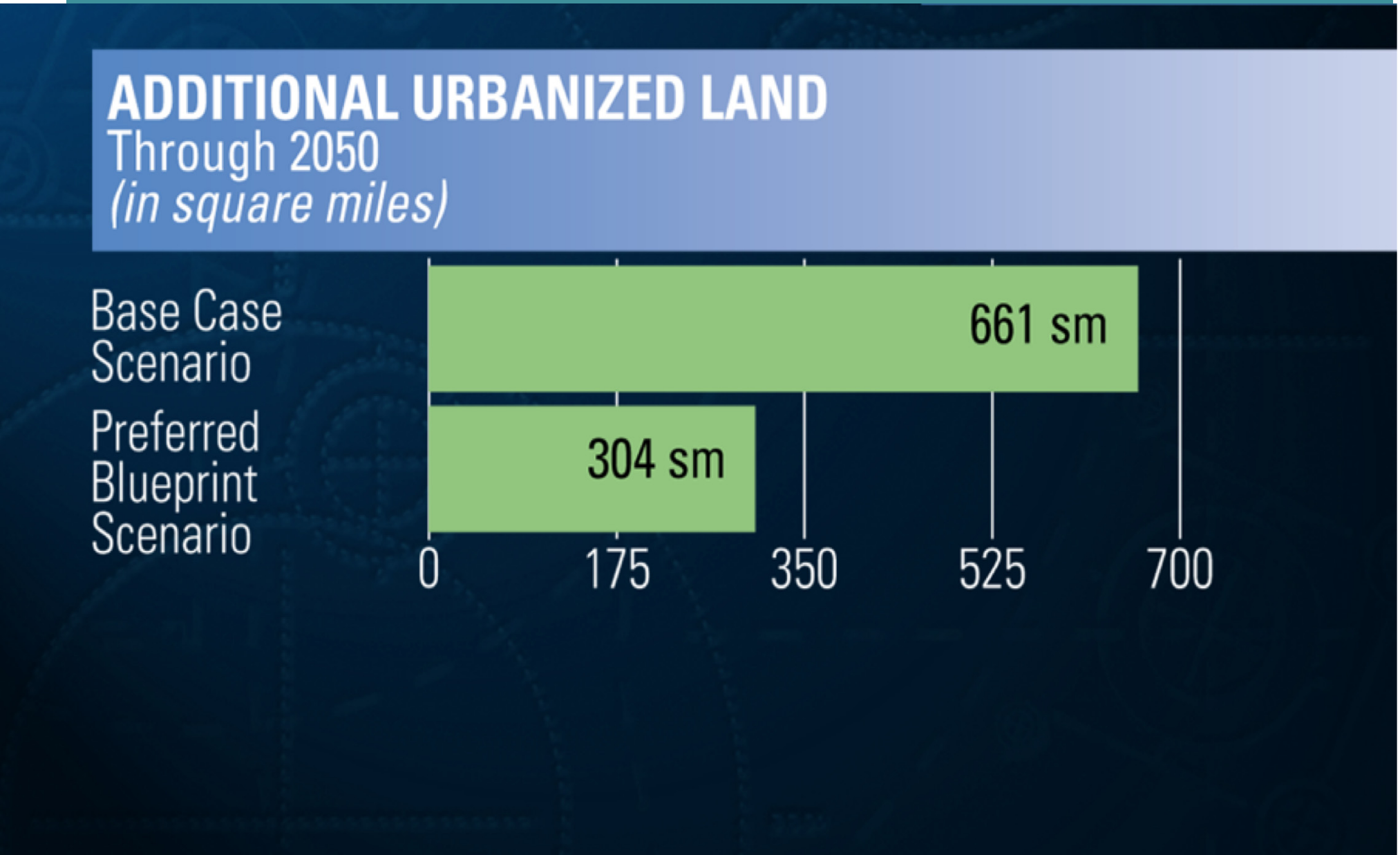
# Less Urban Land



# RUCS Link to MTP/SCS, TCM, and NEPA

- 2008 MTP 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

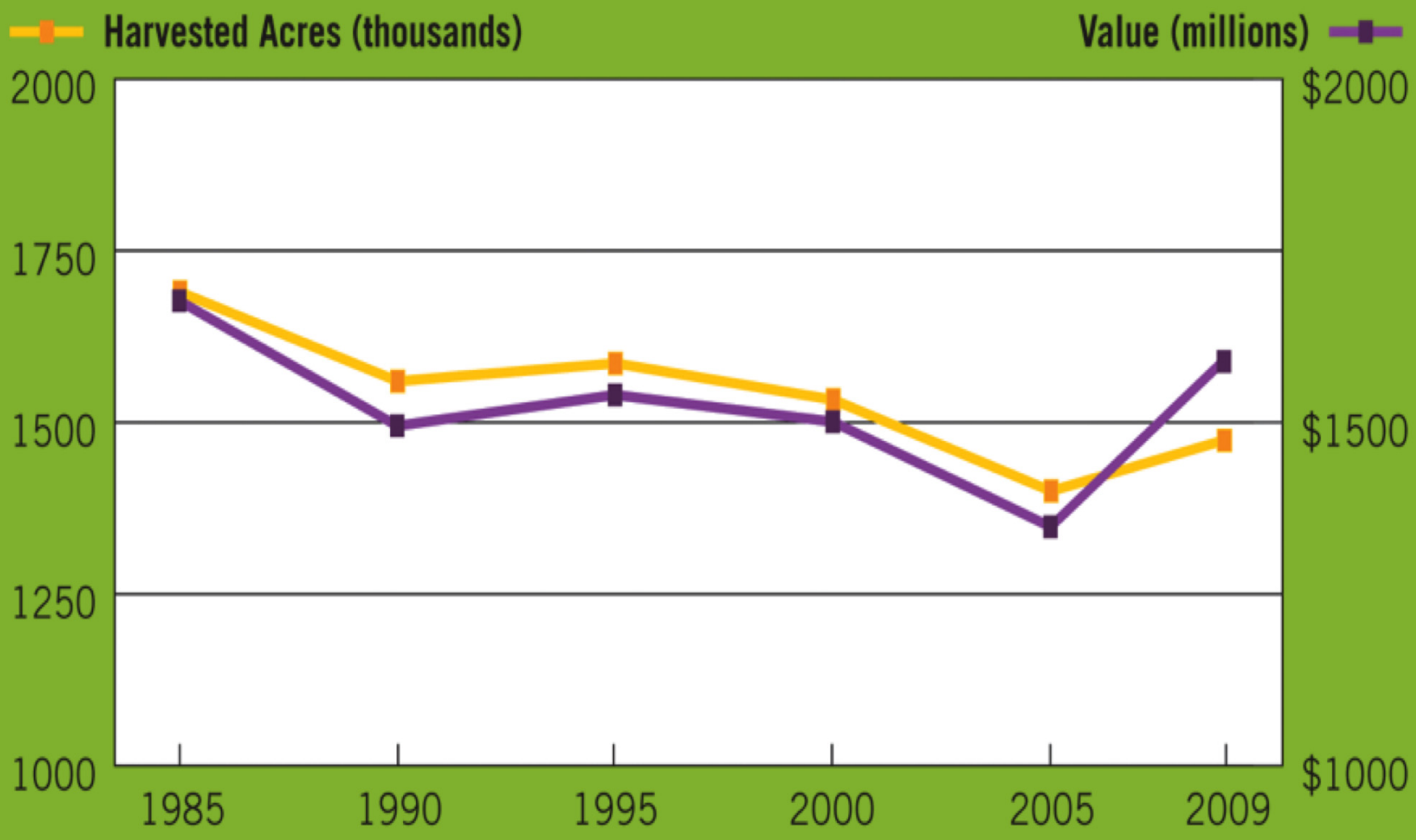
# Rural-Urban Connections Strategy

## Enhancing Rural Economic Viability and Environmental Sustainability

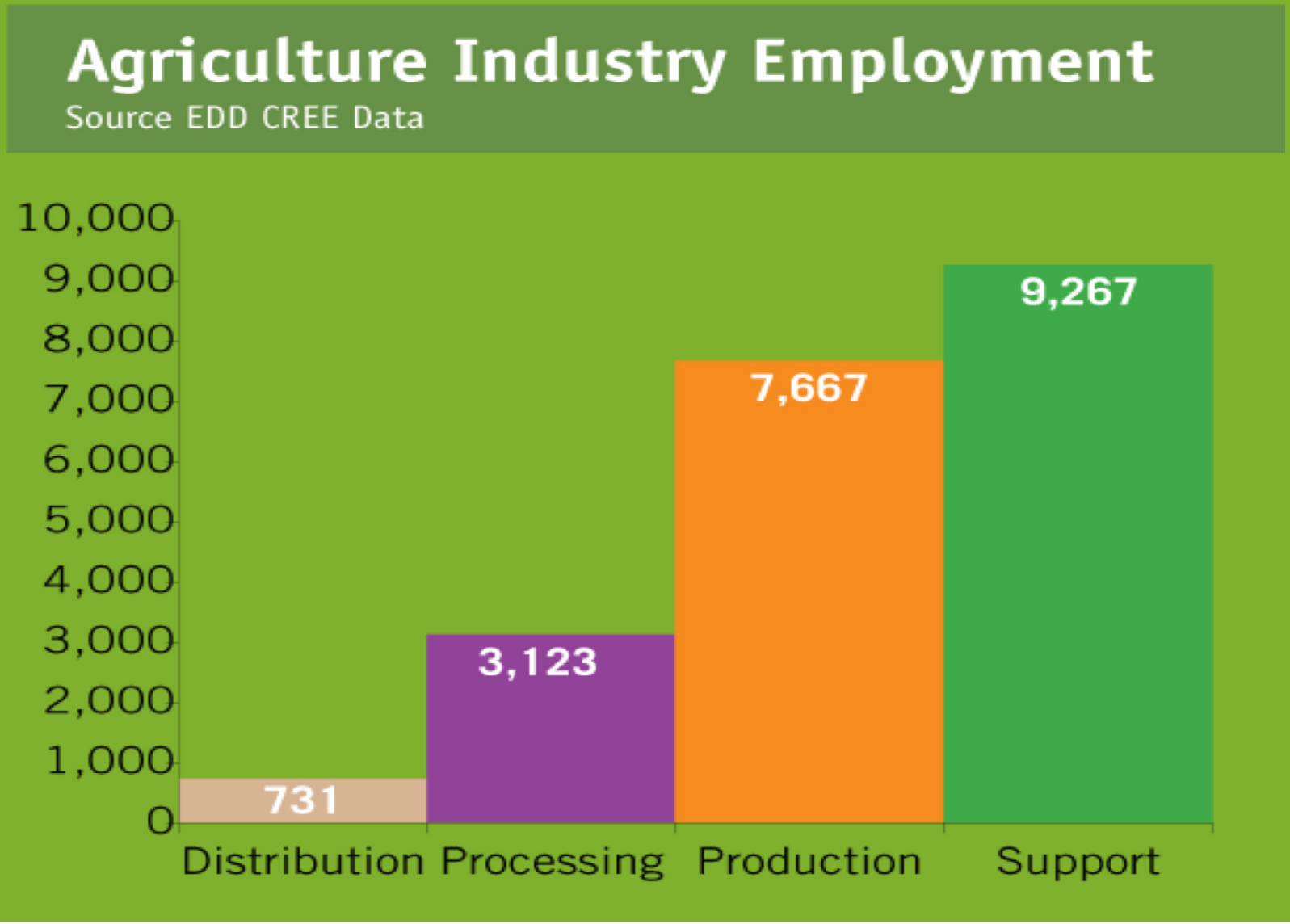
# RUCS Objectives

- Enhance rural economic viability and environmental sustainability
- Highlight rural challenges and opportunities
- Test agricultural market changes, policies and economic development strategies
- Protect and enhance natural resources and ecosystem services
- Determine rural transportation and other infrastructure needs

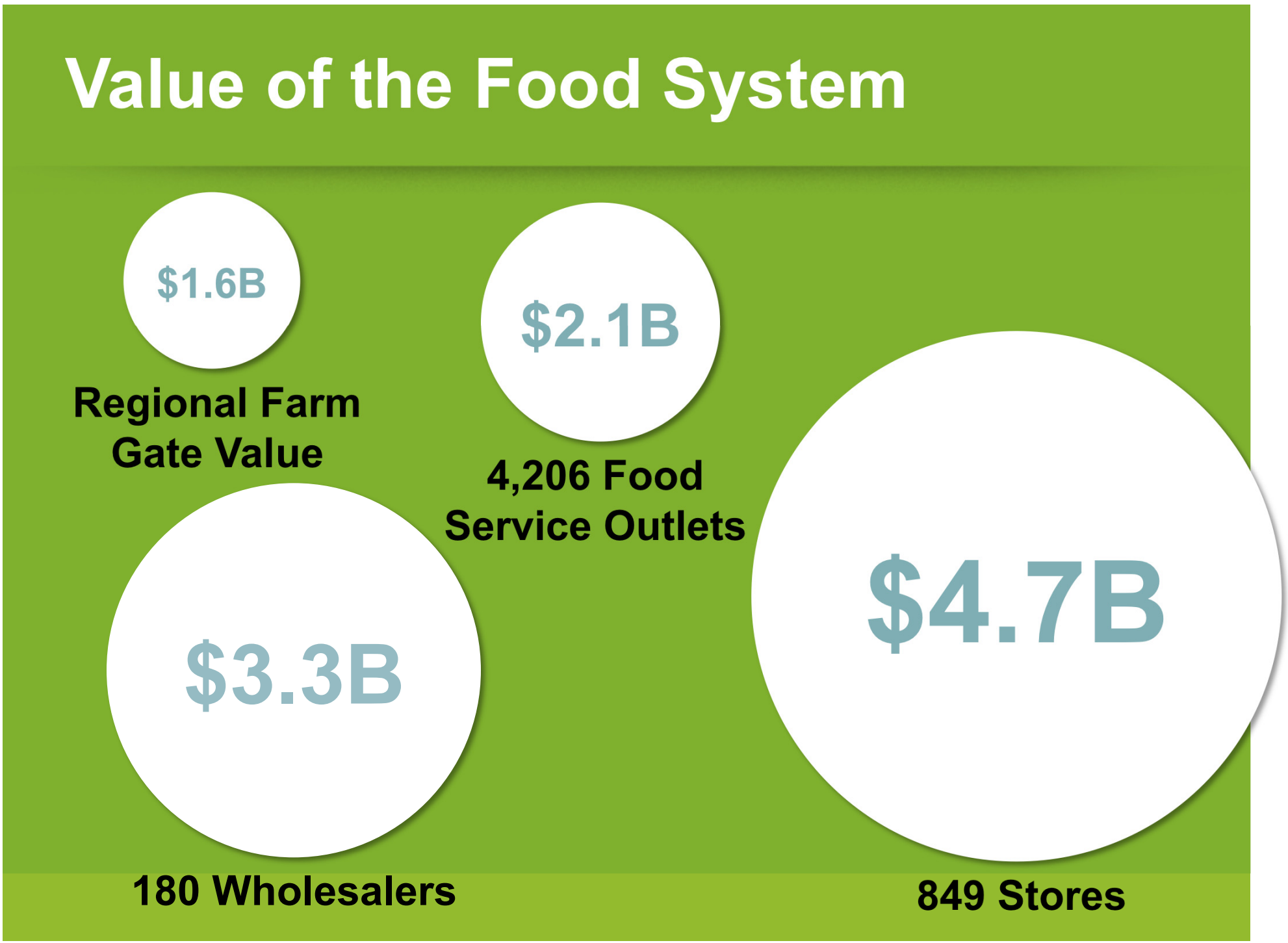
# Agricultural Commodities



# Food Chain Employment



# Value of the Food System



# Challenges & Opportunities

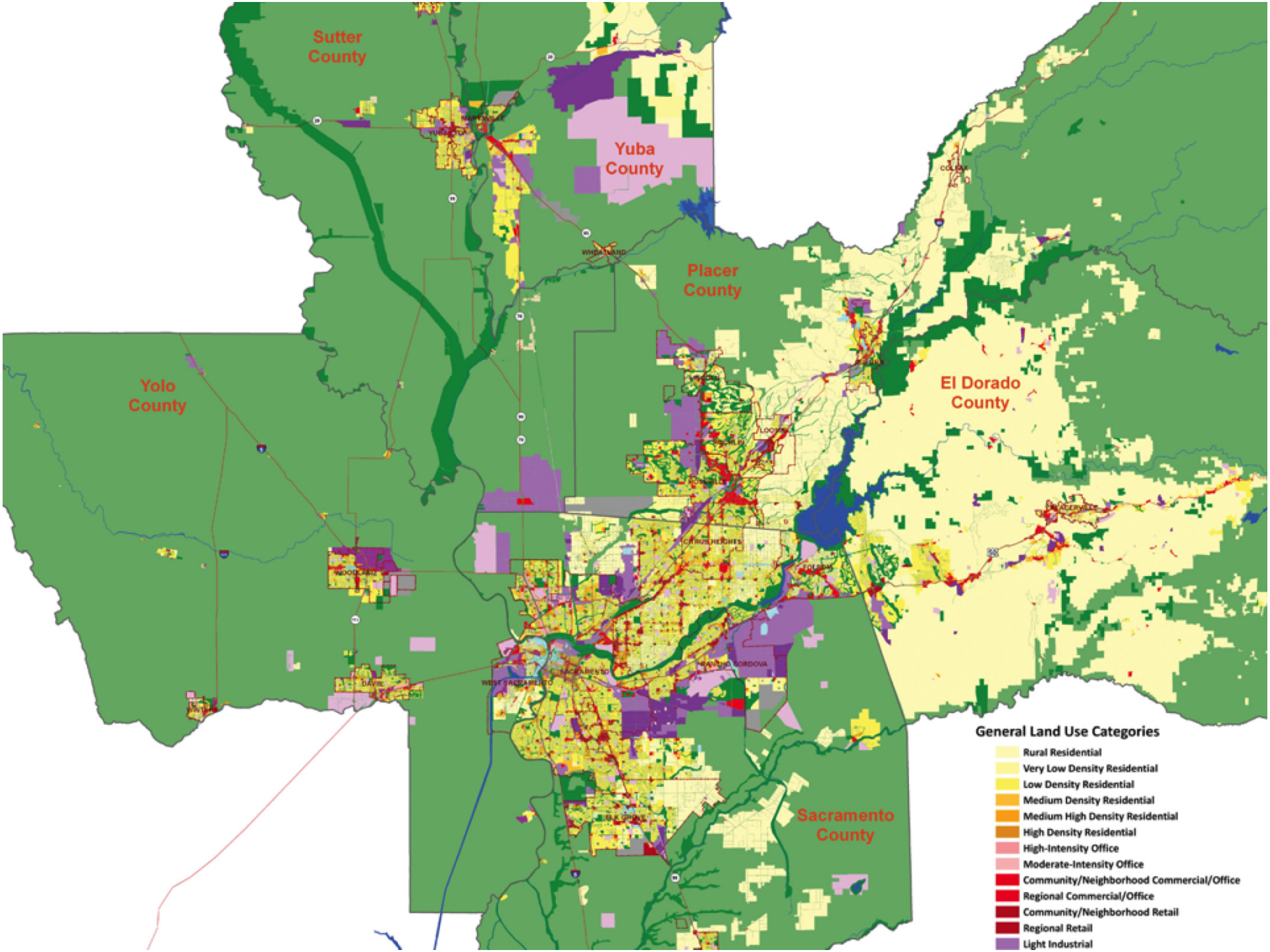
**Topic Areas**

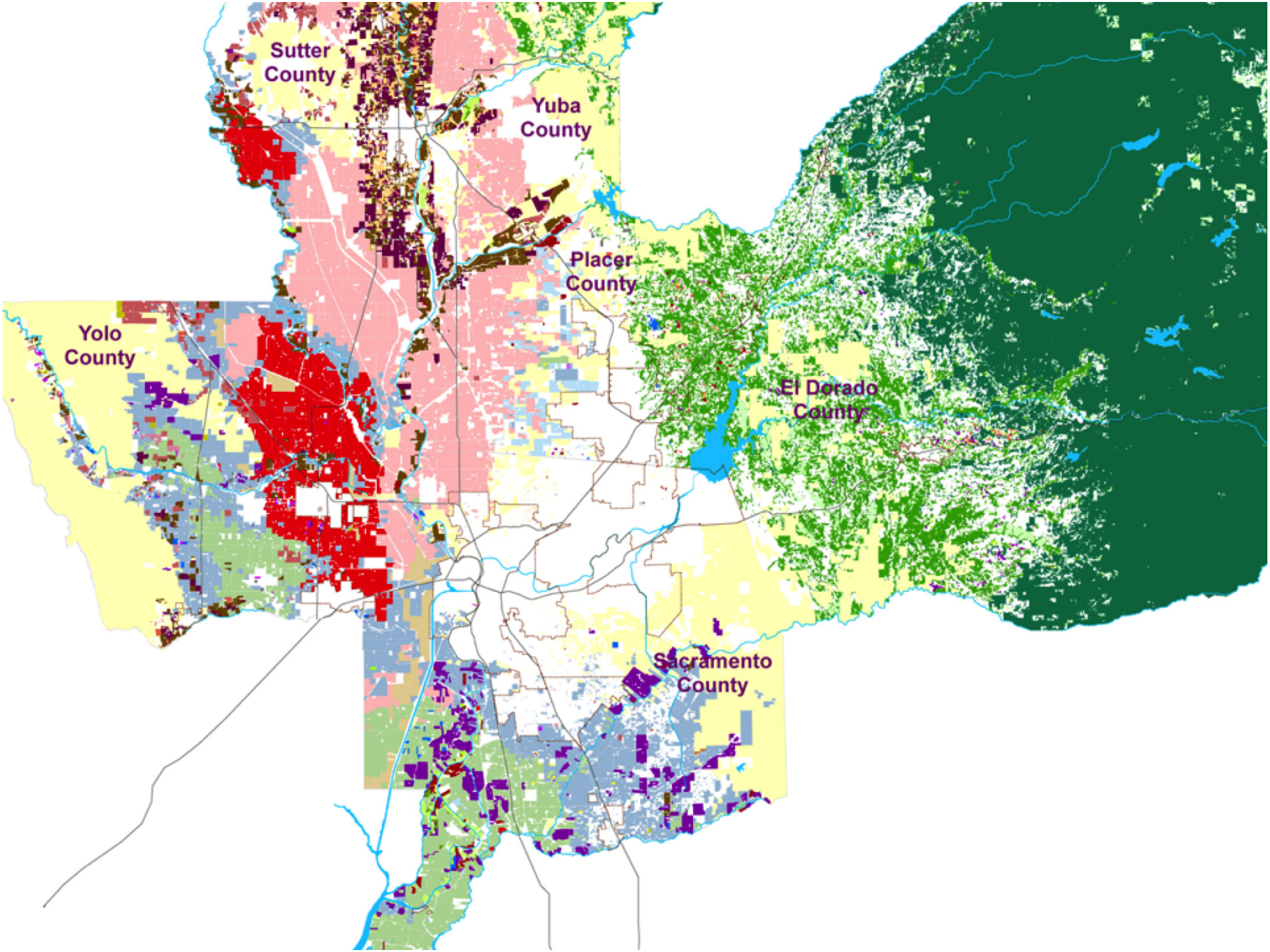
1. Land Use and Conservation Policies and Plans
2. The Infrastructure of Agriculture
3. New Economic Opportunities
4. Forest Management
5. Regulations

# Topic Development Process

Current Conditions Paper
(Challenges & Opportunities)

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


Sutter County
Yuba County
Placer County
El Dorado County
Yolo County
Sacramento County
General Land Use Categories
Rural Residential
Very Low Density Residential
Low Density Residential
Medium Density Residential
Medium High Density Residential
High Density Residential
High-Intensity Office
Moderate-Intensity Office
Community/Neighborhood Commercial/Office
Regional Commercial/Office
Community/Neighborhood Retail
Regional Retail
Light Industrial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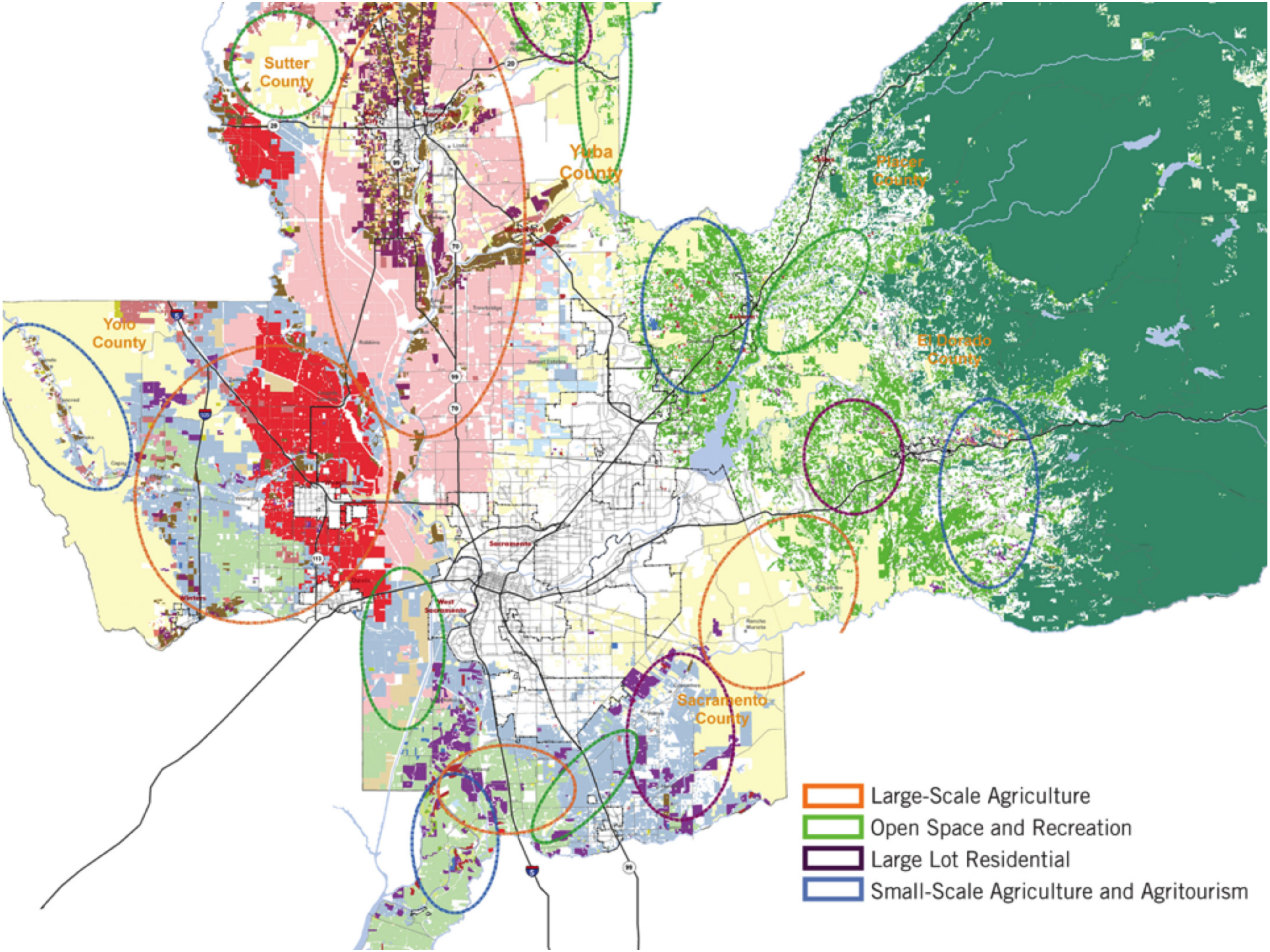

Sutter County
Yuba County
Placer County
Yolo County
El Dorado County
Sacramento County
Large-Scale Agriculture
Open Space and Recreation
Large Lot Residential
Small-Scale Agriculture and Agritourism

## Cost and Return Conventional Almond Production

## Sacramento Region

| Cost category | Input | Quantity | Unit/acre | Price | Cost |
|---|---|---|---|---|---|
| Chemical | Roundup | 3.00 | pt | $ 8.40 | $ 25.20 |
| Chemical | Surflan | 3.00 | pt | $ 16.96 | $ 50.88 |
| Chemical | Goal 2XL | 3.00 | pt | $ 13.50 | $ 40.50 |
| Chemical | Rodent Bait | 1.00 | lb | $ 4.50 | $ 4.50 |
| Chemical | Rovral | 1.00 | lb | $ 25.00 | $ 25.00 |
| Chemical | Abound | 14.00 | floz | $ 2.78 | $ 38.92 |
| Chemical | Ziram | 8.00 | lb | $ 2.80 | $ 22.40 |
| Chemical | Dipel | 2.00 | lb | $ 15.63 | $ 31.26 |
| Chemical | Lorsban | 4.00 | pint | $ 4.00 | $ 16.00 |
| Chemical | Omite | 7.50 | lb | $ 8.23 | $ 61.73 |
| Chemical | Vanguard | 5.00 | oz | $ 4.09 | $ 20.45 |
| Contract | Consultant | 1.00 | acre | $ 25.00 | $ 25.00 |
| Contract | Hives | 2.50 | hive | $ 140.00 | $ 350.00 |
| Contract | Leaf Analysis | 1.00 | acre | $ 2.00 | $ 2.00 |
| Contract Labor | Shake Nuts | 2.00 | hour | $ 80.00 | $ 160.00 |
| Contract Labor | Sweep | 2.00 | hour | $ 55.00 | $ 110.00 |
| Contract Labor | Pick up, haul, hull and shell | 2200.00 | lb | $ 0.11 | $ 242.00 |
| Fertilizer | UN-32 | 220.00 | lb | $ 0.29 | $ 63.80 |
| Fertilizer | Zinc Sulfate | 30.00 | lb | $ 0.50 | $ 15.00 |
| Fertilizer | Potassium Sulfate | 500.00 | lb | $ 0.23 | $ 115.00 |
| Irrigation | Water | 36.00 | acin | $ 2.67 | $ 96.12 |
| Fuel | Gasoline | 11.15 | gallons | $ 3.98 | $ 44.38 |
| Fuel | Diesel | 11.88 | gallons | $ 3.84 | $ 45.62 |
| Labor | Labor (machine) | 11.56 | machine hrs | $ 15.00 | $ 173.40 |
| Labor | Labor (nonmachine) | 11.72 | hrs | $ 12.00 | $ 140.64 |
| Total Operating Cost/Acre | | | | | $ 1,919.79 |


New Tools for Understanding Agricultural Viability

# Building a Crop Map

- Pesticide Use Report data
- Department of Water Resources data
- Satellite data
- Windshield surveys
- Ground truth with growers
- Cost of production studies
- 1 year, $700,000 +/- to build crop map
- Data for 1 year (2008), but includes rotations

# Importance of Crop Maps

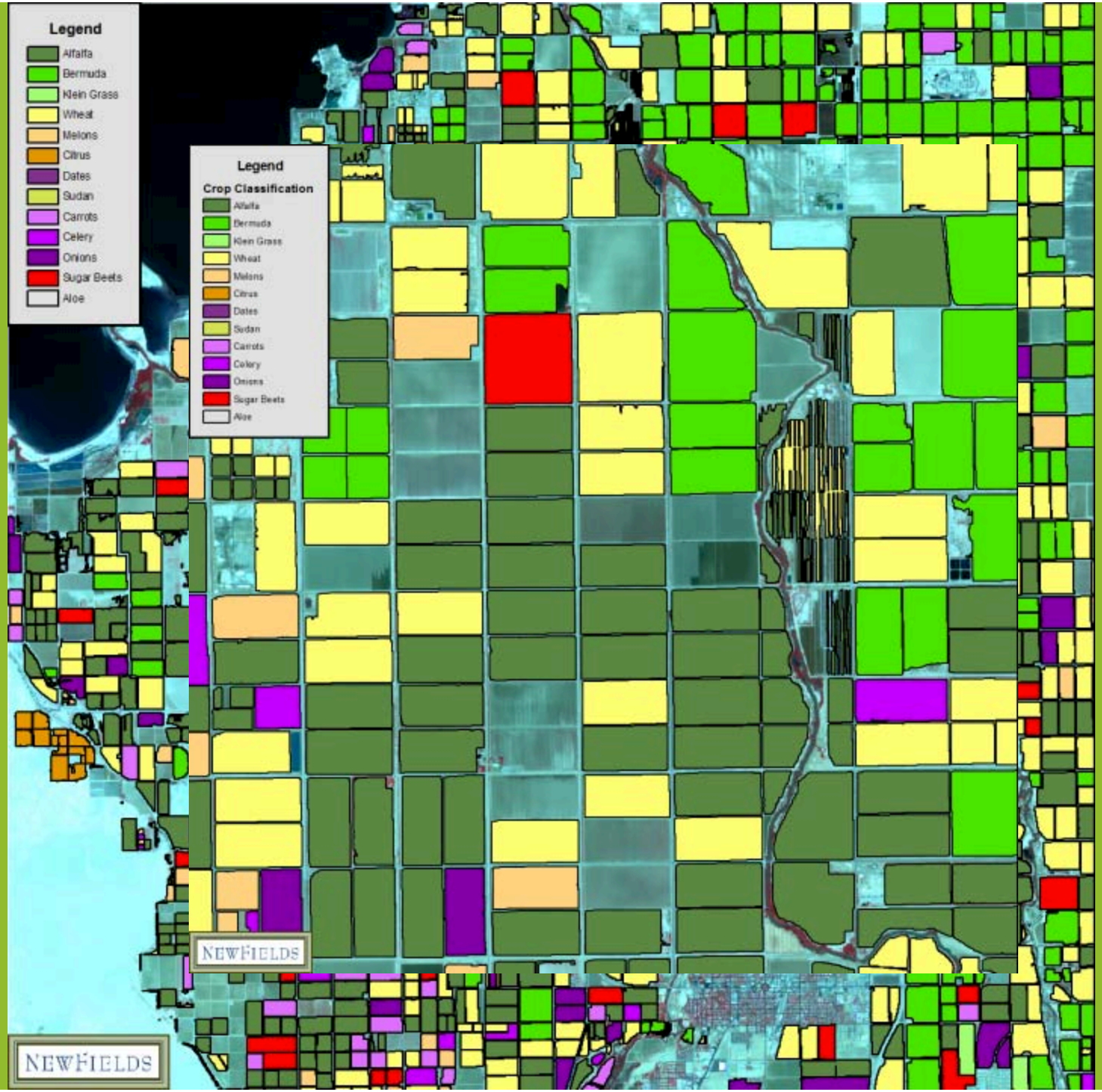
**Land use/crop maps**

- Planning level resources
- Used by several organizations/entities
- Timing/frequency of current data (DWR)
  - Once every 4–8 years
  - Crops/fallowing change annually
- Costs can be significant to update manually

# Crop Mapping Approach

**Innovative Crop Mapping approach using Remote Sensing Techniques**

- Match imagery with crop phenology
  - Spatial and temporal variations
  - Critical growth stages (e.g. flowering, etc)
  - Cropping patterns (across years)
  - Irrigation and cultural practices
- Comprehensive analytical toolset
  - Object-based remote sensing methods
  - Advanced statistical data mining techniques
  - GIS linkage for end-user analysis and Communication


Legend
Alfalfa
Bermuda
Klein Grass
Wheat
Melons
Citrus
Dates
Sudan
Carrots
Celery
Onions
Sugar Beets
Aloe
Legend
Crop Classification
Alfalfa
Bermuda
Klein Grass
Wheat
Melons
Citrus
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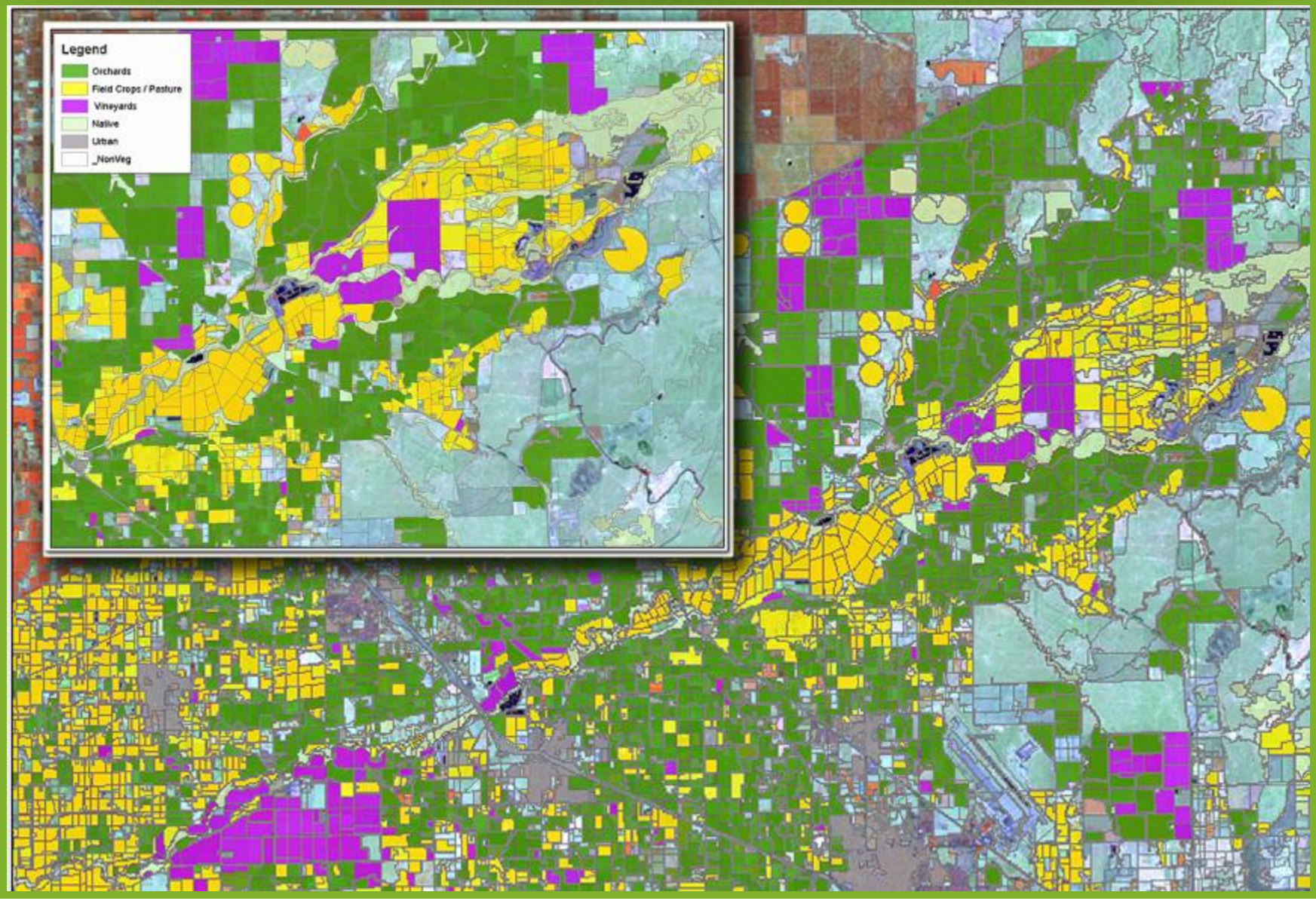
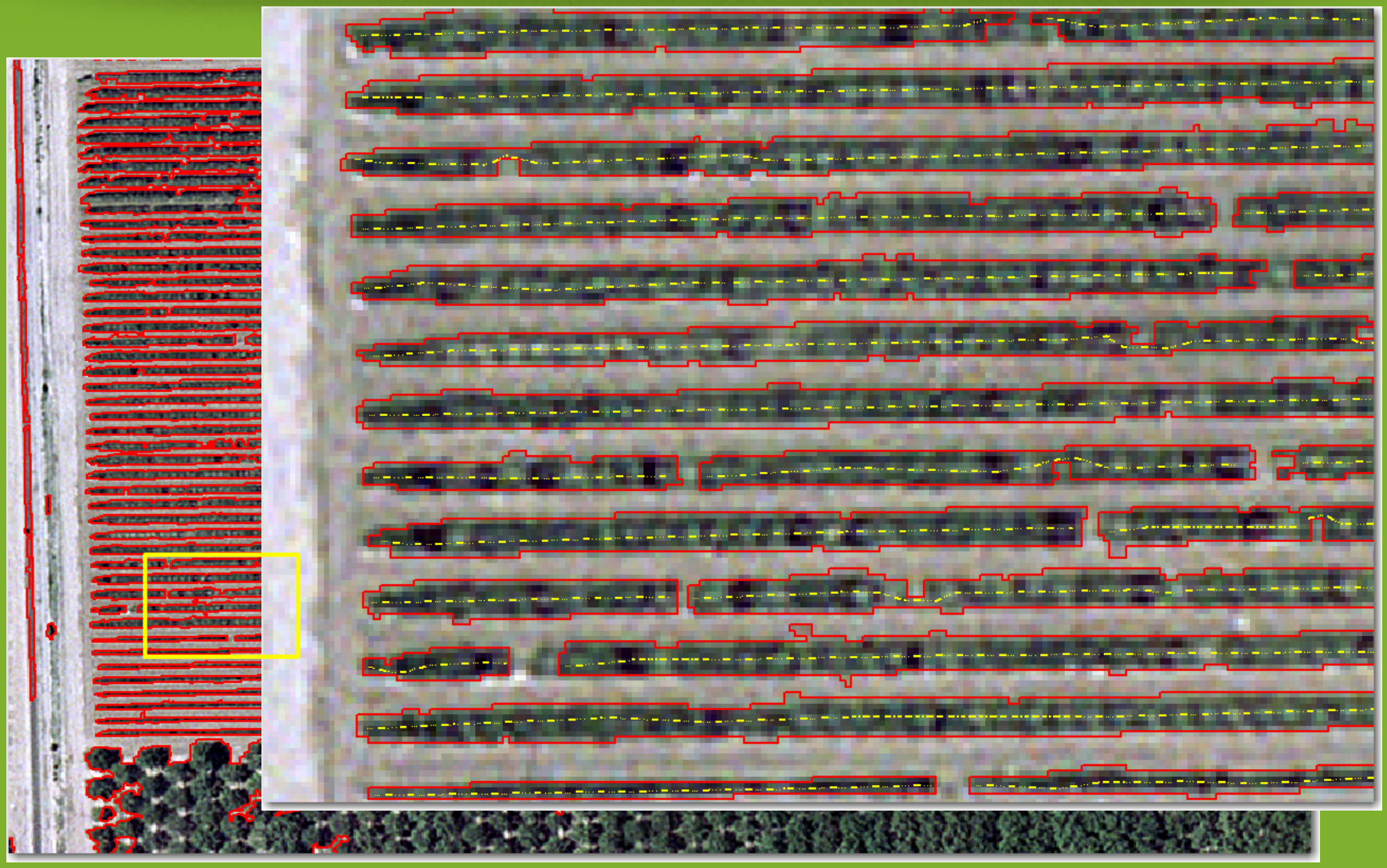
Onions
Sugar Beets
Aloe
NEWFIELDS
NEWFIELDS

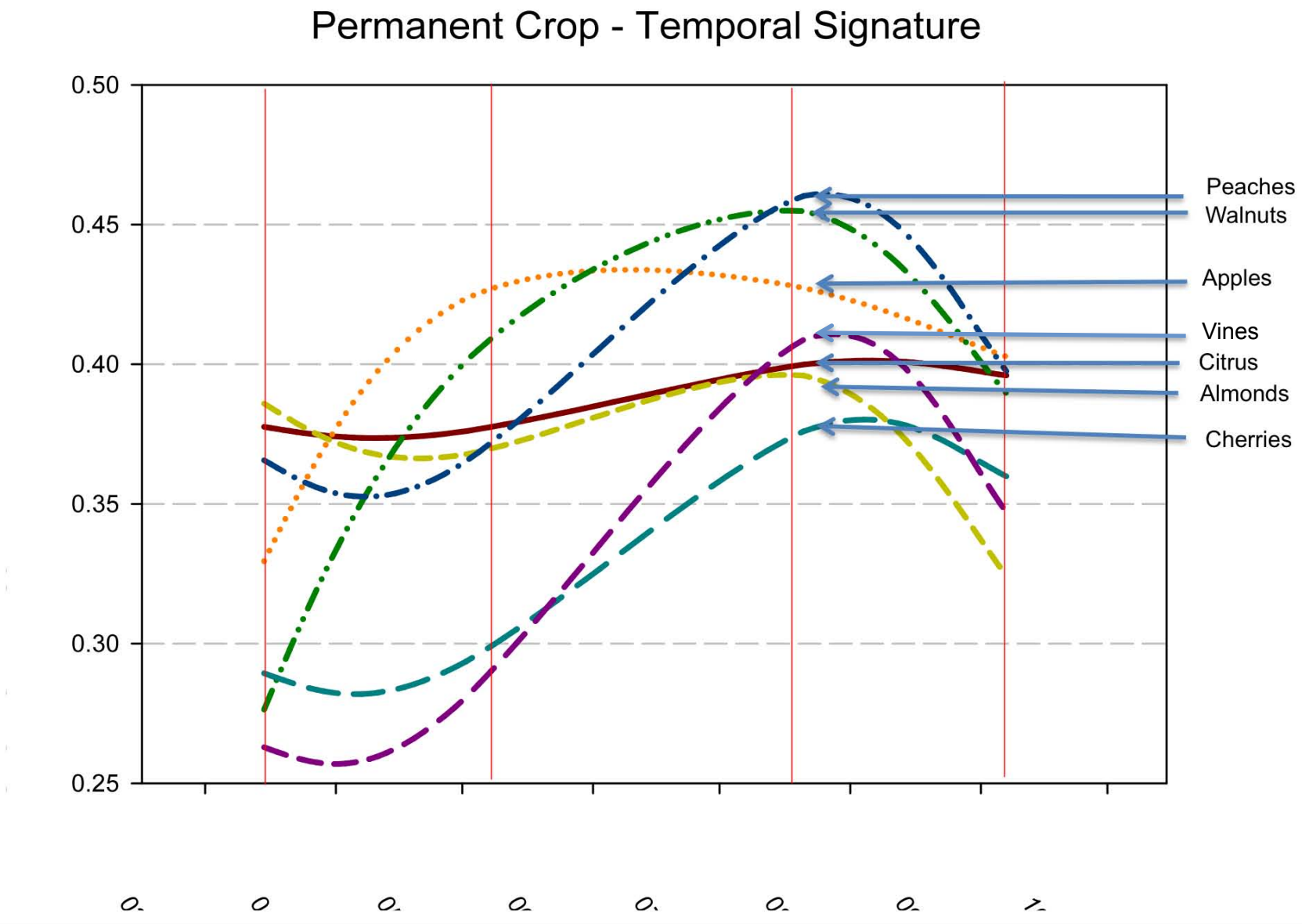
# Example: Merced County



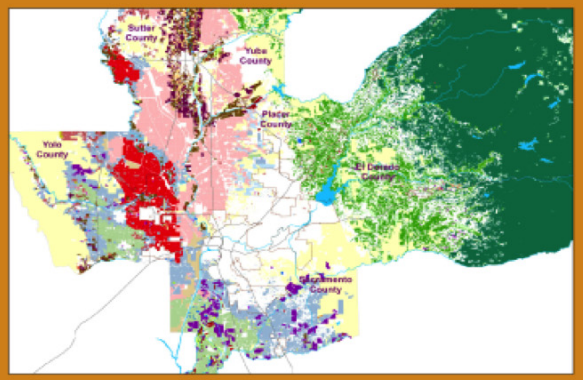
# Vine Spacing: Central Tendency

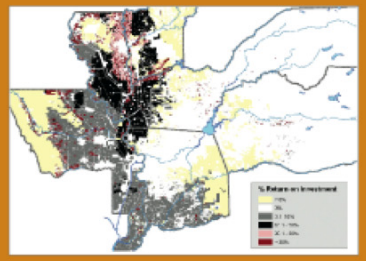


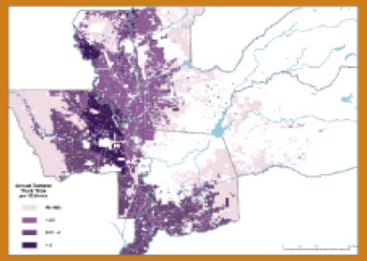
# Temporal Crop Signatures



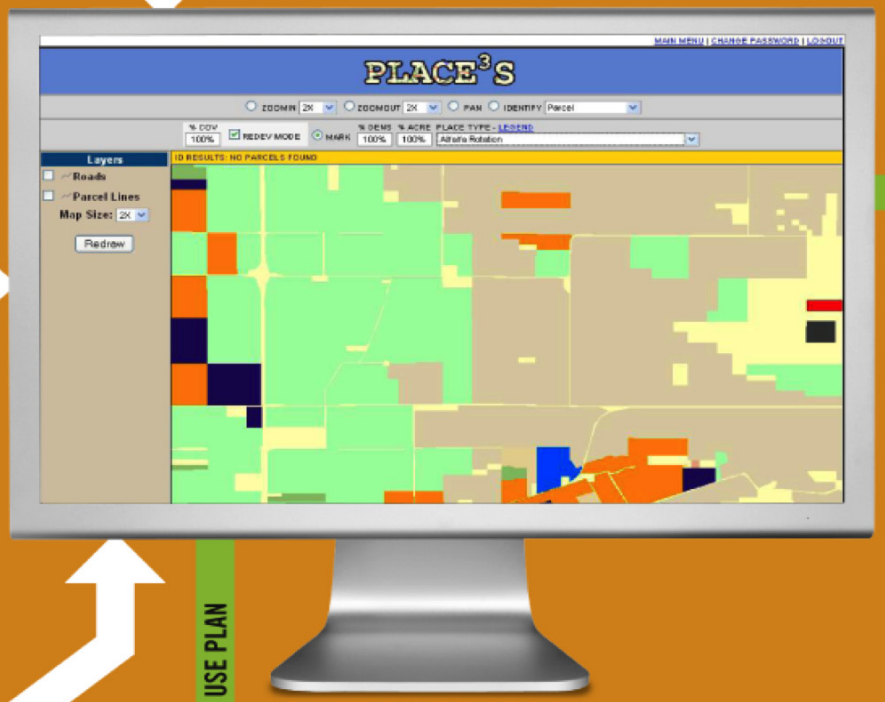
## ① CROP MAP

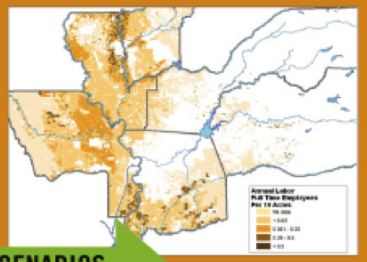


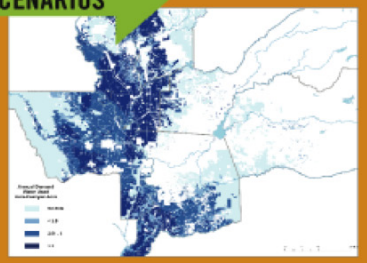


## ④ I-PLACE³S

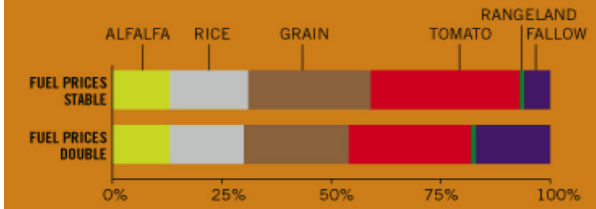


SCENARIOS



## ② ECONOMETRIC MODEL




LAND USE PLAN

## ③ DIET/LAND NEEDS

NUMBER OF **PEOPLE** × **LOCAL** % TYPE OF **CONSUMPTION** = HOW MUCH **LAND NEEDED**

## ⑤ INFRASTRUCTURE/FISCAL MODEL (IMPACS)

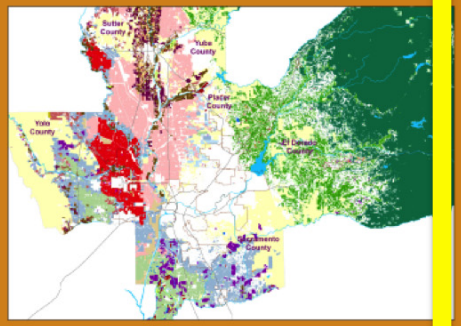
**TYPE & AMOUNT** OF INFRASTRUCTURE & **SERVICES NEEDED**

COST TO **BUILD,** MAINTAIN & **PROVIDE SERVICES**

**$$$** REVENUE GENERATED FROM **LAND USE PLAN**

# PLACE$^3$S Scenario Model

① CROP MAP



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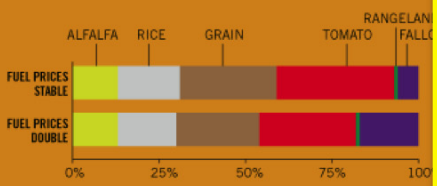


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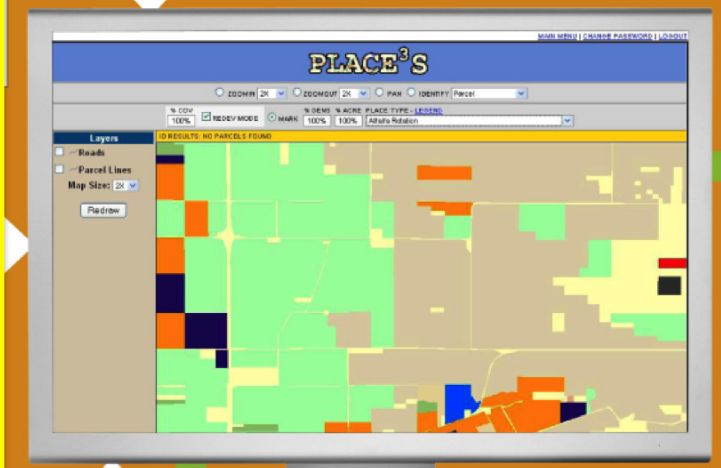
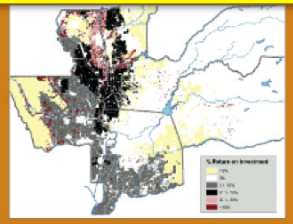
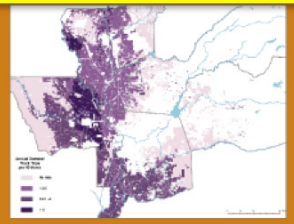
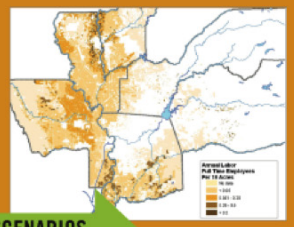
NUMBER OF PEOPLE % LOCAL TYPE OF CONSUMPTION = HOW MUCH LAND NEEDED

④ I-PLACE$^3$S







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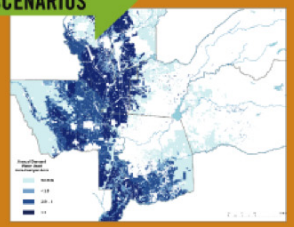

LAND USE PLAN

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TYPE & AMOUNT OF INFRASTRUCTURE & SERVICES NEEDED

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$$$ REVENUE GENERATED FROM LAND USE PLAN

# PLACE$^3$S Scenario Model: Farmer's Economic Pro Forma

**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

# PLACE$^3$S 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)

# PLACE$^3$S

ZOOMIN 2X | ZOOMOUT 2X | PAN | IDENTIFY Parcel

% COV 100% | REDEV MODE | MARK | % DENS 100% | % ACRE 100% | PLACE TYPE - LEGEND: ALFALFA ROTATION- 100% FUEL CHANGE

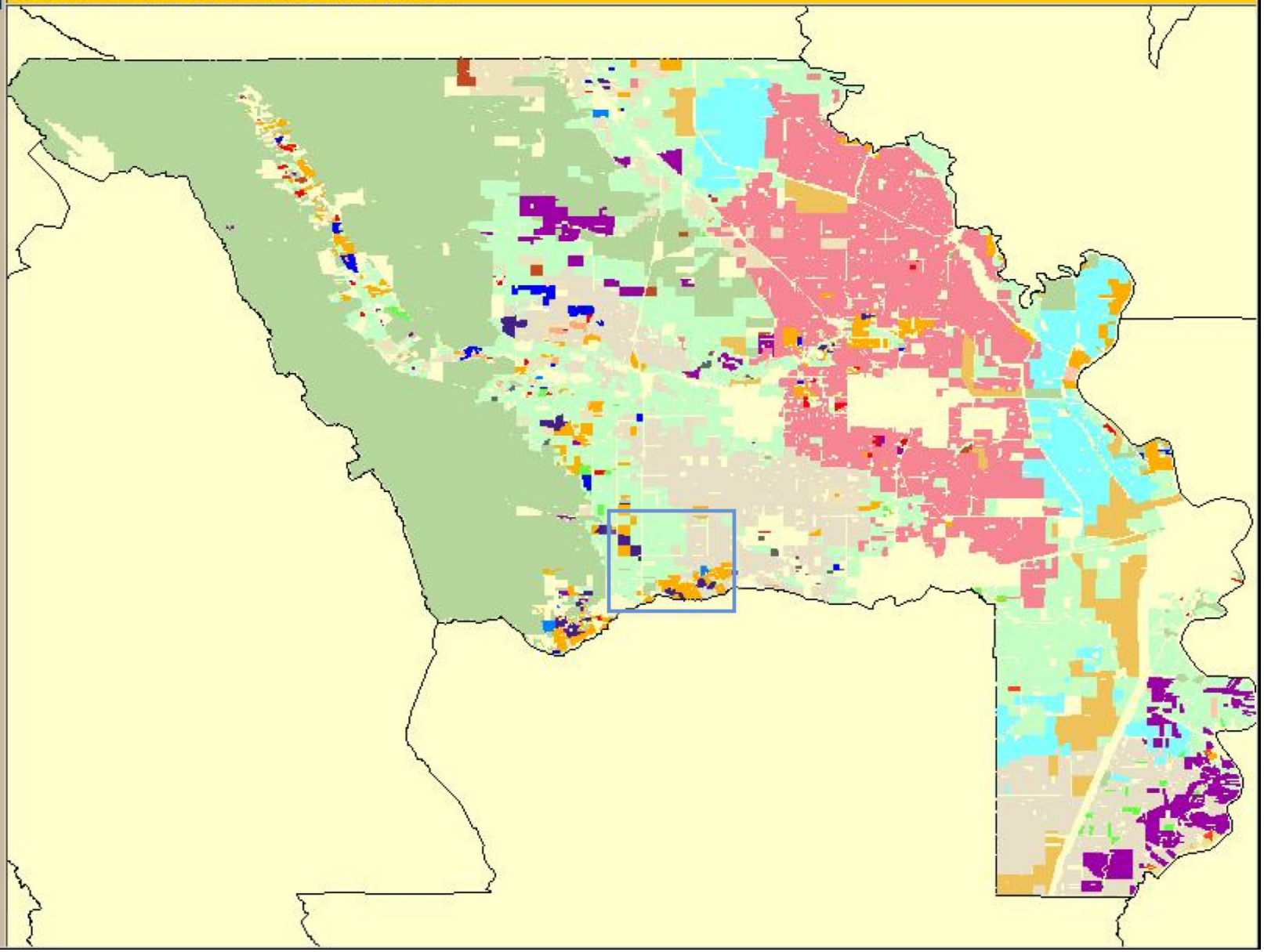
**Layers**

- Roads
- Parcel Lines

Map Size: 2X

Redraw

CLICK ON THE MAP TO PERFORM THE SELECTED ACTION



# PLACE$^3$S

ZOOMIN 2X ZOOMOUT 2X PAN IDENTIFY Parcel

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

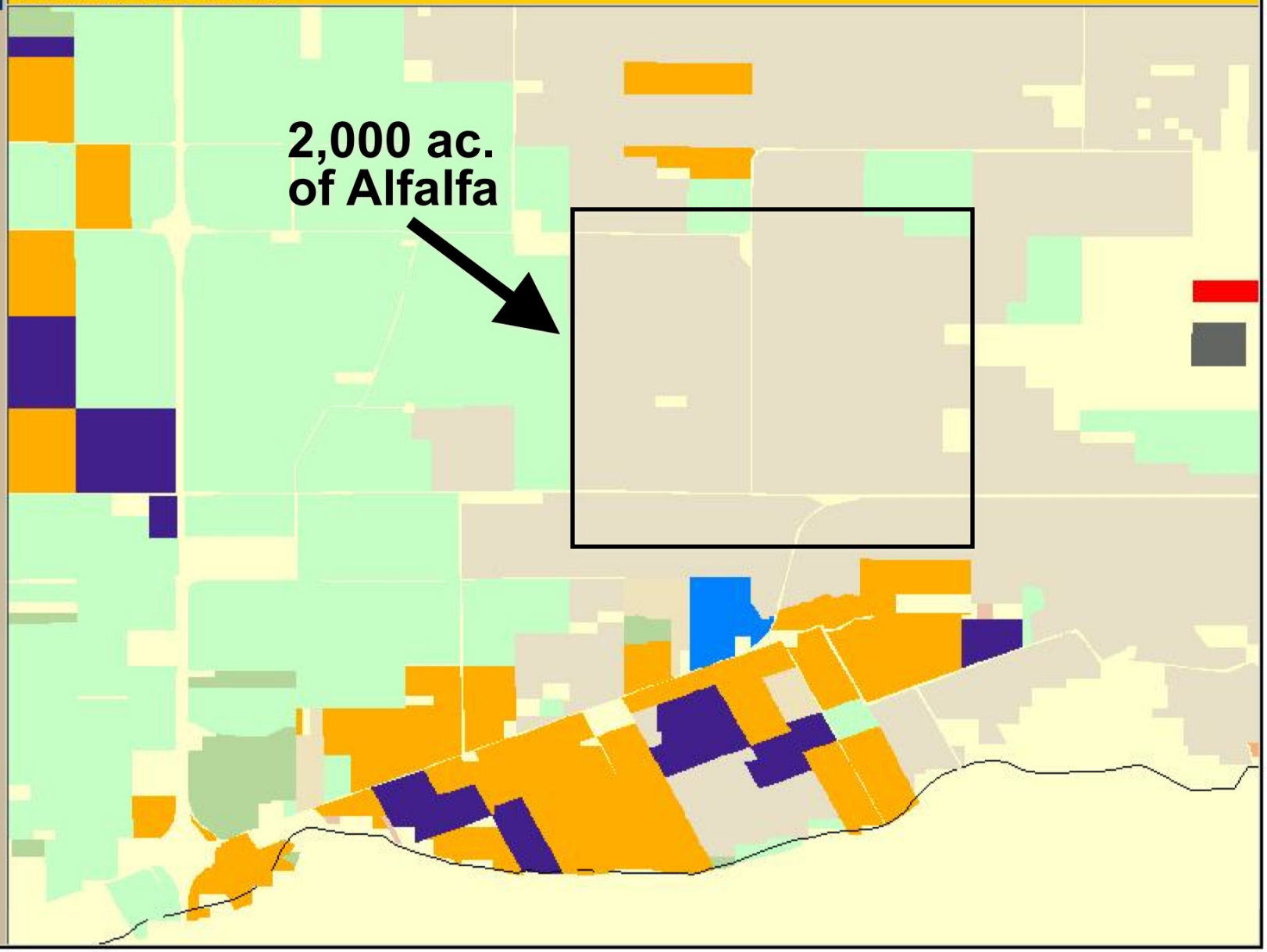
**Layers**

- Roads
- Parcel Lines

Map Size: 2X

Redraw

ID RESULTS: NO PARCELS FOUND



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Redraw

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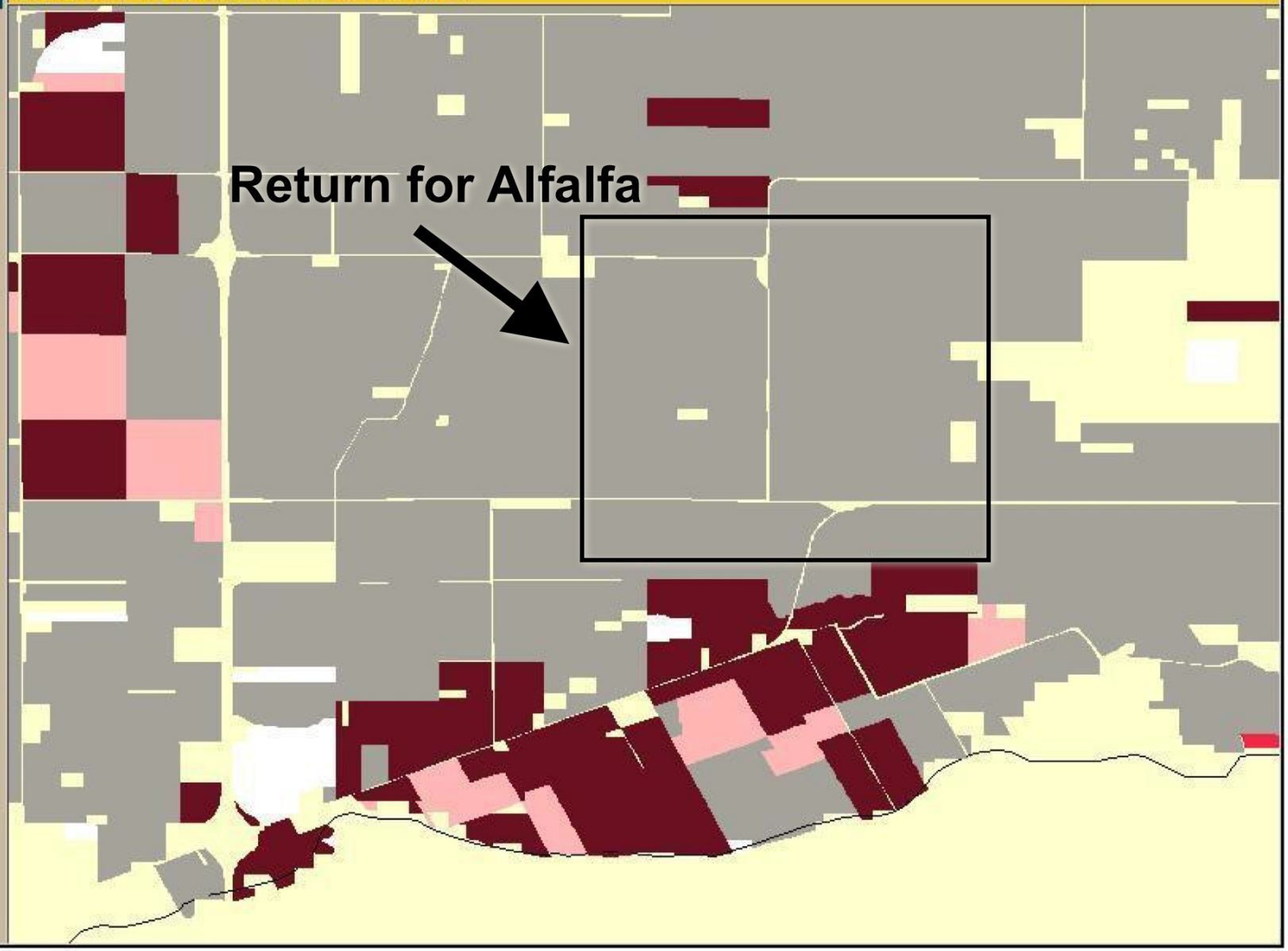


# PLACE$^3$S

ZOOMIN 2X ZOOMOUT 2X PAN IDENTIFY Parcel

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

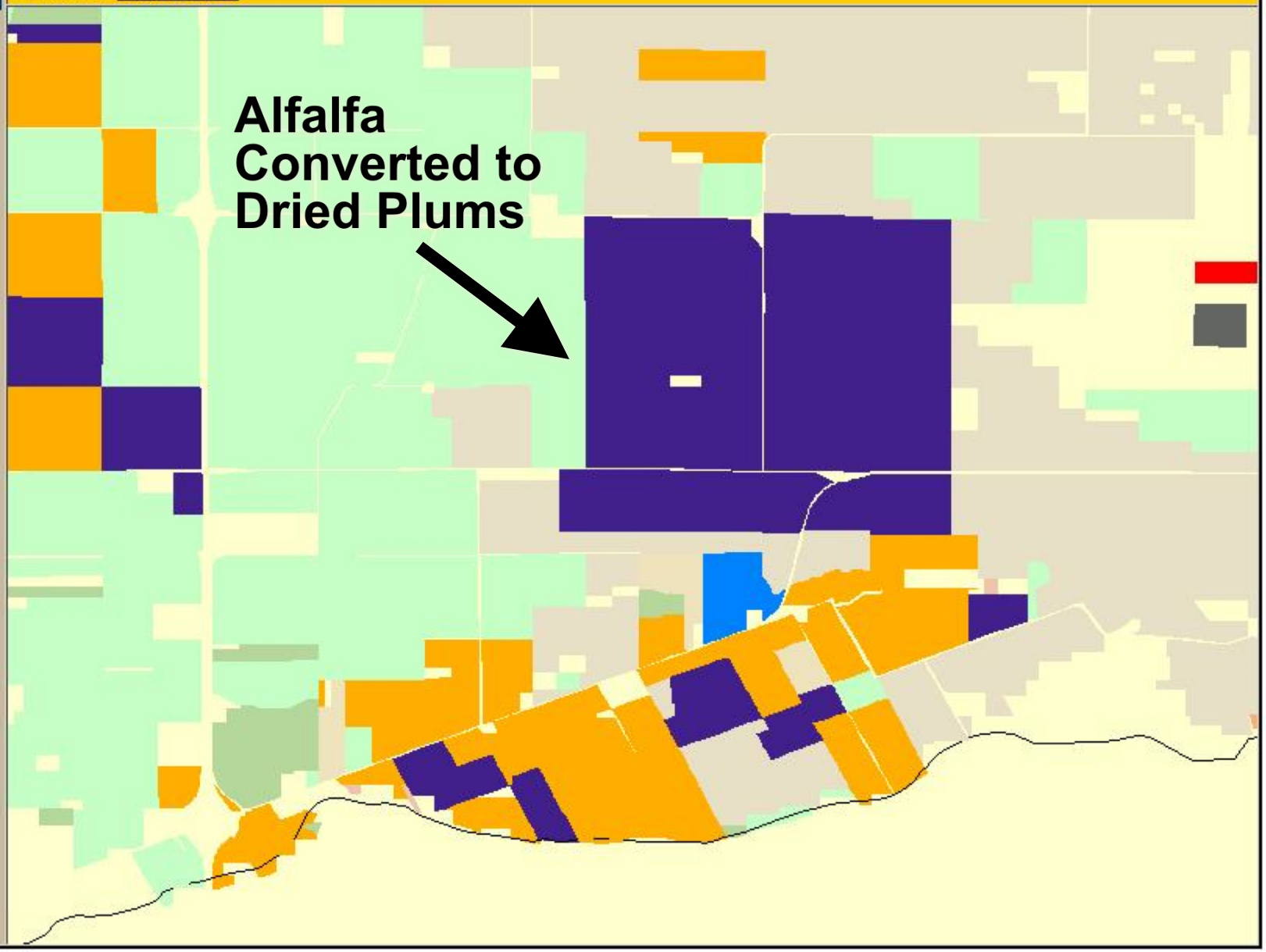
**Layers**

- Roads
- Parcel Lines

Map Size: 2X

Redraw

ID RESULTS: PRUNES - 100%



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% COV 100% | REDEV MODE | MARK | % DENS 100% | % ACRE 100% | PLACE TYPE - LEGEND: ALFALFA ROTATION- 100% FUEL CHANGE

**Layers**

- Roads
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Map Size: 2X

Redraw

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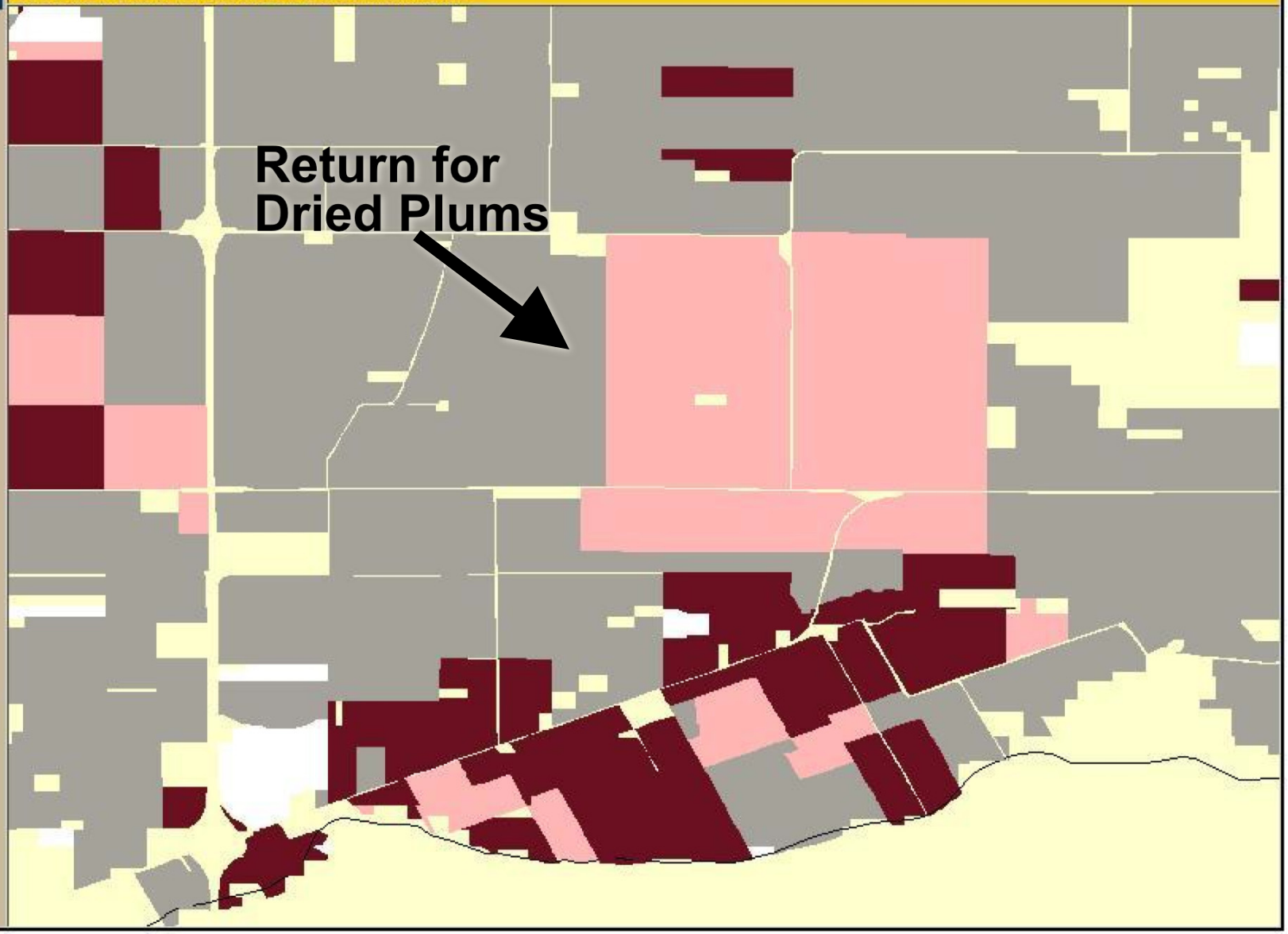



PERCENT RETURN

- 0 to 0
- 0 to 10
- 10 to 20
- 20 to 30
- 30 to 40
- 40 and above

MAIN MENU | CHANGE PASSWORD | LOGOUT

PLACE$^3$S

COMPARE SCENARIOS - RESULTS

| CURRENT PROJECT | PROJECT TYPE | LEAD ORGANIZATION | STUDY AREA |
|---|---|---|---|
| RUCS YOLO DAVID | NEIGHBORHOOD | SACOG | 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**

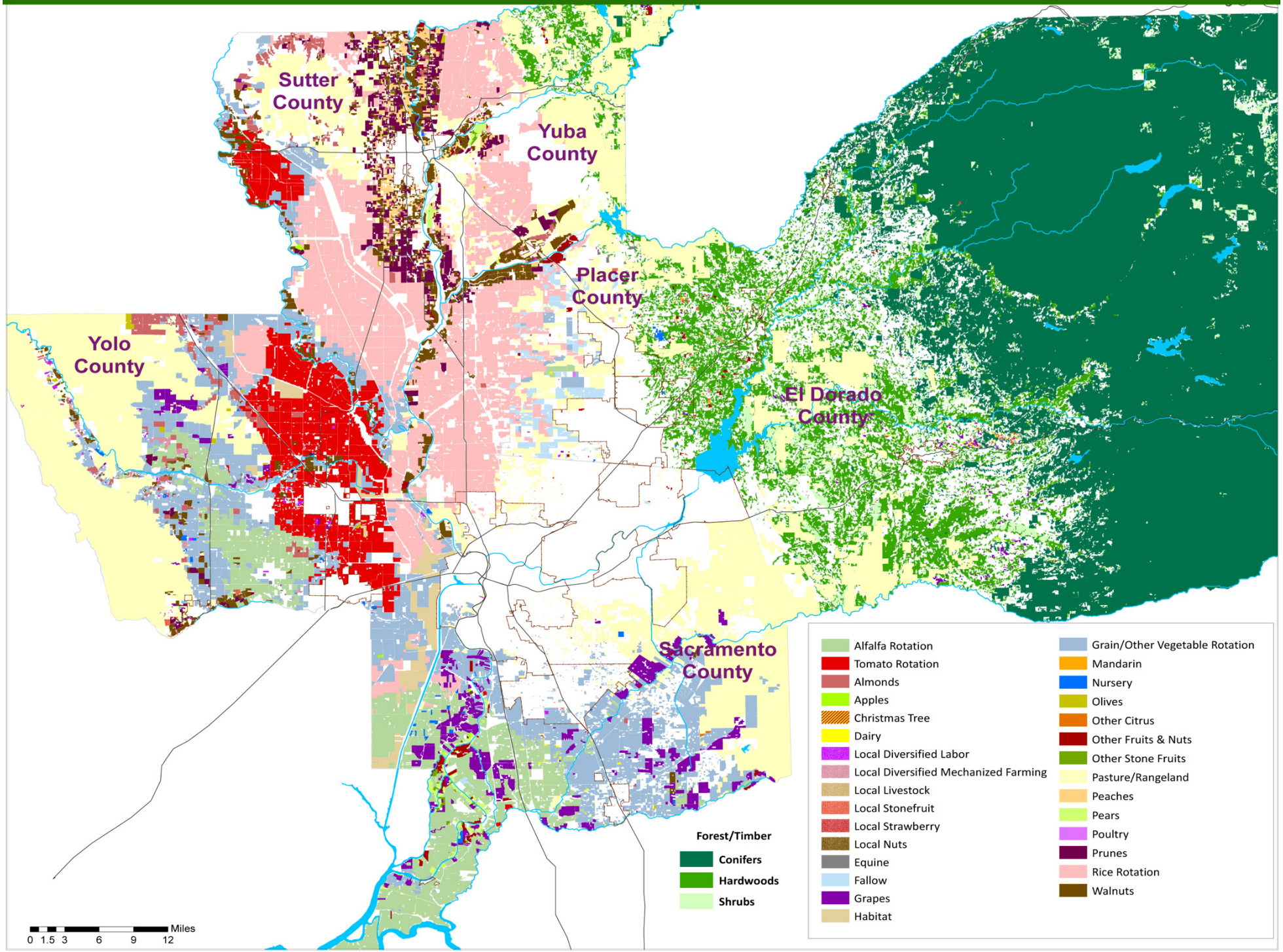
**Return: + $2M**

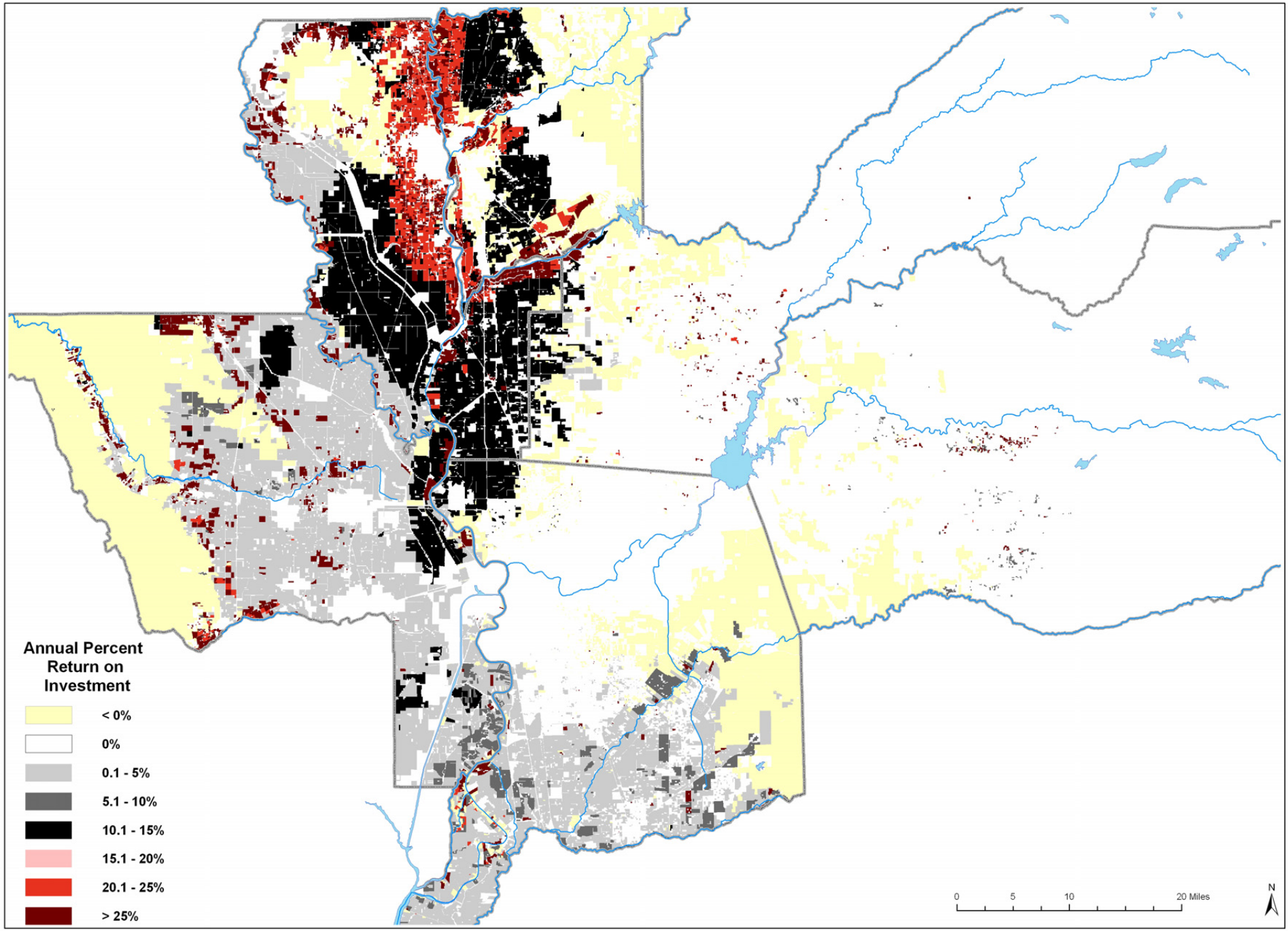
**Water: + 1,000 ac-ft**

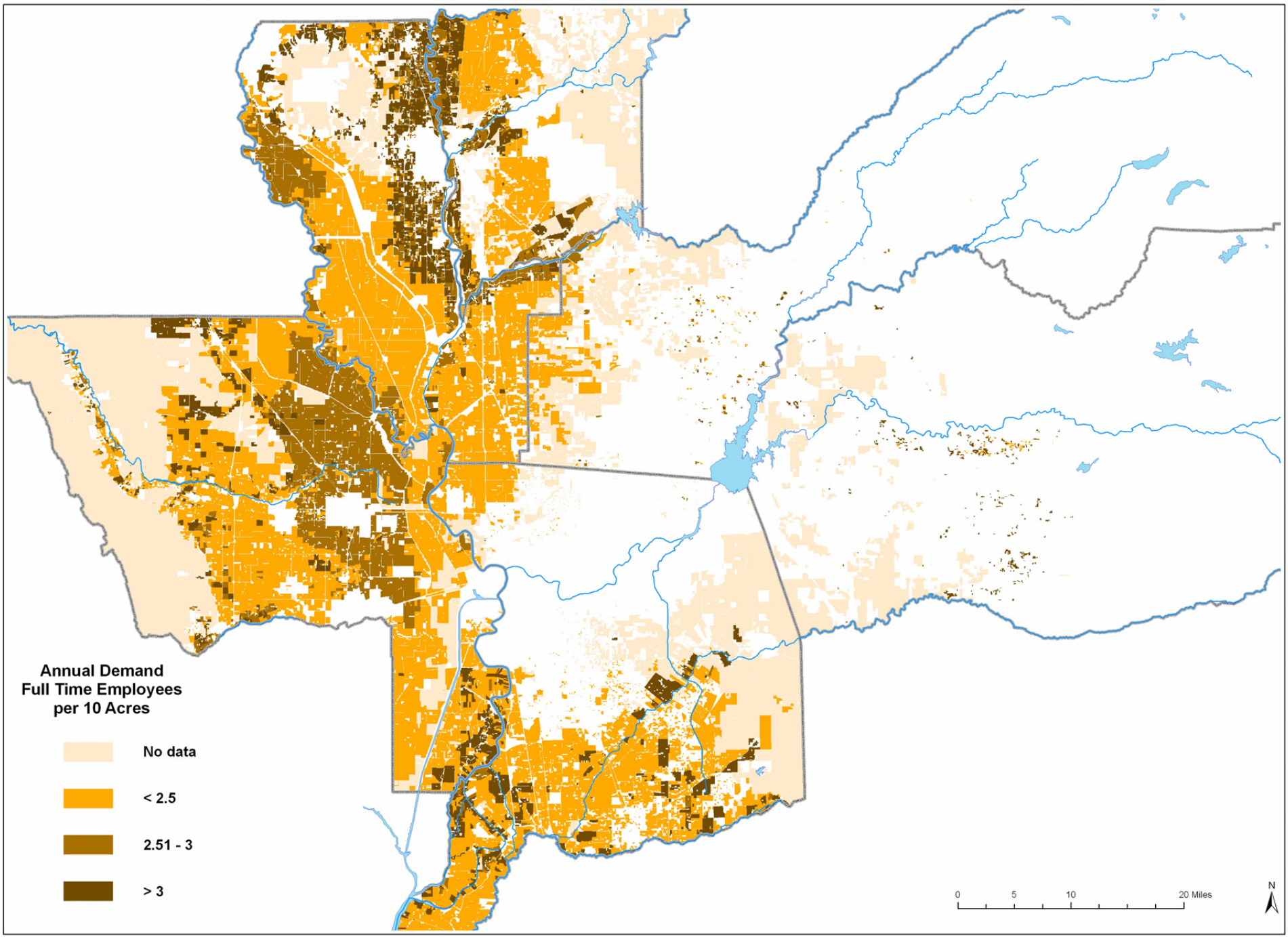
**Labor: + 35 workers**

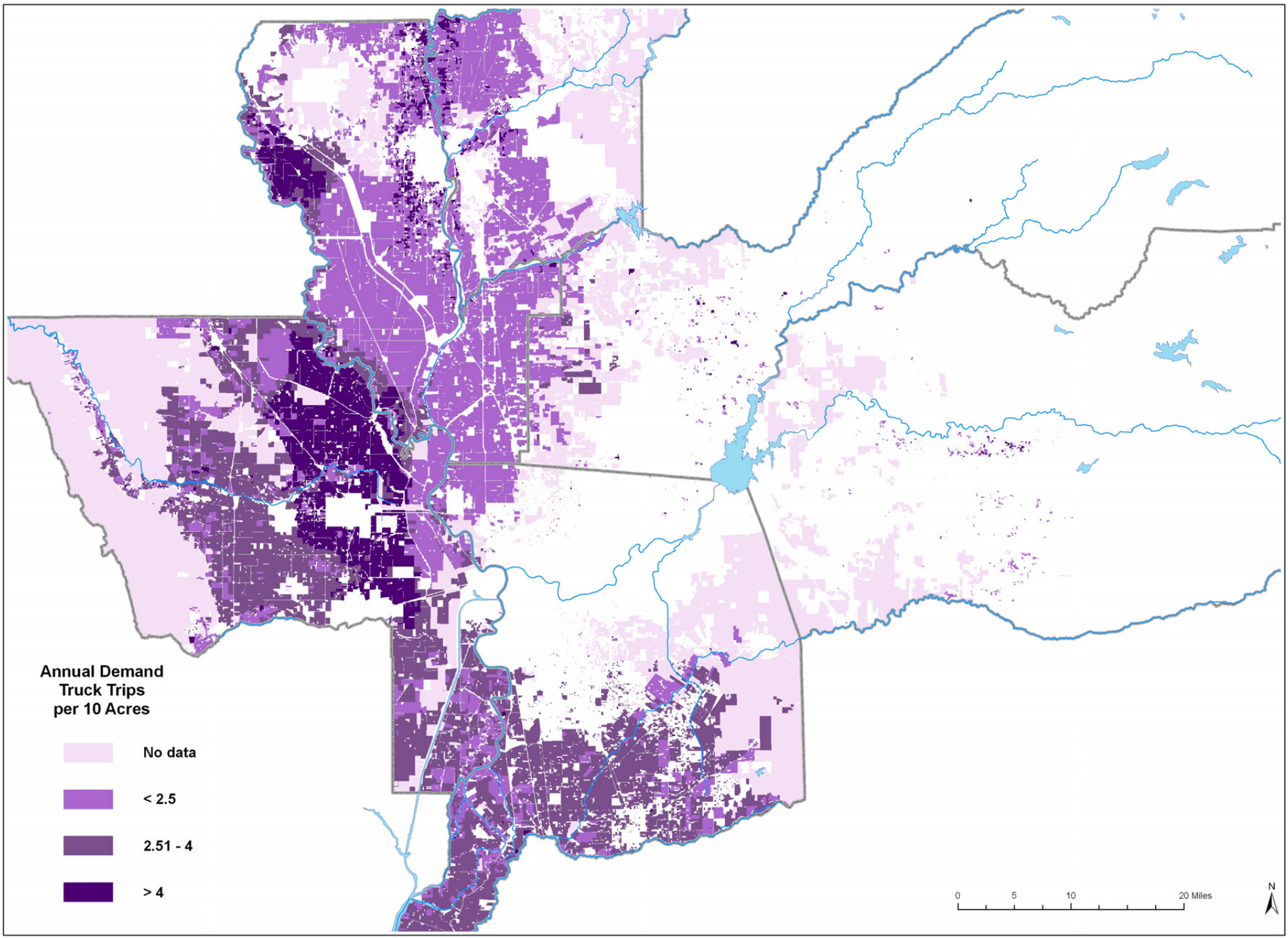
**Trucks: - 250 trips**

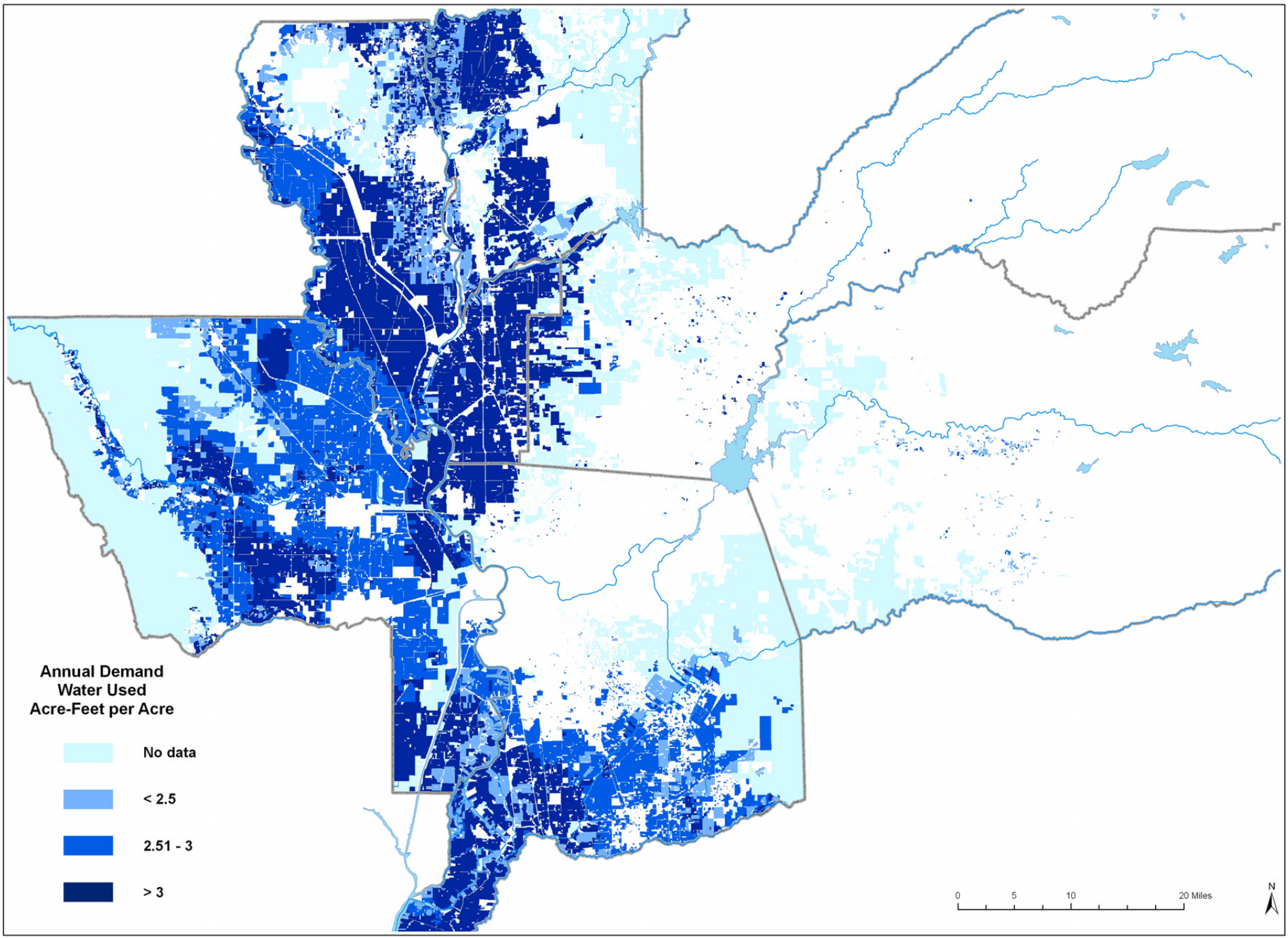
# Farmland and Forestry



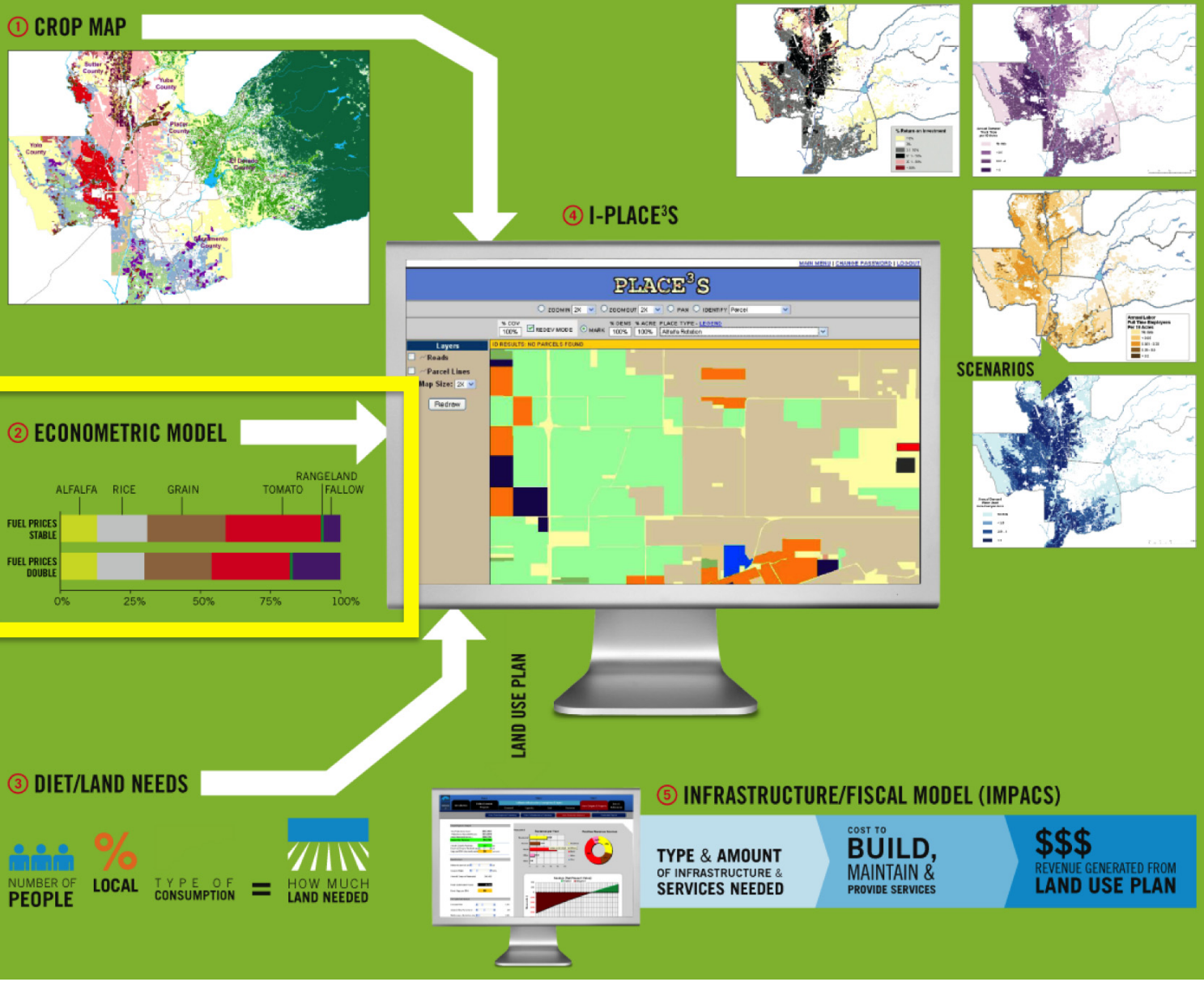

Annual Percent Return on Investment
< 0%
0%
0.1 - 5%
5.1 - 10%
10.1 - 15%
15.1 - 20%
20.1 - 25%
> 25%
0
5
10
20 Miles
N


Annual Demand
Full Time Employees
per 10 Acres
No data
< 2.5
2.51 - 3
> 3
0
5
10
20 Miles
N


Annual Demand
Truck Trips
per 10 Acres
No data
< 2.5
2.51 - 4
> 4
0
5
10
20 Miles
N


Annual Demand
Water Used
Acre-Feet per Acre
No data
< 2.5
2.51 - 3
> 3
0
5
10
20 Miles
N

# Econometric (Predictive) Model



# Econometric (Predictive) Model

**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?

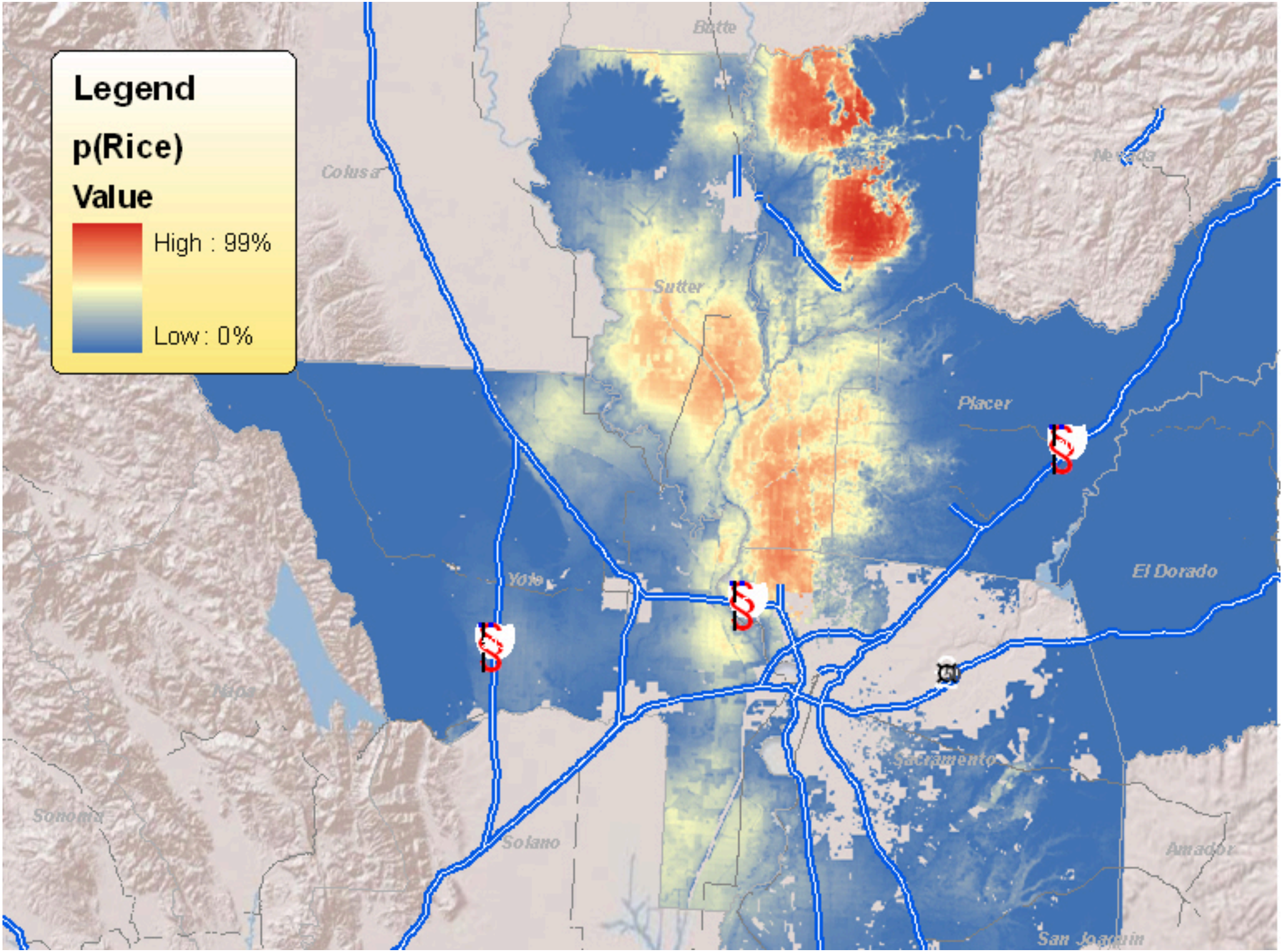
# Econometric Model Background

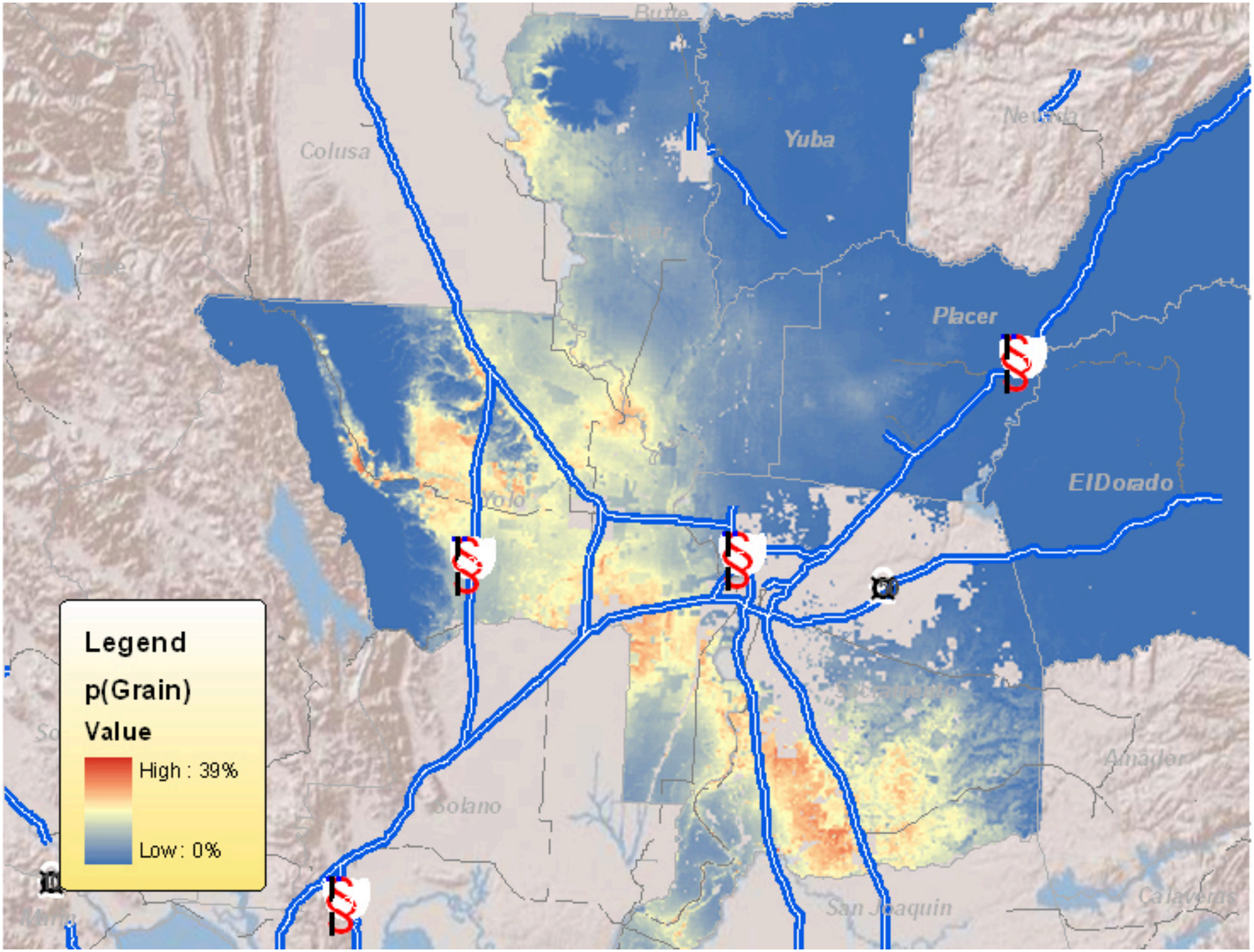
- Agriculture is a dynamic landscape
- Perennials are “permanent,” less complicated
- Annual crops are rotated, complicated
- Helpful to simply: alfalfa, grain, rice, tomato
- Statistical analysis groups parcels into types of agriculture

# Determining Crop Probabilities

**Factors in crop decisions:**

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


Legend
p(Rice)
Value
High : 99%
Low : 0%
Butte
Colusa
Sutter
Placer
El Dorado
Yolo
Sacramento
Solano
Sonoma
Amador
San Joaquin


Legend
p(Grain)
Value
High : 39%
Low : 0%
Yuba
Placer
ElDorado
Colusa
Yolo
Solano
Amador
Calaveras
San Joaquin

# Predictive Model: Factors affecting viability

**Variables affecting crops:**

- Chemicals
- Equipment
- Fertilizer
- Fuel
- Irrigation
- Labor
- Seed
- Commodity Prices

# Predictive 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

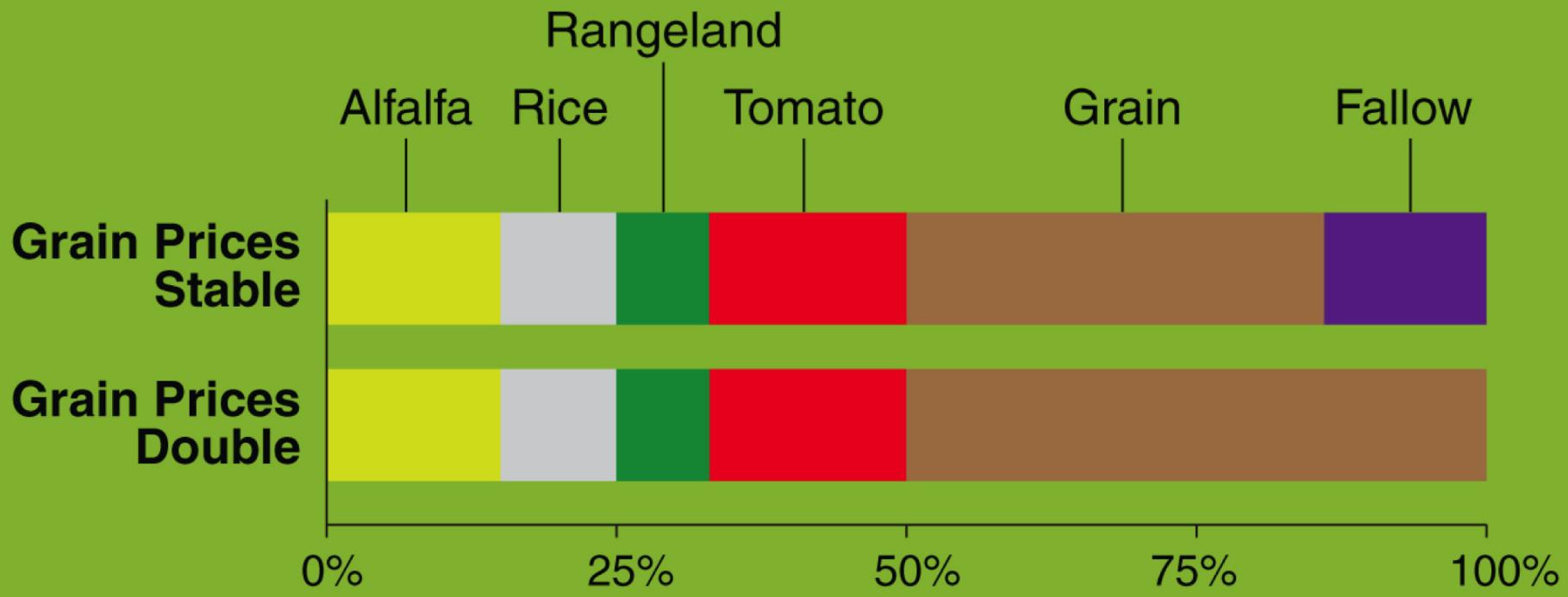
→ Labor prices increase

Drought persists

→ Surface water decrease, Irrigation costs increase

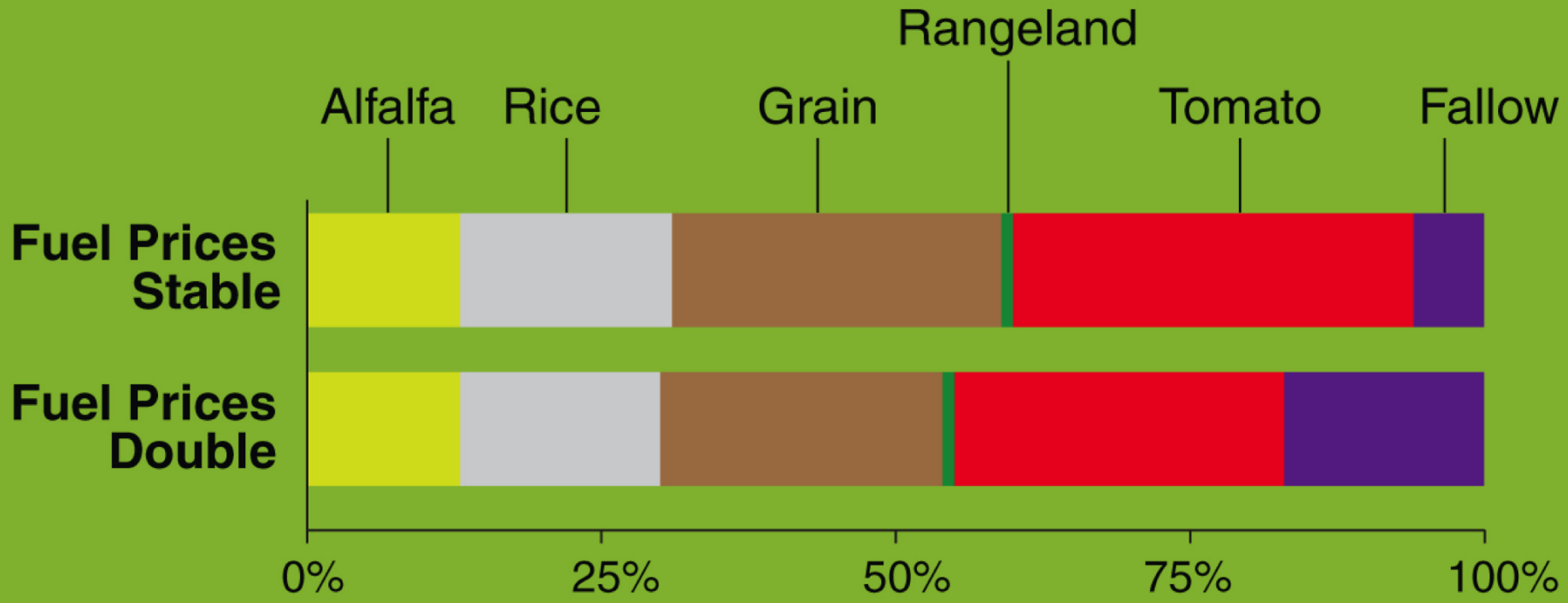
# Predictive Model:
# Stable vs. Double Grain Prices

Crop Type: Grain

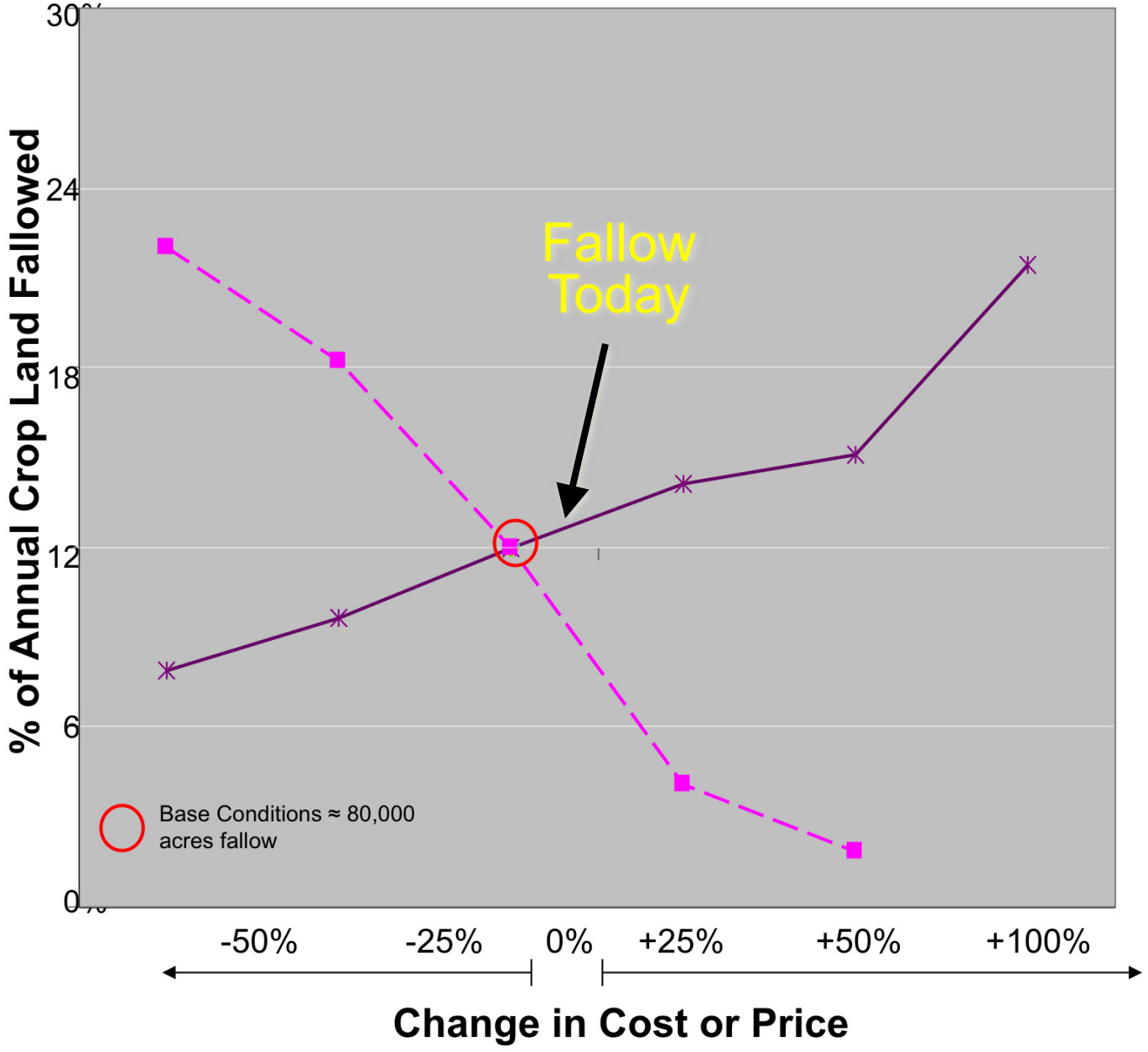


# Predictive Model:
# Stable vs. Double Fuel Prices

Crop Type: Tomato

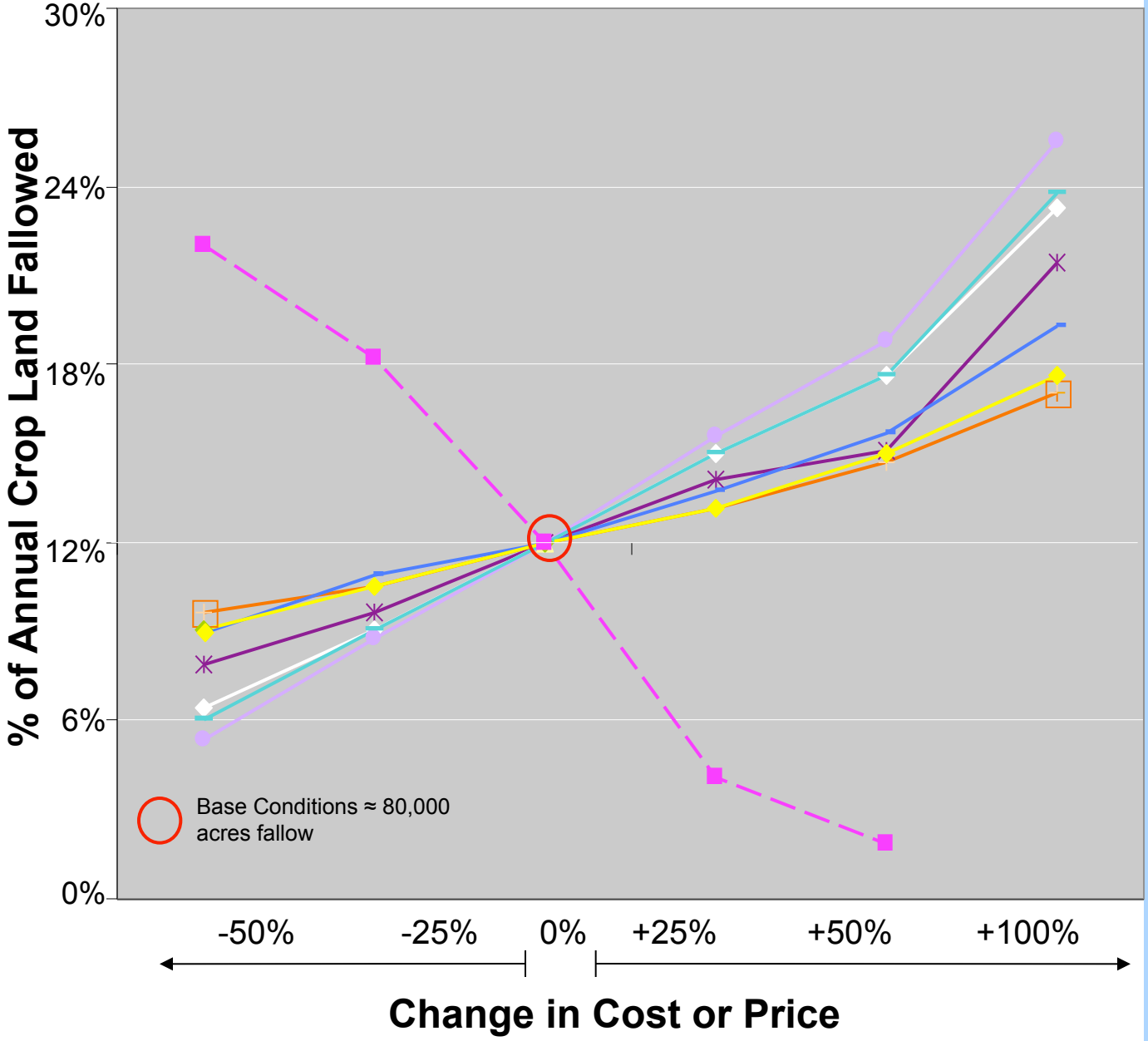


# Change in Fallowing on Annual Crop Land due to Change in Cost or Price




**Approx. 640,000 ac. of annual crop land currently**

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



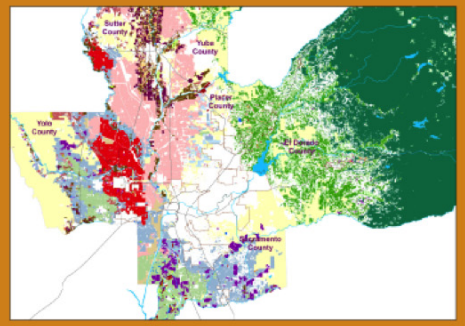

- Labor Costs
- Fertilizer Costs
- Irrigation Costs
- Fuel Costs
- Chemical Costs
- Equipment Costs
- Seed Costs
- Commodity Price

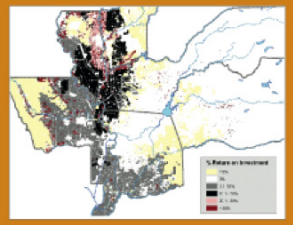
**Approx. 640,000 ac. of annual crop land currently**

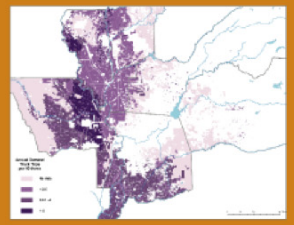
# Rural Communities Fiscal Model

# New Tools for Understanding Agricultural Viability

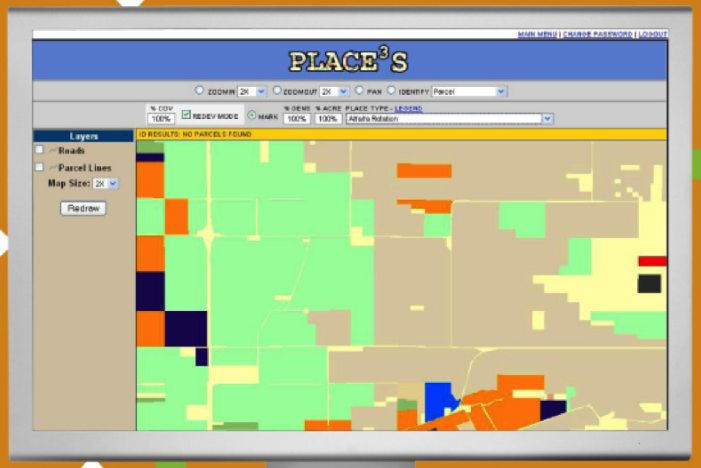
① CROP MAP



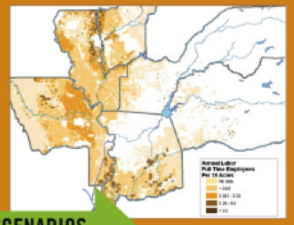



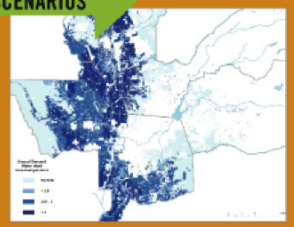


④ I-PLACE³S

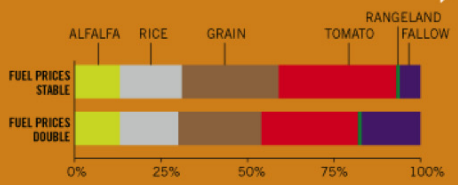



SCENARIOS





② ECONOMETRIC MODEL




LAND USE PLAN

③ DIET/LAND NEEDS

NUMBER OF PEOPLE × % LOCAL × TYPE OF CONSUMPTION = HOW MUCH LAND NEEDED

⑤ INFRASTRUCTURE/FISCAL MODEL (IMPACS)

TYPE & AMOUNT OF INFRASTRUCTURE & SERVICES NEEDED → COST TO BUILD, MAINTAIN & PROVIDE SERVICES → $$$ REVENUE GENERATED FROM LAND USE PLAN

# Fiscal Impacts Model

**Purpose:** Help small rural communities make growth decisions that are fiscally sustainable

**Challenges:**

- Growth of any kind sometimes looks like economic progress
- Needed infrastructure investments to fix existing problems sometimes contribute to this problem

**Example:** Better balanced land uses more fiscally viable than housing subdivision

# Modeling Objectives

- Address the imbalance between infrastructure and service costs and revenue
- Estimates infrastructure and service needs and costs from various land use plans
- Estimates revenues from same plan
- Identifies gaps and determines additional revenue needed
- Can be used for rural or urban areas

# Model Inputs

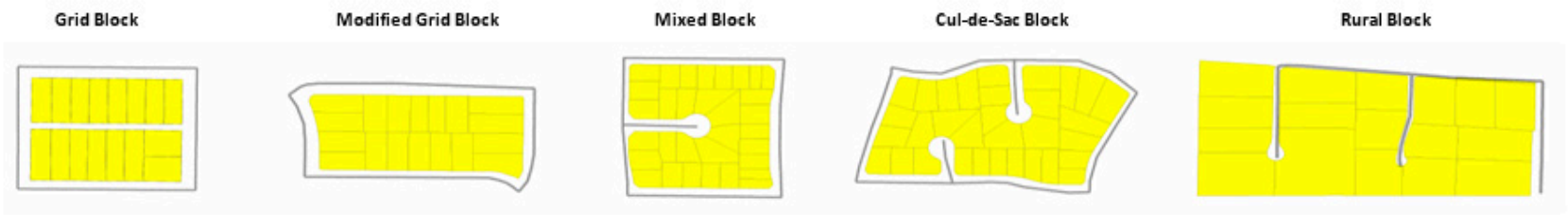
- Land use information
  (acres and type of development)
- Development parameters
  (e.g., street pattern, amount of infill)
- Systems specifications
  (e.g., water system demand and capacity)

| Code | Residential | Acres | % of Land | H Si |
|---|---|---|---|---|
| LU_Res1 | Rural Residential | 0.0 | 0.0% | 2.8 |
| LU_Res2 | Very Low Density Residential | 4.0 | 7.8% | 2.8 |
| LU_Res3 | Low Density Residential | 19.0 | 37.3% | 2.5 |
| LU_Res4 | Medium Density Residential | 10.0 | 19.6% | 2.2 |
| LU_Res5 | Medium-High Density Residential | 0.0 | 0.0% | 2.1 |
| LU_Res6 | High Density Residential | 0.0 | 0.0% | 1.7 |
| | Total | 33.0 | 64.7% | |

| Code | Mixed Use | Acres | % of Land | H Si |
|---|---|---|---|---|
| LU_Mix1 | Mixed Use Residential Focus | 0.0 | 0.0% | 1.5 |
| LU_Mix2 | Mixed Use Employment Focus | 0.0 | 0.0% | 1.5 |
| | Total | 0.0 | 0.0% | |

| | | Acres | % of | H |
|---|---|---|---|---|

## 3-A BLOCK STREET PATTERN:




## 3-B STREET WIDTH:

| Type | Description | ROW (ft) | Pavement width (ft) | Sidewalk Width (ft) | Sidewalk Completeness | Curb & Gutter Completeness | Lighting Spacing (ft) |
|---|---|---|---|---|---|---|---|
| StreetA | arterial street | 80.00 | 48.00 | 6.00 | 100.00% | 100.00% | 300 |
| StreetB | collector street | 60.00 | 48.00 | 4.00 | 100.00% | 100.00% | 300 |
| StreetC | local access 1 | 50.00 | 36.00 | 3.00 | 100.00% | 100.00% | 100 |
| StreetD | local access 2 | 50.00 | 24.00 | 4.00 | 100.00% | 100.00% | 100 |
| StreetE | parkway | 50.00 | 24.00 | 0.00 | 0.00% | 0.00% | 500 |

## Assign Development Pattern to Land Uses

| Code | Land Use | Street Pattern |
|---|---|---|
| LU_Res1 | Rural Residential | Rural Block |
| LU_Res2 | Very Low Density Residential | Rural Block |
| LU_Res3 | Low Density Residential | Cul-de-Sac Block |
| LU_Res4 | Medium Density Residential | Modified Grid Block |
| LU_Res5 | Medium-High Density Residential | Mixed Block |
| LU_Res6 | High Density Residential | |
| LU_Mix1 | Mixed Use Residential Focus | |
| LU_Mix2 | Mixed Use Employment Focus | |
| LU_NRes1 | Moderate Intensity Office | |
| LU_NRes2 | Community/Neighborhood Commercial / Office | |
| LU_NRes3 | Light Industrial Office | |

Default Street Pattern
Modified Grid Block

Default Local Street
StreetC

Default Major Street
StreetB

| | High | Median | Low |
|---|---|---|---|
| Interior GPCD | 70 | 55 | 50 |
| Toilets, Kitchen Sinks etc. | 21 | 18 | 15 |
| Residential Interior Demand | **17,808,350** | **13,992,275** | **12,720,250** |
| Residential Sewer | **14,246,680** | **11,193,820** | **10,176,200** |

Non-Residential Potable Water Demand Rates

Total Non Residential FTE 594

| | | Interior GPFTE (gallons / FT | |
|---|---|---|---|
| Land Use | FTE | High | Median |
| Moderate Intensity Office | 126 | 3,219,300 | 2,529,450 |
| Community/Neighborhood Commercial / Office | 108 | 2,759,400 | 2,168,100 |
| Light Industrial Office | 149 | 3,806,950 | 2,991,175 |
| Community / Neighborhood Retail | 21 | 536,550 | 421,575 |
| Regional Retail | 102 | 2,606,100 | 2,047,650 |
| Light Industry | 0 | 0 | 0 |
| Heavy Industry | 0 | 0 | 0 |
| Warehouse / Storage | 0 | 0 | 0 |
| Recreation Center | 0 | 0 | 0 |
| Public /Quasi Public | 0 | 0 | 0 |
| Restaurant Dining | 0 | 0 | 0 |

| County | Community | Water Supply | | | Water Treatment | | |
|---|---|---|---|---|---|---|---|
| | | Source | Existing | Designed | Source | Existing | Desi |
| | UNITS | - | MGD | MGD | - | MGD | M |
| El Dorado | Cameron Park | 11 | | | 11 | 32 | 3 |
| El Dorado | Camino | 11 | | | 11 | 32 | 3 |
| El Dorado | Cool | 1 | | | 1 | 4.6 | 5 |
| El Dorado | Diamond Springs/El Dorado | 11 | | | 11 | 32 | 3 |
| El Dorado | Fairplay | 13 | | | 13 | | |
| Yolo | Dunnigan | 5 | | | 5 | | |
| Yolo | Elkhorn | 7 | | | 7 | | |
| Yolo | Knights Landing | 4 | 1 | 4.3 | 4 | | |
| Yolo | Madison | 6 | 0.28 | 0.93 | 6 | | |
| Yolo | Winters | 2 | 10.1 | 19.4 | 2 | | |
| Assumption: For Water Supply, unlimited amount of G.W. supply will be available. | | | | | | | |
| Assumption: For Water Treatment, Water Storage and Sewer Treatment, empty cells mean no public/commu | | | | | | | |

**Sources:**


1. Georgetown Divide Public Utility District Capital Facility Charge Study

2: Yolo County Draft Winters Municipal Services Review Infrastructure Needs and Deficiences. RMC Water an

3: County of Yolo 2030 Countywide General Plan - Public Facilities and Services Element

4: Knights Landing Community Services District. Final MSR/SOI Municipal Services Review, 2006

5: Yolo County Integrated Regional Water Management Plan

# Model Outputs

Infrastructure needs and costs
(total & per unit; public & private)

Service costs

Payback period

Revenue sources

Cost-revenue gap

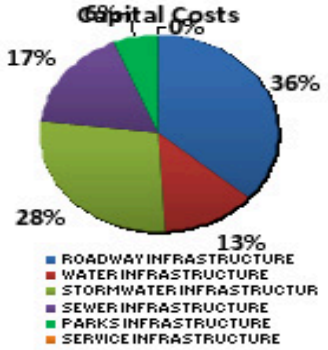
## MUNICIPAL INFRASTRUCTURE SUMMARY

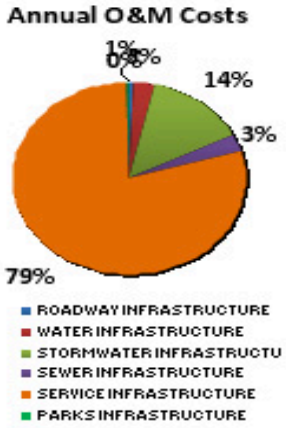
Select Standards Scenario: Median
Select Cost Scenario
Select Capacity Scenario

**Public Sector Cost Implication**

| CapitalCost | Cost / ERU | Annual O&M | O&M / ERU |
|---|---|---|---|
| $811,830 | $2,206 | $115,498 | $314 |

| Component | Quantities Total (ft) | Ft/ERU | Capital Construction Costs Total | Per ERU | Annual O&M Costs Total | Per ERU | Check to Include Capital Cost or |
|---|---|---|---|---|---|---|---|
| ROADWAY INFRASTRUCTURE | | | | | | | |
| Local Streets | 3,164 | 24.9 | $4,925,209 | $13,384 | $2,564 | $7 | ☐ |
| Major Streets | 3,519 | 9.6 | $2,233,459 | $6,069 | $1,223 | $3 | ☐ |
| Street Upgrades | 0 | 0.0 | $0 | $0 | $0 | $0 | ☑ |
| **Total Streets & Roadway** | **12,683** | 34.5 | **$7,158,667** | **$19,453** | **$3,787** | **$10** | |
| WATER INFRASTRUCTURE | ft | ft/ERU | | | | | |
| Laterals | 23,615 | 64.2 | $495,322 | $1,348 | $966 | $2.6 | ☐ |
| Distribution + Main | 13,183 | 35.8 | $1,694,550 | $4,605 | $3,864 | $10.5 | ☐ |
| **Total Water Distribution** | **36,798** | **100.0** | **$2,190,471** | **$5,952** | **$4,830** | **$13.1** | |
| **Supply, Treatment, Storage** | - | - | **$315,000** | **$856** | **$9,660** | **$26.3** | ☑ |
| **Total Water** | **0** | **0.0** | **$2,505,471** | **$6,808** | **$14,490** | **$39.4** | |
| STORMWATER INFRASTRU | ft | ft/ERU | | | | | |
| Laterals | 23,615 | 64.2 | $1,586,950 | $4,312 | $18,892 | $51.3 | ☐ |
| Collection | 12,683 | 34.5 | $3,835,272 | $10,422 | $57,073 | $155.1 | ☐ |
| Detention | | | $62,196 | $169 | $5,000 | $13.6 | ☐ |
| **Total Stormwater Infrastr** | **36,298** | **98.6** | **$5,484,417** | **$14,903** | **$80,965** | **$220.0** | |
| SEWER INFRASTRUCTURE | ft | ft/ERU | | | | | |
| Laterals | 23,615 | 64.2 | $1,322,458 | $3,594 | $773 | $2.1 | ☐ |
| Trunk + Collection | 13,183 | | $1,802,525 | $4,898 | $3,091 | $8.4 | ☐ |
| Treatment | - | - | $196,830 | $535 | $11,592 | $31.5 | ☑ |
| **Total Sewer** | **36,798** | **100.0** | **$3,321,813** | **$9,027** | **$15,456** | **$42.0** | |
| PARKS INFRASTRUCTURE | acres | acre/ERU | | | | | |
| Sports Facility | 0 | 0.000 | $0 | $0 | $0 | $0.0 | ☐ |
| City Park | 3 | 0.008 | $900,000 | $2,446 | $600 | $1.6 | ☐ |
| Pocket Parks/Tot Lots | 1 | 0.003 | $300,000 | $815 | $200 | $0.5 | ☑ |
| **Total Service** | **4** | **0.011** | **$1,200,000** | **$3,261** | **$800** | **$2.2** | |
| SERVICE INFRASTRUCTURE | # | #/ERU | | | | | |
| Police Officer(s) | 1 | - | - | - | $90,000 | $244.6 | ☐ |
| Fire Fighter(s) | 1 | - | - | - | $95,000 | $258.2 | ☐ |
| Other (health, education, etc.) | | - | - | - | $267,080 | $725.8 | ☐ |
| **Total Service** | **2** | - | **$0** | **$0** | **$452,080** | ##### | |
| **otal Infrastructure Cos** | | | **$19,670,369** | **$53,452** | **$567,578** | **$1,542** | |
| **n Site (Developer) Cos** | | | **$17,958,540** | **$48,800** | | | |
| **Public Sector Costs** | | | **$811,830** | **$2,206** | **$115,498** | **$314** | |



## Simple Payback Analysis

| | |
|---|---|
| Total Public Sector Costs | $811,830 |
| Public Sector Annual O&M Costs | $115,498 |
| Annual Revenue (Taxes etc.) | $144,785 |
| **Annual Net Revenue** | $29,287 |

Actual Simple Payback: 27.7 yrs

Desired Simple Payback (yrs: 20

Gap per ERU (desired payba: $110 per year

## Bond Analysis

Maturity period (yrs: 20

Coupon Rate: 5.0%

Annual Coupon Payments: $40,591

Total Additional Funds: -$11,305

Bond Gap per ERU: $31

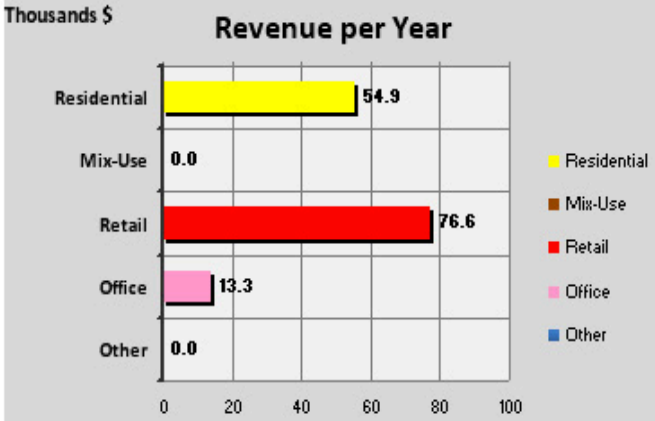
## Life Cycle Cost Analysis

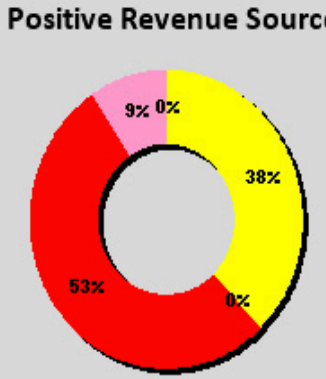
Discount Rate: 5.0%

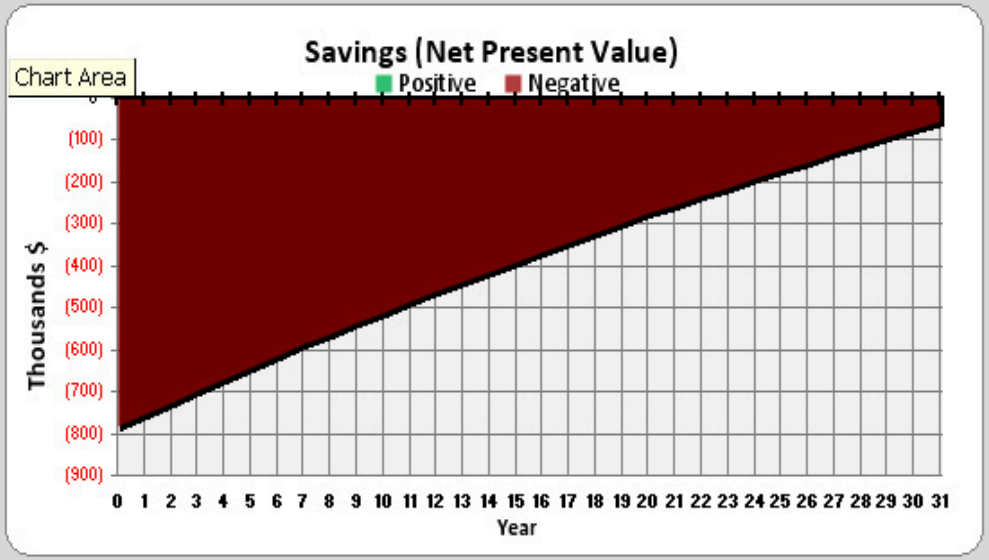
Analysis Time Period (yrs): 20

Maintenance Escalation rate: 0.0%

Net Present Value (NPV) savings (20 yrs): -$277,203



IMPACS2.0

Step 1 | Step 2 | Step 3

Introduction | Define Scenario Program | Calibrate Infrastructure Assumptions & Inputs (Demand | Capacity | Cost | Revenue) | View Outputs & Reports | Data & References

1. Specify Scenario Details | 2. Enter Land Use Information | 3. Enter Development Parameters | Import from Places3

Input Mode: Enter Area | Import Defaults from Prototype

| Code | Residential | Acres | % of Land | HH Size | Net Density (DU/ac) | Avg Lot size | Avg Bldg Footprin t | # Floor s | Avg DU/Bld g | FAR | Set back | DU | Residents | FTE | GFA | ERU |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LU_Res1 | Rural Residential | 0.0 | 0.0% | 2.8 | 1 | 1 | 3,049 | 1 | 1 | 0.07 | 120 | 0 | 0 | 0 | 0 | 0 |
| LU_Res2 | Very Low Density Residential | 4.0 | 7.8% | 2.8 | 4 | 0.25 | 2,831 | 1 | 1 | 0.26 | 60 | 16 | 45 | 0 | 45,296 | 16 |
| LU_Res3 | Low Density Residential | 16.0 | 31.4% | 2.5 | 8 | 0.125 | 2,505 | 1 | 1 | 0.46 | 50 | 128 | 320 | 0 | 320,640 | 128 |
| LU_Res4 | Medium Density Residential | 10.0 | 19.6% | 2.25 | 12.1 | 0.083 | 1,012 | 2 | 1 | 0.56 | 40 | 121 | 272 | 0 | 244,904 | 121 |
| LU_Res5 | Medium-High Density Residential | 0.0 | 0.0% | 2.1 | 24.9 | 0.5 | 7,514 | 2 | 13 | 0.69 | 30 | 0 | 0 | 0 | 0 | 0 |
| LU_Res6 | High Density Residential | 0.0 | 0.0% | 1.75 | 43.5 | 2 | 19,602 | 4 | 87 | 0.9 | 20 | 0 | 0 | 0 | 0 | 0 |
| | Total | 30.0 | 58.8% | | | | | | | | | 265 | 637 | 0 | 610,840 | 265 |

| Code | Mixed Use | Acres | % of Land | HH Size | FAR | Avg Lot | Avg Bldg Footprin t | # Floor s | Avg DU/Bld g | sf/F TE | Set Back | DU | Residents | FTE | GFA | ERU |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LU_Mix1 | Mixed Use Residential Focus | 3.0 | 5.9% | 1.5 | 1.36 | 1.5 | 22,216 | 4 | 56 | 576 | 20 | 111 | 167 | 38 | 177,725 | 182 |
| LU_Mix2 | Mixed Use Employment Focus | 0.0 | 0.0% | 1.5 | 1.08 | 1.5 | 17,642 | 4 | 52 | 350 | 20 | 0 | 0 | 50 | 0 | 0 |
| | Total | 3.0 | 5.9% | | | | | | | | | 111 | 167 | 88 | 177,725 | 182 |

| Code | Non-Residential | Acres | % of Land | HH Size | FAR | Avg Lot | Avg Bldg Footprin t | # Floor s | Avg DU/Bld g | sf/F TE | Set Back | DU | Employees | FTE | GFA | ERU |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LU_NRes1 | Moderate Intensity Office | 1.0 | 2.0% | 0 | 1.02 | 0.25 | 5,554 | 2 | 0 | 350 | 100 | 0 | 126 | 126 | 44,431 | 17 |
| LU_NRes2 | Community/Neighborhood Commercial / Offic | 3.0 | 5.9% | 0 | 0.29 | 0.25 | 1,053 | 3 | 0 | 350 | 100 | 0 | 108 | 108 | 37,897 | 15 |
| LU_NRes3 | Light Industrial Office | 4.0 | 7.8% | 0 | 0.3 | 0.5 | 3,267 | 2 | 0 | 350 | 50 | 0 | 149 | 149 | 52,272 | 20 |
| LU_NRes4 | Community / Neighborhood Retail | 1.0 | 2.0% | 0 | 0.28 | 0.5 | 6,098 | 1 | 0 | 576 | 100 | 0 | 21 | 21 | 12,197 | 4 |
| LU_NRes5 | Regional Retail | 4.0 | 7.8% | 0 | 0.34 | 5 | 74,052 | 1 | 0 | 576 | 100 | 0 | 102 | 102 | 59,242 | 23 |
| LU_NRes6 | Light Industry | 0.0 | 0.0% | 0 | 0.33 | 2 | 28,750 | 1 | 0 | 400 | 100 | 0 | 0 | 0 | 0 | 0 |
| LU_NRes7 | Heavy Industry | 0.0 | 0.0% | 0 | 0.23 | 2 | 20,038 | 1 | 0 | 2500 | 100 | 0 | 0 | 0 | 0 | 0 |
| LU_NRes8 | Warehouse / Storage | 0.0 | 0.0% | 0 | 0.33 | 2 | 28,750 | 1 | 0 | 20000 | 100 | 0 | 0 | 0 | 0 | 0 |
| LU_NRes9 | Recreation Center | 0.0 | 0.0% | 0 | 0.3 | 3 | 39,204 | 1 | 0 | 2175 | 100 | 0 | 0 | 0 | 0 | 0 |
| LU_NRes10 | Public /Quasi Public | 0.0 | 0.0% | 0 | 0.3 | 1.5 | 6,534 | 3 | 0 | 2175 | 100 | 0 | 0 | 0 | 0 | 0 |
| LU_NRes11 | Restaurant Dining | 0.0 | 0.0% | 0 | 0.28 | 1 | 12,197 | 1 | 0 | 482.5 | 50 | 0 | 0 | 0 | 0 | 0 |
| LU_NRes12 | Hotel | 0.0 | 0.0% | 0 | 0.34 | 3 | 11,108 | 4 | 0 | 2200 | 200 | 0 | 0 | 0 | 0 | 0 |
| LU_NRes13 | Medical / dental clinic | 0.0 | 0.0% | 0 | 0.98 | 1 | 42,689 | 1 | 0 | 350 | 50 | 0 | 0 | 0 | 0 | 0 |
| LU_NRes14 | Church | 0.0 | 0.0% | 0 | 0.23 | 2 | 20,038 | 1 | 0 | 2175 | 100 | 0 | 0 | 0 | 0 | 0 |
| LU_NRes15 | Schools | 0.0 | 0.0% | 0 | 0.3 | 5 | 65,340 | 1 | 0 | 1370 | 200 | 0 | 0 | 0 | 0 | 0 |
| | Total | 13.0 | 25.5% | | | | | | | | | 0 | 506 | 506 | 206,039 | 79 |

IMPA CS2.0

Step 1: Introduction | Define Scenario Program

Step 2: Calibrate Infrastructure Assumptions & Inputs — Demand | Capacity | Cost | Revenue

Step 3: View Outputs & Reports | Data & References

View Development Summary | View Infrastructure Summary | View Revenue Analysis | Generate Report

## MUNICIPAL INFRASTRUCTURE SUMMARY

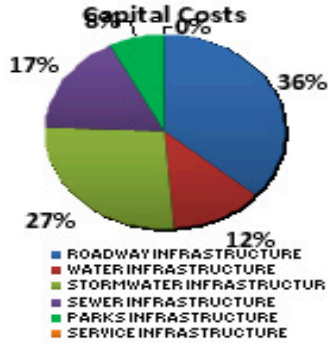
Select Standards Scenario: Median
Select Cost Scenario
Select Capacity Scenario

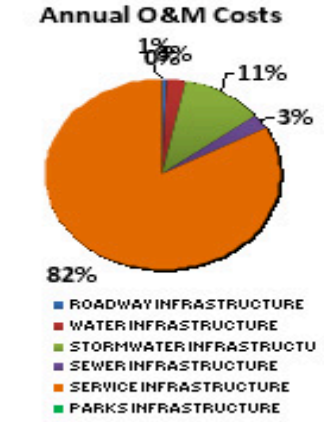
**Public Sector Cost Implication**

| CapitalCost | Cost / ERU | Annual O&M | O&M / ERU |
|---|---|---|---|
| $867,092 | $1,648 | $121,894 | $232 |

| Component | Quantities Total (ft) | Ft/ERU | Capital Construction Costs Total | Per ERU | Annual O&M Costs Total | Per ERU | Check to Include Capital Cost or |
|---|---|---|---|---|---|---|---|
| ROADWAY INFRASTRUCTURE | | | | | | | |
| Local Streets | 3,344 | 17.8 | $5,022,004 | $9,548 | $2,614 | $5 | ☐ |
| Major Streets | 3,519 | 6.7 | $2,233,459 | $4,246 | $1,223 | $2 | ☐ |
| Street Upgrades | 0 | 0.0 | $0 | $0 | $0 | $0 | ☑ |
| **Total Streets & Roadway** | **12,863** | 24.5 | **$7,255,463** | **$13,794** | **$3,837** | **$7** | |
| WATER INFRASTRUCTURE | ft | ft/ERU | | | | | |
| Laterals | 21,915 | 41.7 | $460,222 | $875 | $1,186 | $2.3 | ☐ |
| Distribution + Main | 13,363 | 25.4 | $1,718,082 | $3,266 | $4,744 | $9.0 | ☐ |
| **Total Water Distribution** | **35,278** | **67.1** | **$2,178,304** | **$4,141** | **$5,930** | **$11.3** | |
| **Supply, Treatment, Storage** | - | - | **$315,000** | **$599** | **$11,860** | **$22.5** | ☑ |
| **Total Water** | **0** | **0.0** | **$2,493,304** | **$4,740** | **$17,790** | **$33.8** | |
| STORMWATER INFRASTRU | ft | ft/ERU | | | | | |
| Laterals | 21,915 | 41.7 | $1,472,710 | $2,800 | $17,532 | $33.3 | ☐ |
| Collection | 12,863 | 24.5 | $3,889,733 | $7,395 | $57,883 | $110.0 | ☐ |
| Detention | | | $59,800 | $114 | $5,000 | $9.5 | ☐ |
| **Total Stormwater Infrastr** | **34,778** | **66.1** | **$5,422,243** | **$10,308** | **$80,415** | **$152.9** | |
| SEWER INFRASTRUCTURE | ft | ft/ERU | | | | | |
| Laterals | 21,915 | 41.7 | $1,227,258 | $2,333 | $949 | $1.8 | ☐ |
| Trunk + Collection | 13,363 | | $1,827,150 | $3,474 | $3,795 | $7.2 | ☐ |
| Treatment | - | - | $252,092 | $479 | $14,232 | $27.1 | ☑ |
| **Total Sewer** | **35,278** | **67.1** | **$3,306,500** | **$6,286** | **$18,976** | **$36.1** | |
| PARKS INFRASTRUCTURE | acres | acre/ERU | | | | | |
| Sports Facility | 0 | 0.000 | $0 | $0 | $0 | $0.0 | ☐ |
| City Park | 4 | 0.008 | $1,200,000 | $2,281 | $675 | $1.3 | ☐ |
| Pocket Parks/Tot Lots | 1 | 0.002 | $300,000 | $570 | $200 | $0.4 | ☑ |
| **Total Service** | **5** | **0.010** | **$1,500,000** | **$2,852** | **$875** | **$1.7** | |
| SERVICE INFRASTRUCTURE | # | #/ERU | | | | | |
| Police Officer(s) | 1 | - | - | - | $90,000 | $171.1 | ☐ |
| Fire Fighter(s) | 2 | - | - | - | $190,000 | $361.2 | ☐ |
| Other (health, education, etc.) | | - | - | - | $308,081 | $585.7 | ☐ |
| **Total Service** | **3** | - | **$0** | **$0** | **$588,081** | **$1,118.0** | |

| | | | | |
|---|---|---|---|---|
| **otal Infrastructure Cos** | **$19,977,509** | **$37,980** | **$709,975** | **$1,350** |
| **n Site (Developer) Cos** | **$17,910,418** | **$34,050** | | |
| **Public Sector Costs** | **$867,092** | **$1,648** | **$121,894** | **$232** |



IMPACS2 .0

Step 1 | Step 2 | Step 3

Introduction | Define Scenario Program | Calibrate Infrastructure Assumptions & Inputs (Demand | Capacity | Cost | Revenue) | View Outputs & Reports | Data & References

View Development Summary | View Infrastructure Summary | View Revenue Analysis | Generate Report

## Simple Payback Analysis

| | |
|---|---|
| Total Public Sector Costs | $867,092 |
| Public Sector Annual O&M Costs | $121,894 |
| Annual Revenue (Taxes etc.) | $168,290 |
| **Annual Net Revenue** | $46,396 |

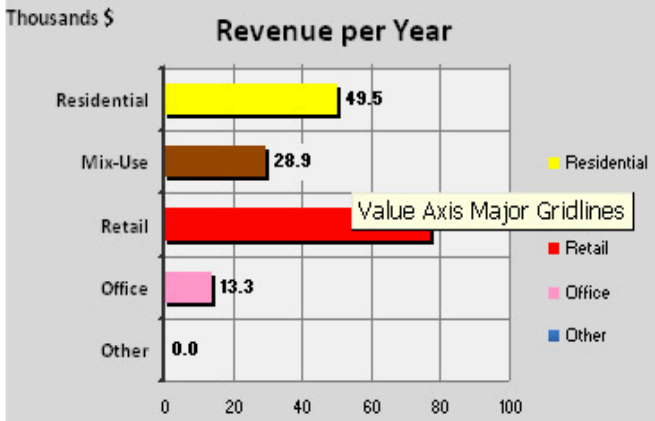
| | | |
|---|---|---|
| Actual Simple Payback: | 18.7 | yrs |
| Desired Simple Payback (yrs | 20 | |
| Gap per ERU (desired payba | $0 | per year |

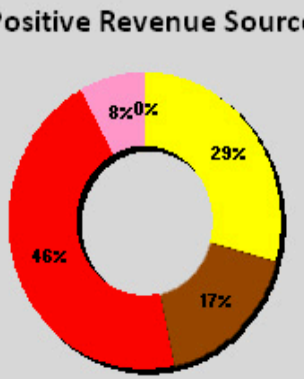
## Bond Analysis

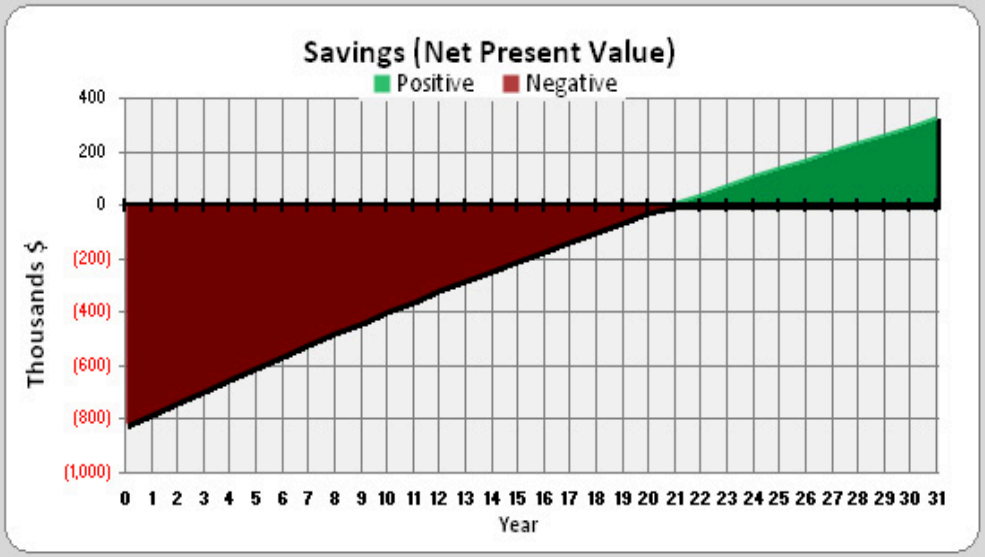
| | | |
|---|---|---|
| Maturity period (yrs | 20 | |
| Coupon Rate | 5.0% | |
| Annual Coupon Payments | $43,355 | |
| Total Additional Funds: | $3,042 | |
| Bond Gap per ERU: | $0 | |

## Life Cycle Cost Analysis

| | |
|---|---|
| Discount Rate | 5.0% |
| Analysis Time Period (yrs) | 20 |
| Maintenance Escalation rate | 0.0% |
| Net Present Value (NPV) savings (20 yrs) | -$20,139 |



# Fiscal Model Discussion

- Are your small communities experiencing growth pressure?
- How are they dealing with issues, such as:
  - Job-housing balance
  - Infrastructure investment and O&M
  - Services
- Are these responses different than the past?
- Is this model helpful?
  - What are we missing? (What can be improved?)

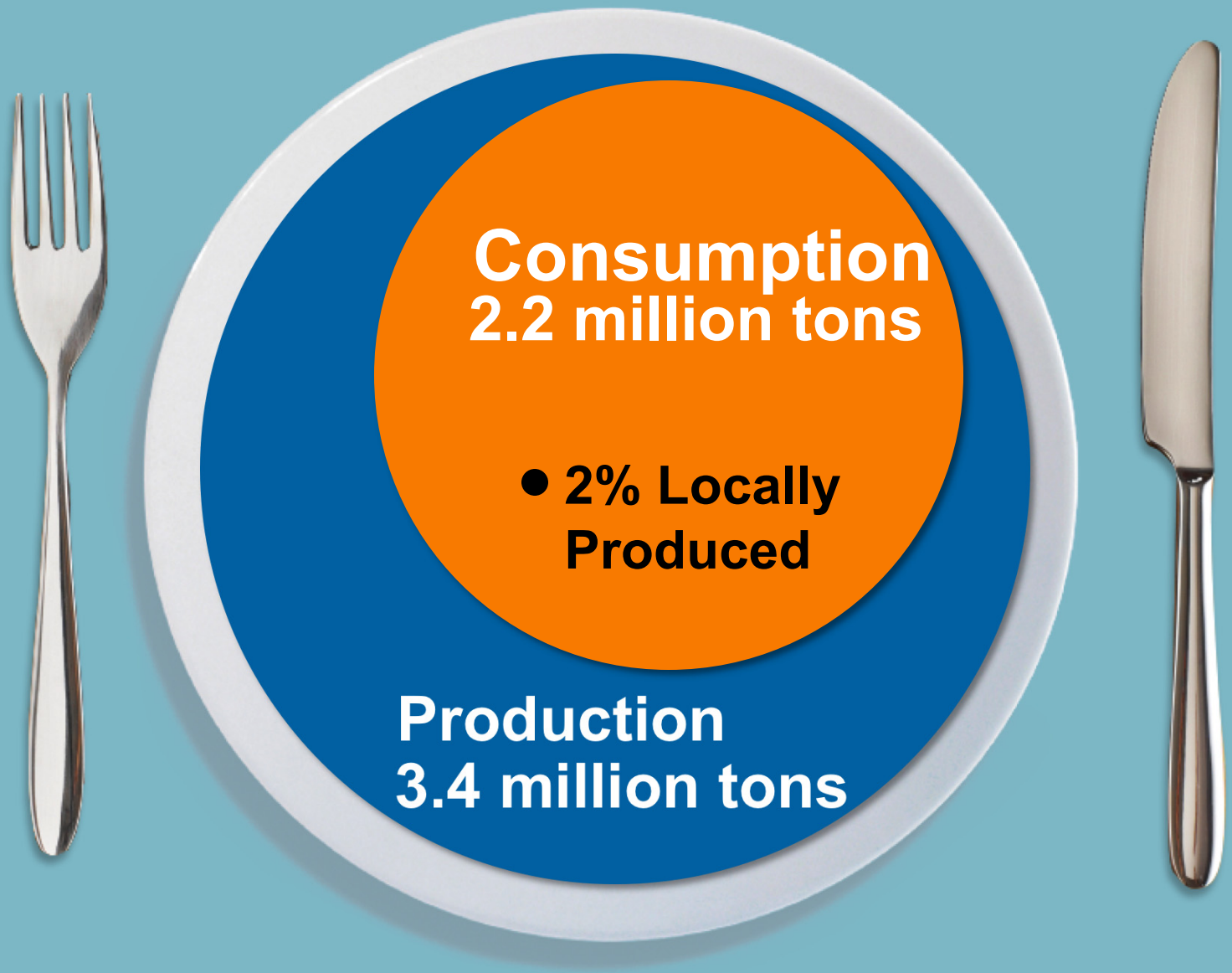

Understanding the
Local Food Economy

# Local Food System

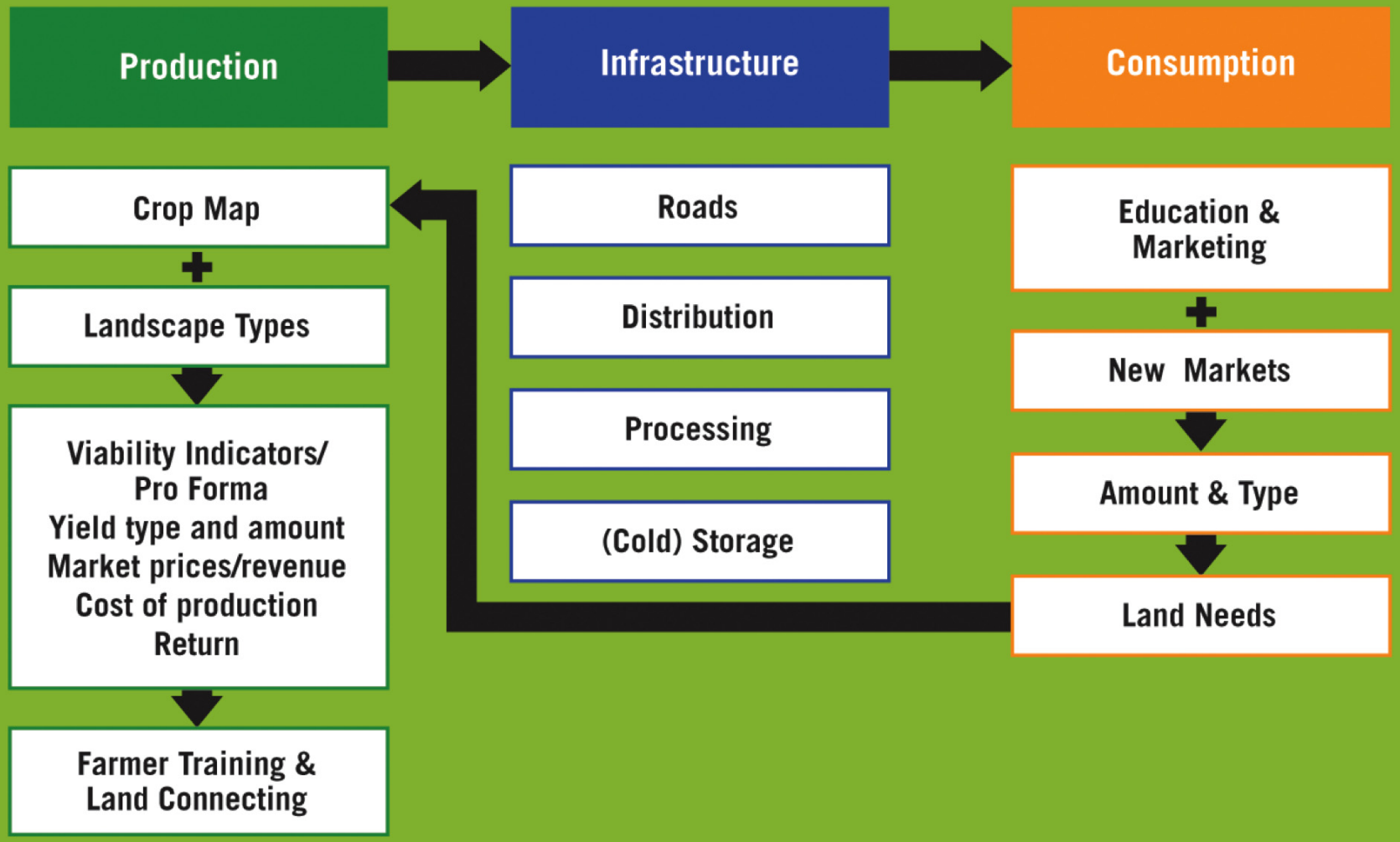
**Purpose:** Estimate supply and infrastructure needs to meet consumer demand for locally grown food

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

# Production and Consumption



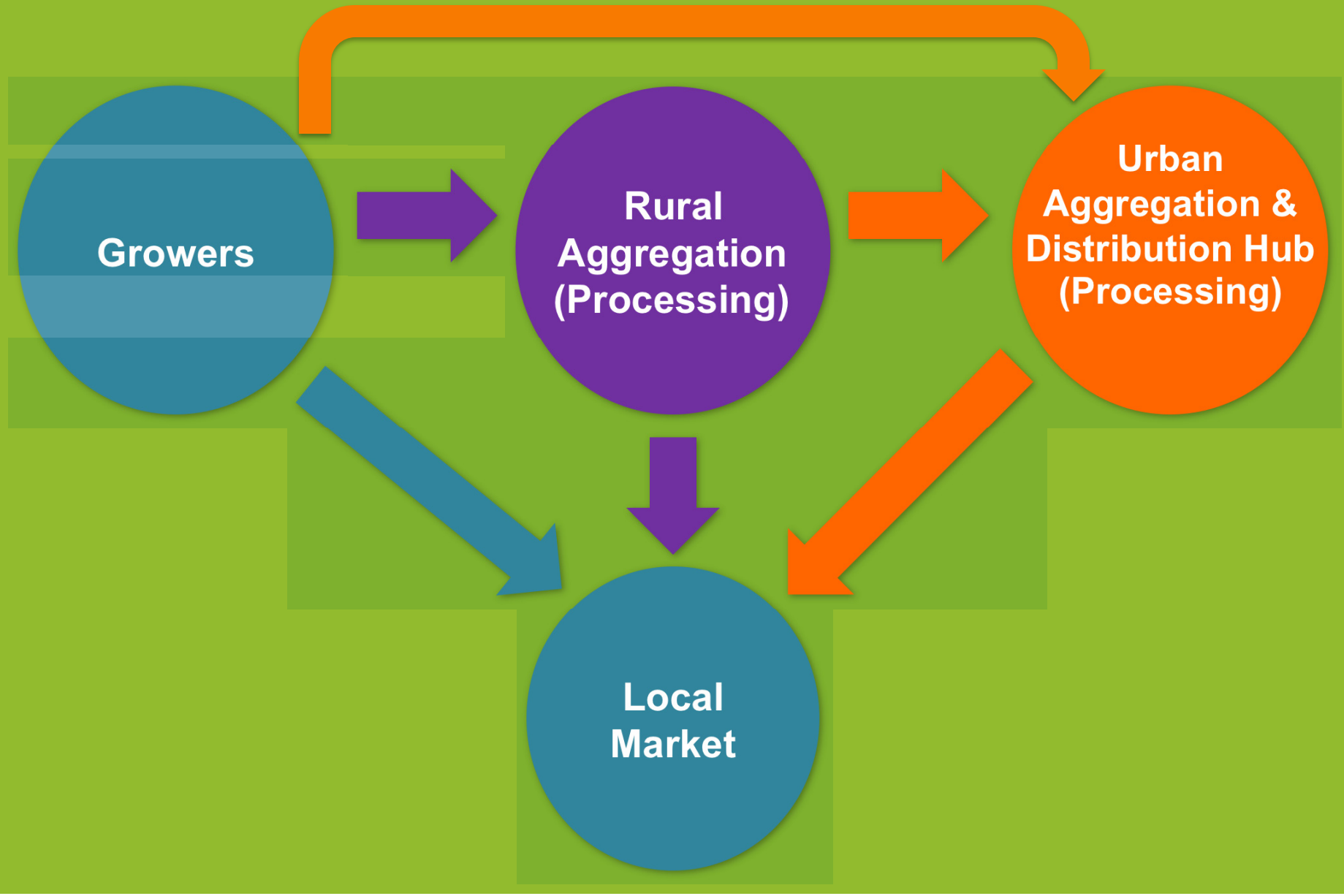
# Local food analysis chart




- Aggregate local produce
- Volume for larger customers
- Use existing distributors to get local food to market
- Marketing and labeling as “local”
- Shared facilities


- Diversify products
- Serve customers that need processed food
- Commercial kitchens
- Repurpose existing processing
- Mobile processing
- Shared facilities

# Local Food System



# Food Hub Research

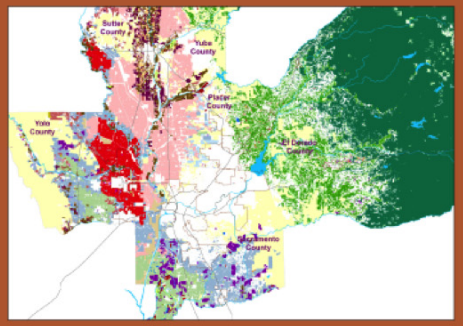
## Illinois Packing House Financial Data and Acreage Sensitivity Analysis

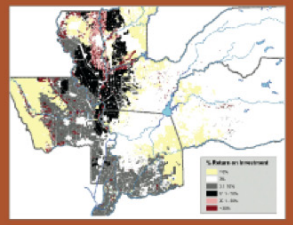
| Acres | Net Revenue | Gross Margin | SG&A | Operating Income | Operating Margin | Net Income | Seasonal Utilization | Annual Utilization |
|---|---|---|---|---|---|---|---|---|
| 500 | $1,767,136 | 12.1% | 20.2% | ($143,350) | -8.1% | ($320,527) | 13.4% | 4.4% |
| 1000 | $3,534,272 | 12.1% | 10.1% | $69,760 | 2.0% | ($107,417) | 26.8% | 8.8% |
| 1260 | $4,453,183 | 12.1% | 8.0% | $180,577 | 4.1% | $2,210 | 33.7% | 11.1% |
| 2500 | $8,835,680 | 12.1% | 5.5% | $583,668 | 6.6% | $263,889 | 66.9% | 22.1% |
| 3500 | $12,369,952 | 12.1% | 5.3% | $839,135 | 6.8% | $429,612 | 93.7% | 30.9% |
| 10500 | $37,109,856 | 12.1% | 5.0% | $2,619,505 | 7.1% | $1,584,375 | 281.0% | 92.6% |

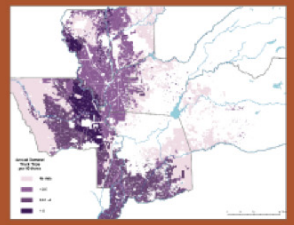
Source: Ready to Grow: A Plan for Increasing Illinois Fruit and Vegetable Crop Production

# New Tools for Understanding Agricultural Viability

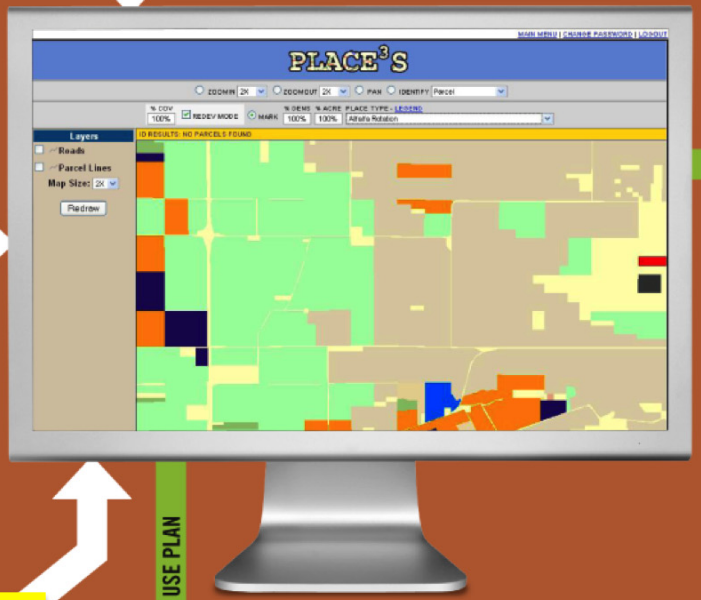
① CROP MAP

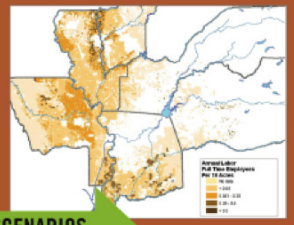




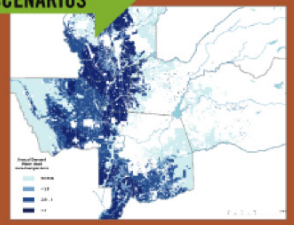


④ I-PLACE³S

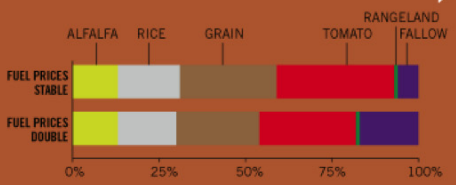


SCENARIOS



② ECONOMETRIC MODEL




LAND USE PLAN

⑤ INFRASTRUCTURE/FISCAL MODEL (IMPACS)

TYPE & AMOUNT OF INFRASTRUCTURE & SERVICES NEEDED

COST TO BUILD, MAINTAIN & PROVIDE SERVICES

$$$ REVENUE GENERATED FROM LAND USE PLAN

③ DIET/LAND NEEDS

NUMBER OF PEOPLE × LOCAL % × TYPE OF CONSUMPTION = HOW MUCH LAND NEEDED

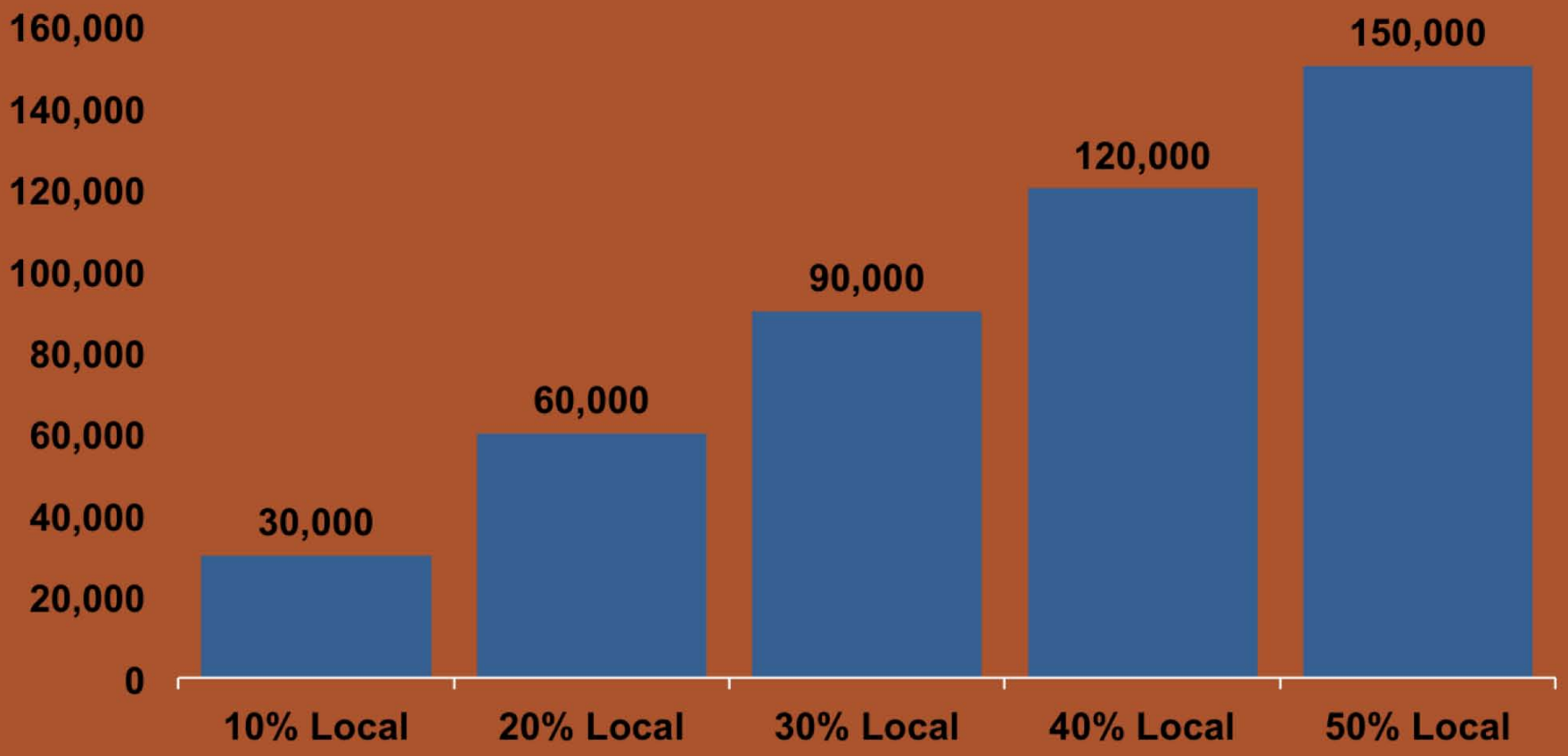
# Linking Consumption to Production

Land Needs Model Inputs:

- Population
- Consumer diet(s)
- Percent local
- Farming system(s)
- Farmer skill level(s)

# Farmland Needs for Local Food

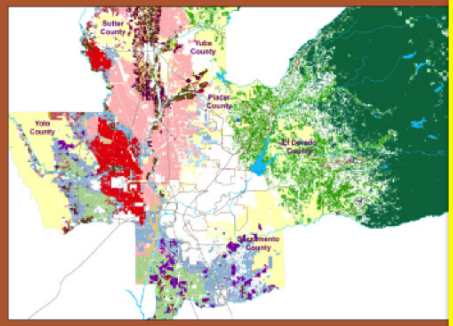
**Acres (*excluding meat and dairy production*)**



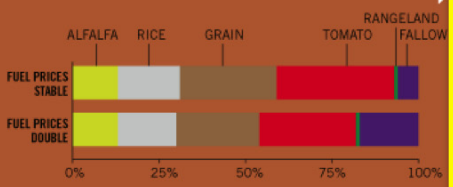

***Assumes 1) USDA recommended diet, and 2) mostly expert farmers***

# New Tools for Understanding Agricultural Viability

① CROP MAP



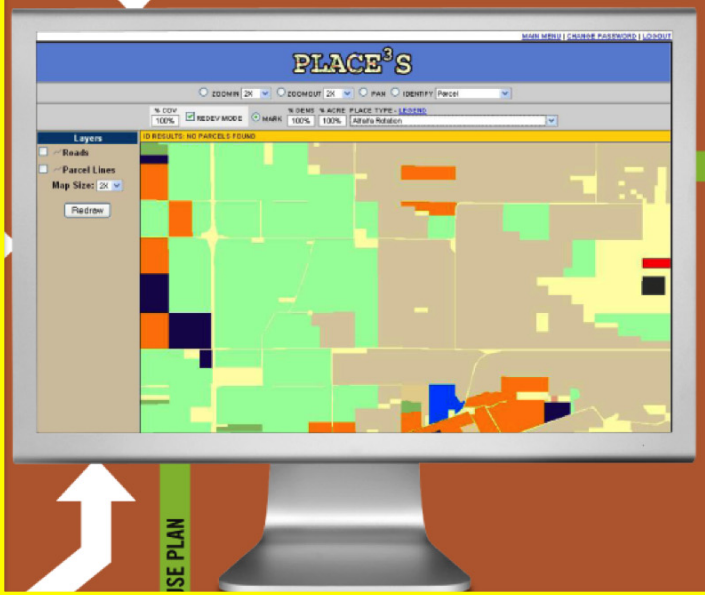
② ECONOMETRIC MODEL

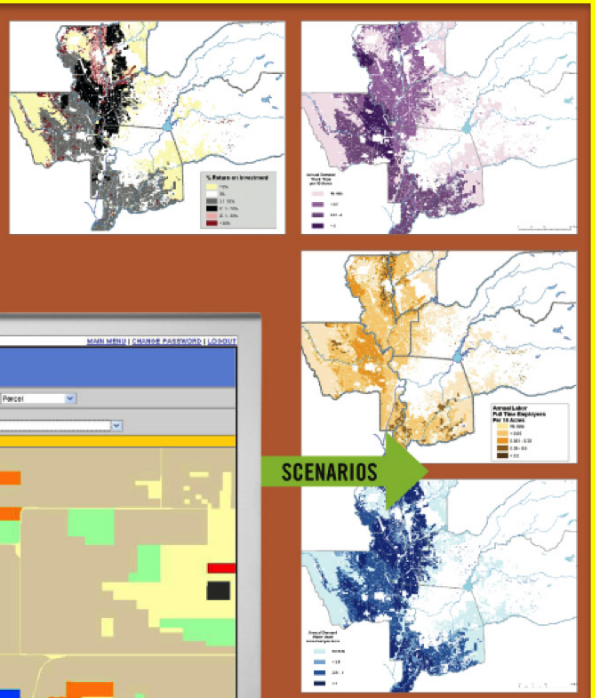



③ DIET/LAND NEEDS

NUMBER OF PEOPLE × % LOCAL × TYPE OF CONSUMPTION = HOW MUCH LAND NEEDED

④ I-PLACE³S



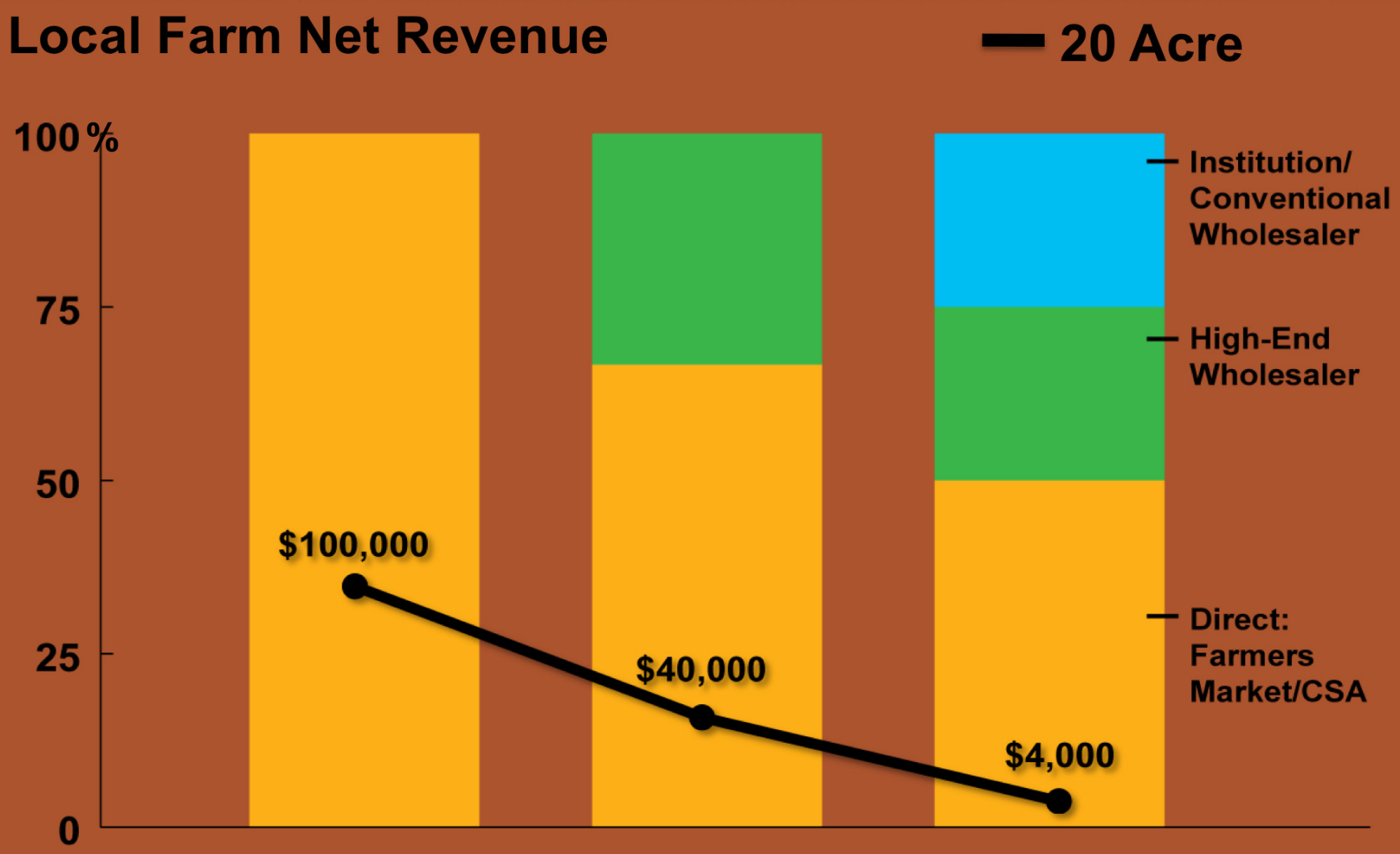
SCENARIOS

LAND USE PLAN

⑤ INFRASTRUCTURE/FISCAL MODEL (IMPACS)

TYPE & AMOUNT OF INFRASTRUCTURE & SERVICES NEEDED → COST TO BUILD, MAINTAIN & PROVIDE SERVICES → $$$ REVENUE GENERATED FROM LAND USE PLAN

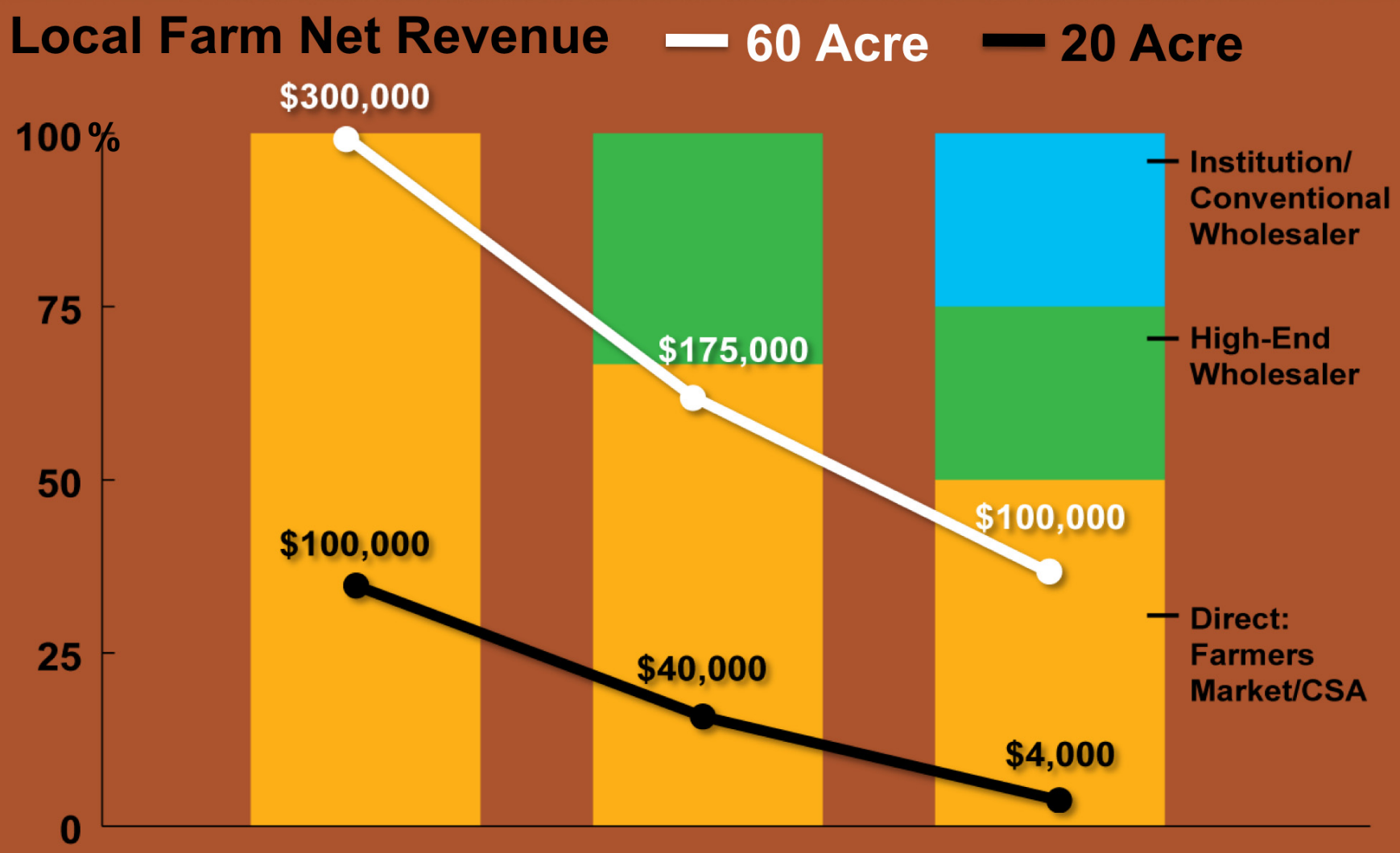
# Markets and Revenue



# Farm Scale

- Wholesale and Institutional buyers have lower price point
- Larger farms may be better able to serve these markets
- Trade off margins for volume
- Hand labor → Machine labor
- Larger scale → Cost per acre decrease

# Markets and Revenue




Land Use

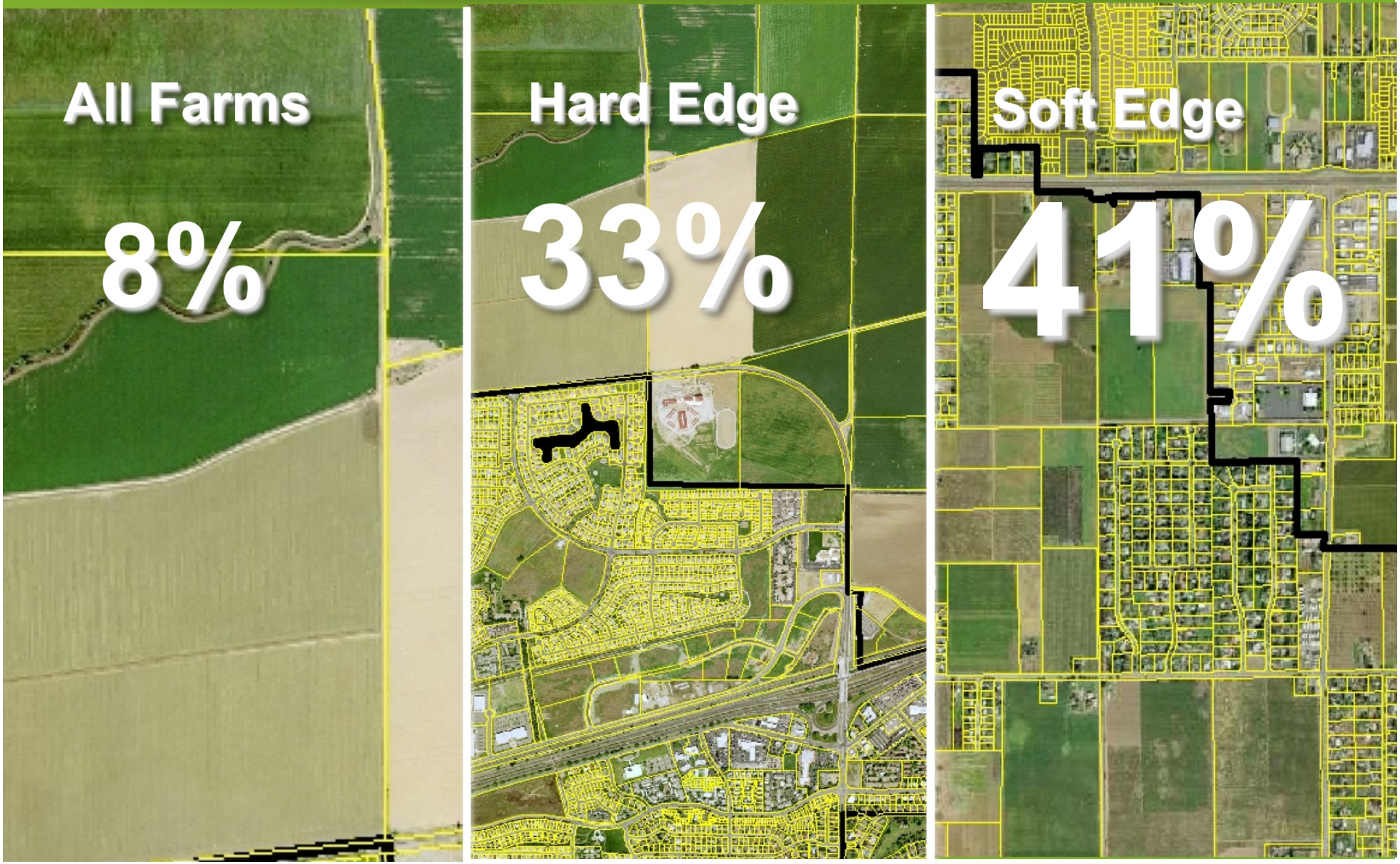
# Rural-Urban Interface

## Hard Edge

## Soft Edge

# Rural-Urban Interface:

## Percent likelihood of fallowing at…



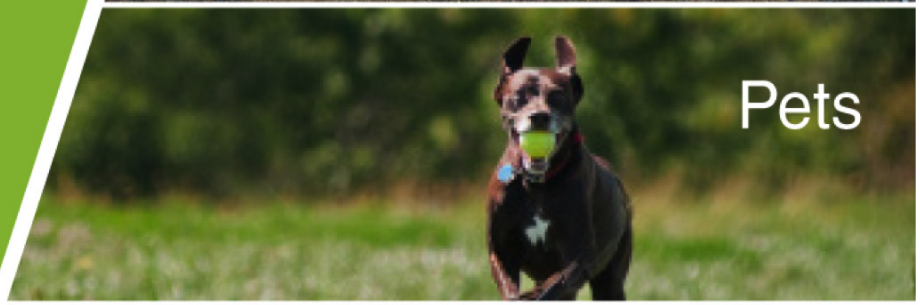
# Reducing Conflict

## Rural

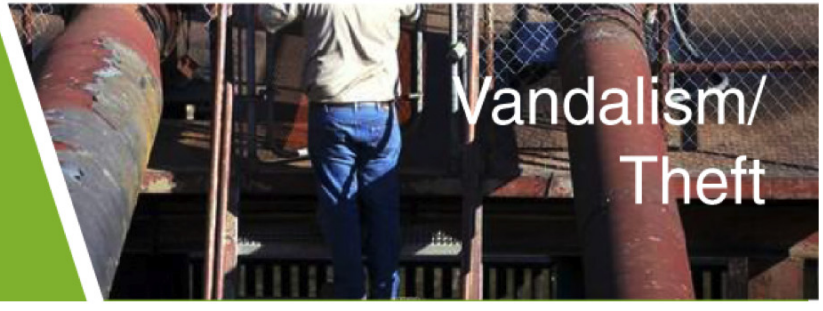




## Urban





# Innovations at the Edge and Beyond

## Infill & Redevelopment

SACRAMENTO REGION Blueprint TRANSPORTATION + LAND USE PLAN

## Rural-Urban Edge

SACRAMENTO REGION RURAL-URBAN CONNECTIONS STRATEGY

- 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.


Yuba-Sutter
NCCP/HCP
Placer HCP
Phase I
Yolo Natural
Heritage
Program
El Dorado County
Integrated
Natural Resources
Management Plan
Natomas Basin HCP
South
Sacramento
HCP
Delta
Protection
Act
80
99
5
50

# Habitat Opportunities on Agriculture Lands

**Rice**
10 species including Swainson's hawk, burrowing owl, peregrine falcon

**Row Crops**
7 species including Swainson's hawk, burrowing owl, loggerhead shrike

**Irrigated Pasture**
10 species including Swainson's hawk, burrowing owl, peregrine, falcon

**Alfalfa**
9 species including Swainson's hawk, burrowing owl, ferruginous hawk

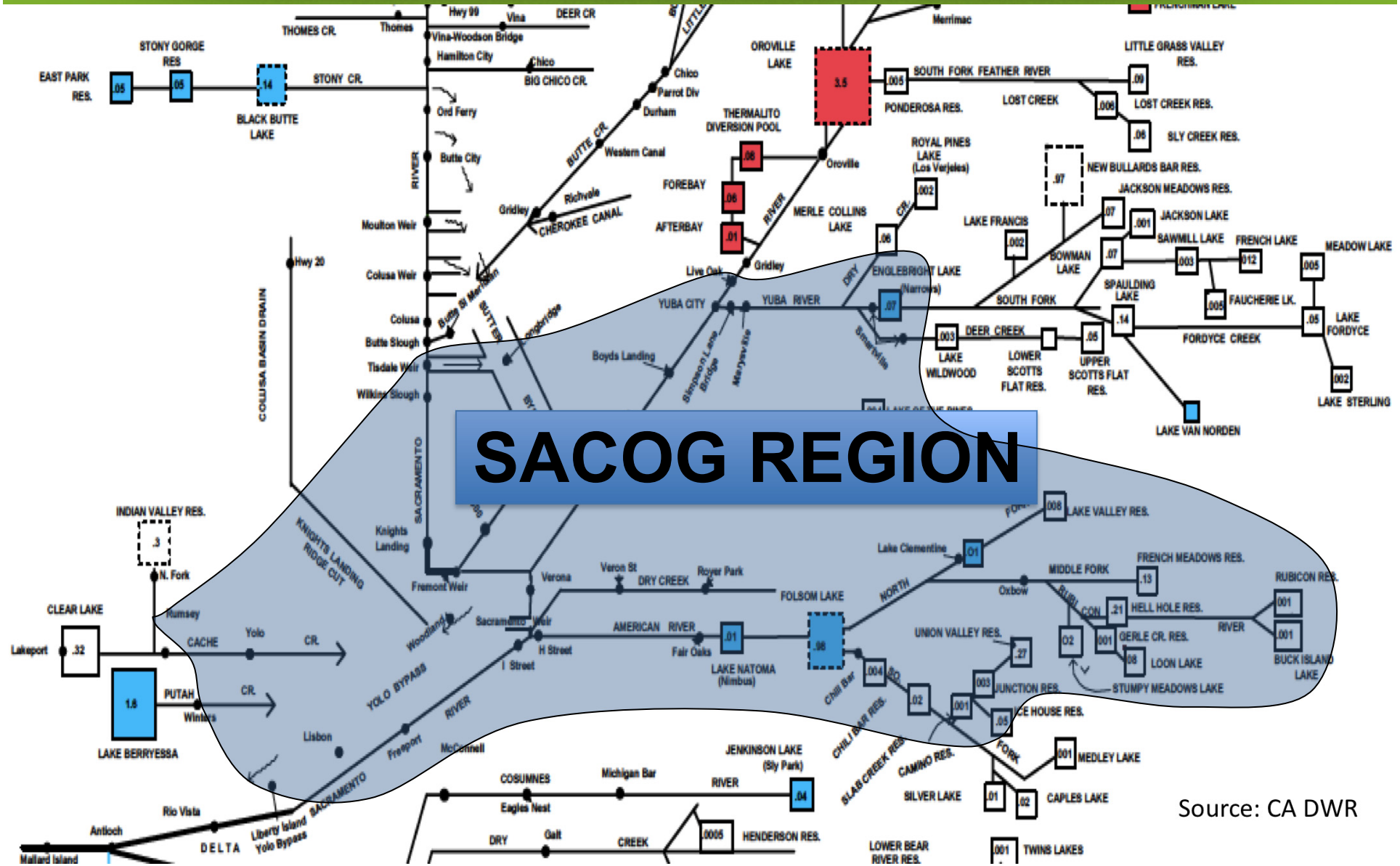
**Orchards**
3 species including Cooper's hawk, yellow warbler

**Grazing, no vernal pools**
16 species including Swainson's hawk, burrowing owl

**Grazing, with vernal pools**
16 species including fairy shrimp, tadpole shrimp

*Source: Sierra Club, Mother Lode Chapter*

# Surface Water System




Source: CA DWR

# Ag Land Conversion: Vehicle $C0_2$ Emissions

**For every 10 acres:**

Agriculture = 0.5–1.0 ton / YEAR

Development = 0.5–1.0 ton / DAY

# Transportation

**Challenges**

Urbanizing rural roads

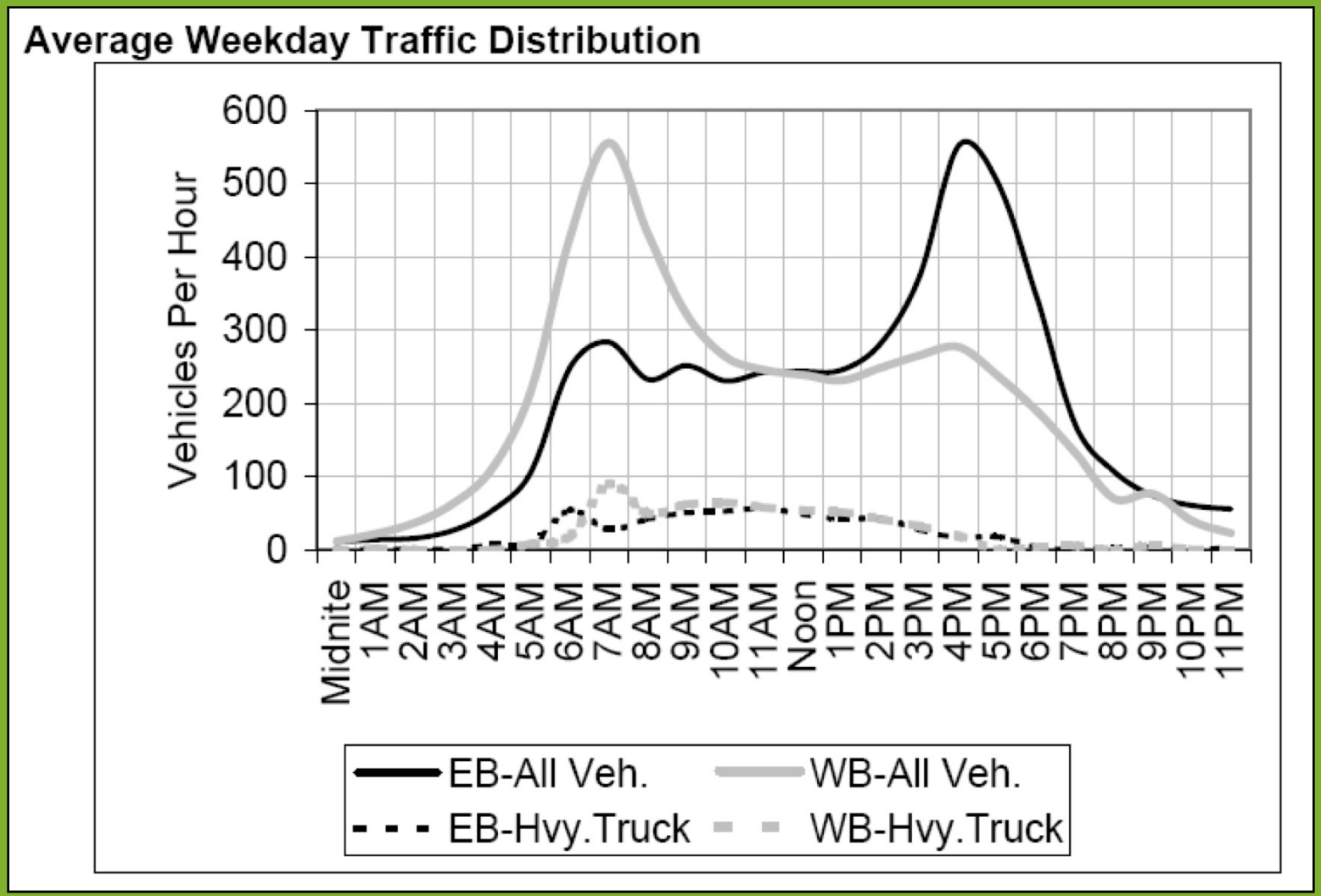
Conflicts/accidents

Farm worker transport

Road standards

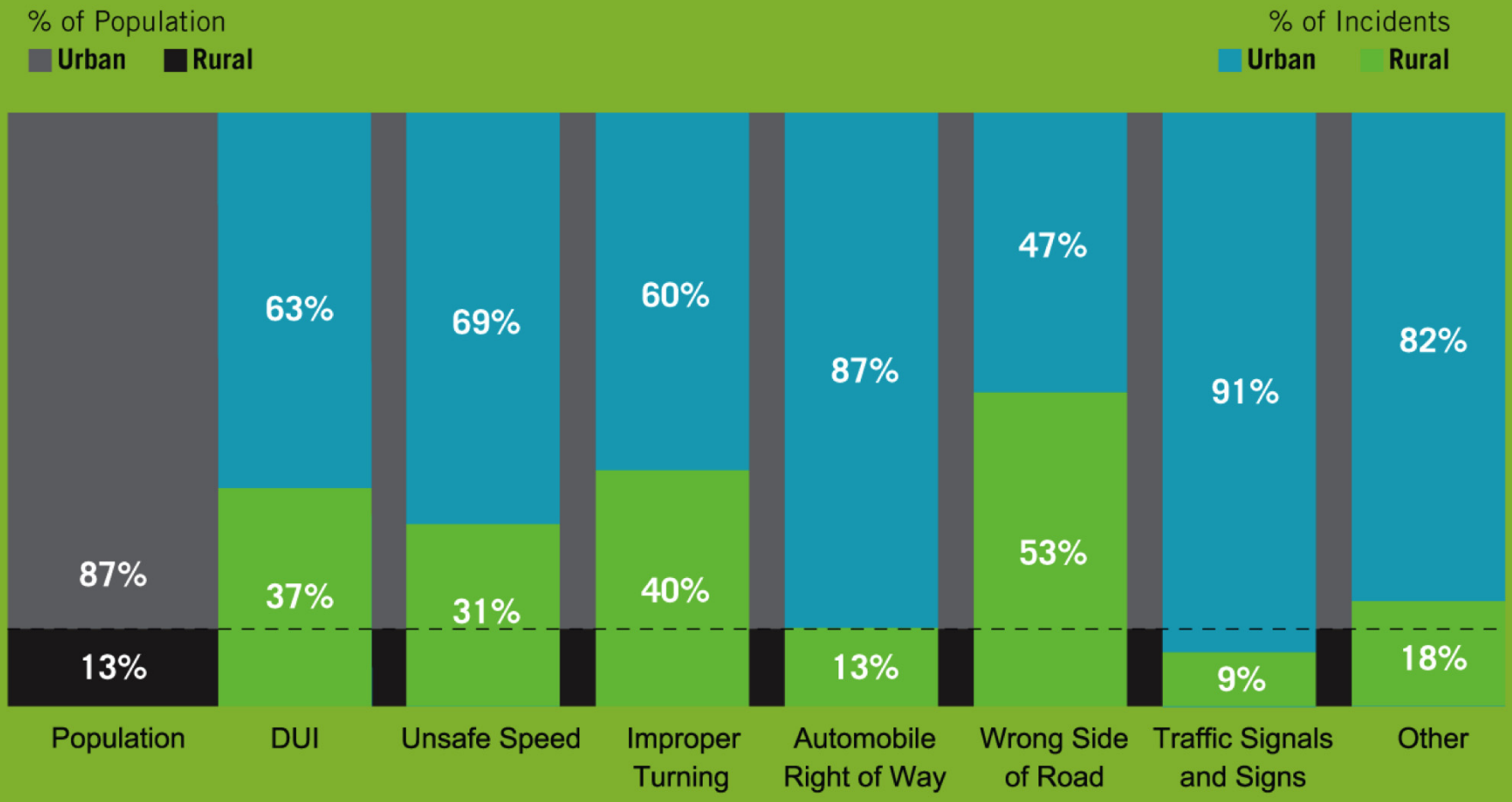
Maintenance

# Urban Rural/Edge Travel: Existing Conditions



# Urban Rural/Edge Travel: Existing Conditions

## 44% of fatal collisions vs. 13% of population

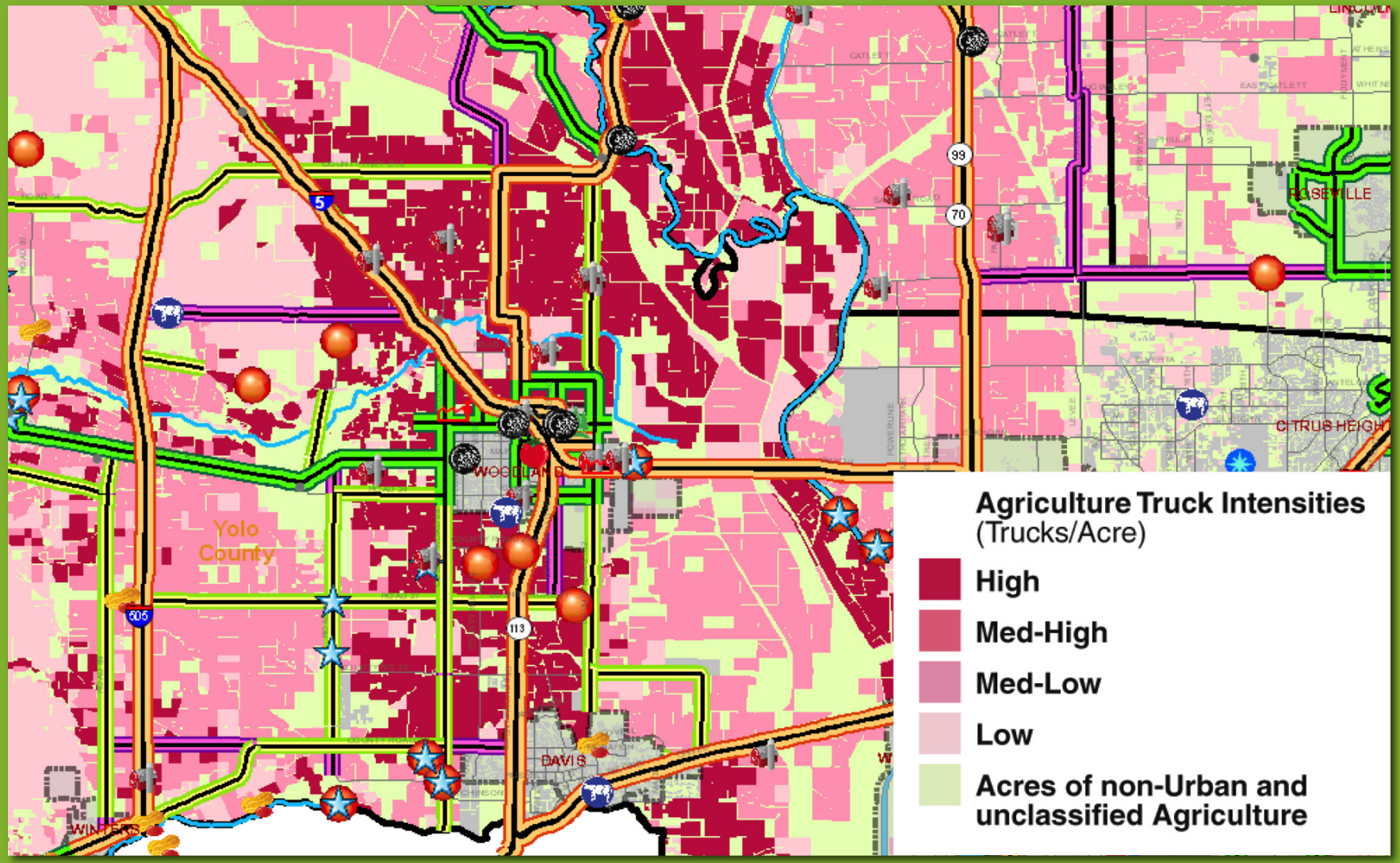



# Expand Rural Mobility

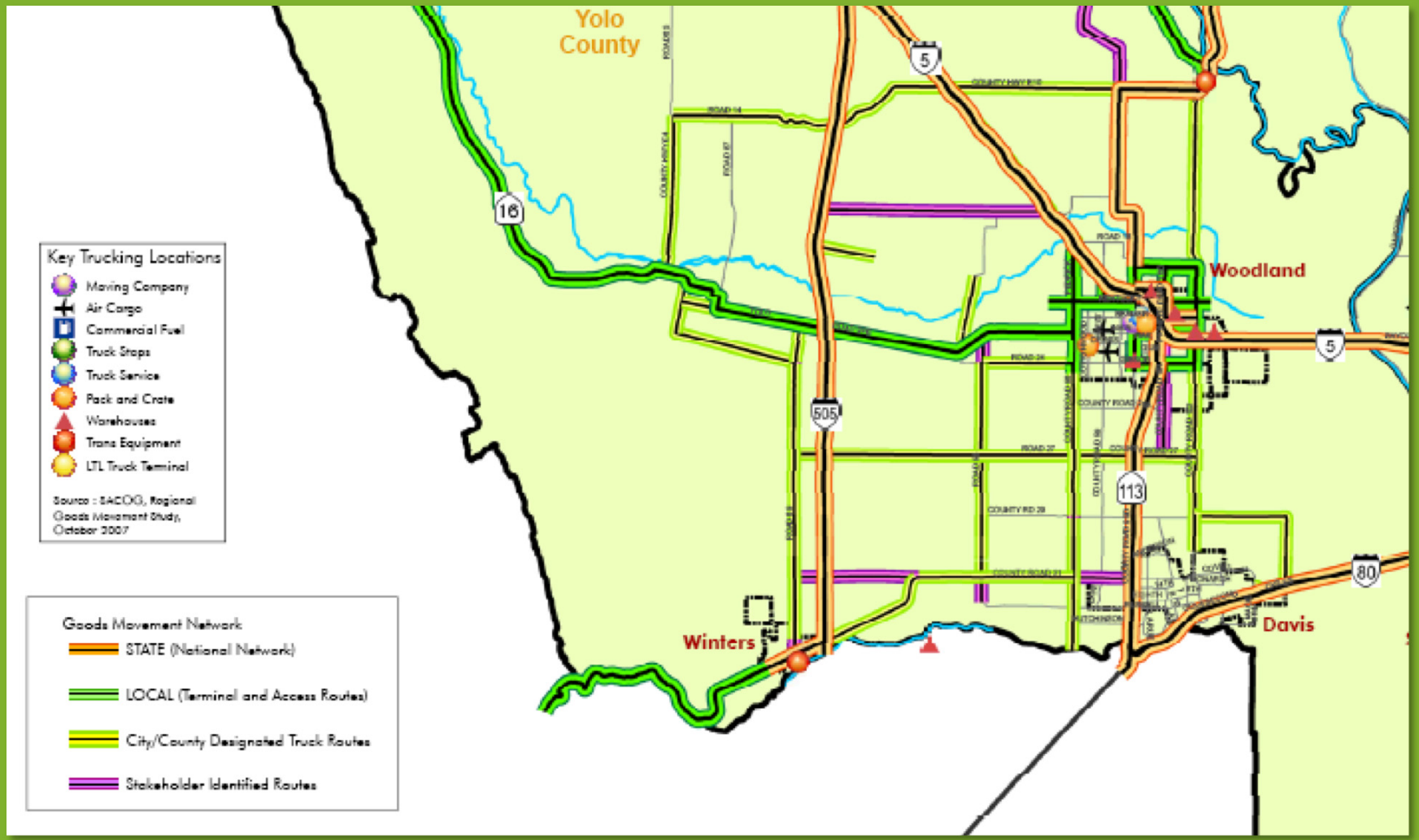
# Expanded Mobility: Existing Conditions

- Unsafe & unreliable transportation for ag workers
- Agricultural worker transportation program (AWTP)

# Farm to Market Travel: Existing Conditions



# Farm to Market Travel: Innovations




Agritourism
CARSON RD
1 High Hill Ranch
3 Boa Vista Orchards
6 Madrona Vineyards
40 Fudge Factory Farm
42 Cardanini Pumpkin Patch
APPLE HILL
Scenic Drive
EL DORADO COUNTY


Port of West
Sacramento

# SGC Project Objectives

Support Blueprint (MTP/SCS) implementation by enhancing agricultural viability:

- Community diet and food deserts
- Food system infrastructure needs
- Ag worker support
- Rural community infrastructure
- Ag land protection and farm-to-market travel

# Future Work

- Energy production
- Carbon sequestration
- Recreation and open space
- Regulations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