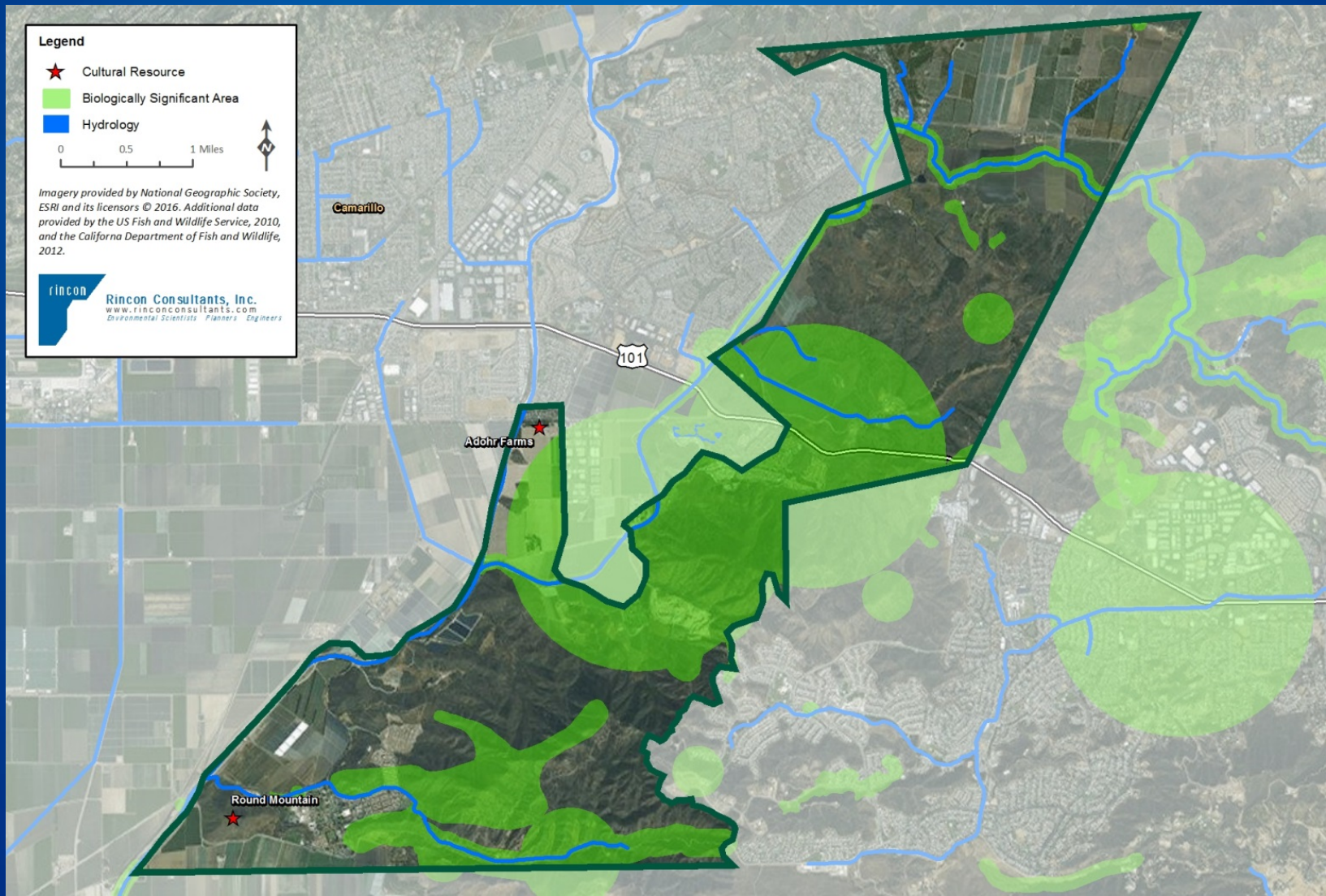


Systematic Trail Planning Using Geographic Information System (GIS)



Systematic Trail Planning Using Geographic Information System (GIS)



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Goals of Session

1) Demystify GIS



2) Learn applications of GIS



Outline

- 1) Background on GIS:
 - Benefits
 - Expertise and computing power required
- 2) Introduction to case study
- 3) Basemaps
- 4) Spatial ranking system
- 5) Next steps



Benefits of GIS

Better:

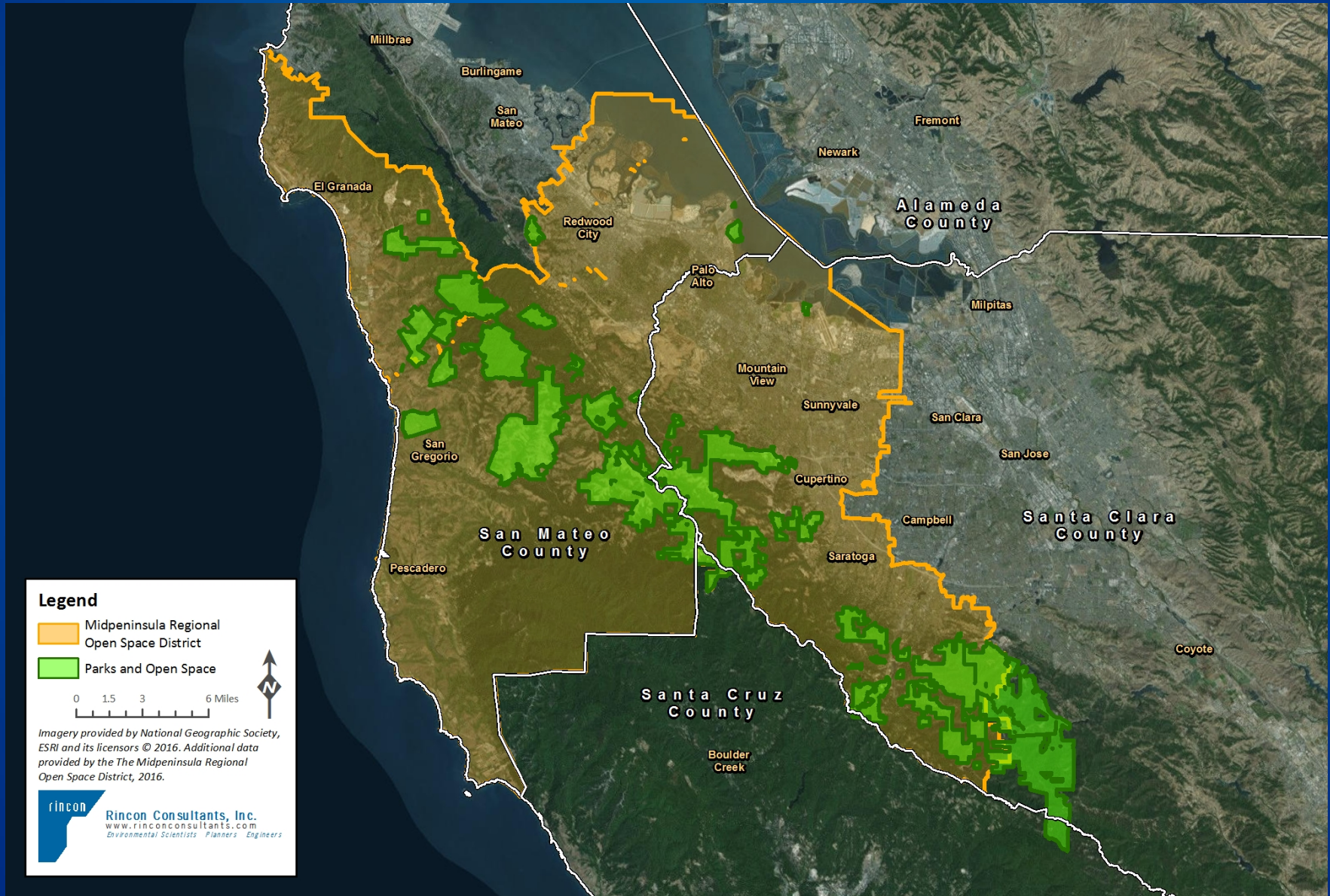
- 1) Decision-making
- 2) Communication
- 3) Geographic record-keeping



Who Can Use GIS?

- 1) Anyone can use online data portals with GIS functionality
- 2) But may need special expertise for more complex tasks:
 - a) Familiarity with a GIS program
 - b) Good spatial awareness
 - c) Understanding of “coordinate space.”
 - d) Sense for the quality of data – “garbage in, garbage out”

Regional Open Space Agencies



Legend

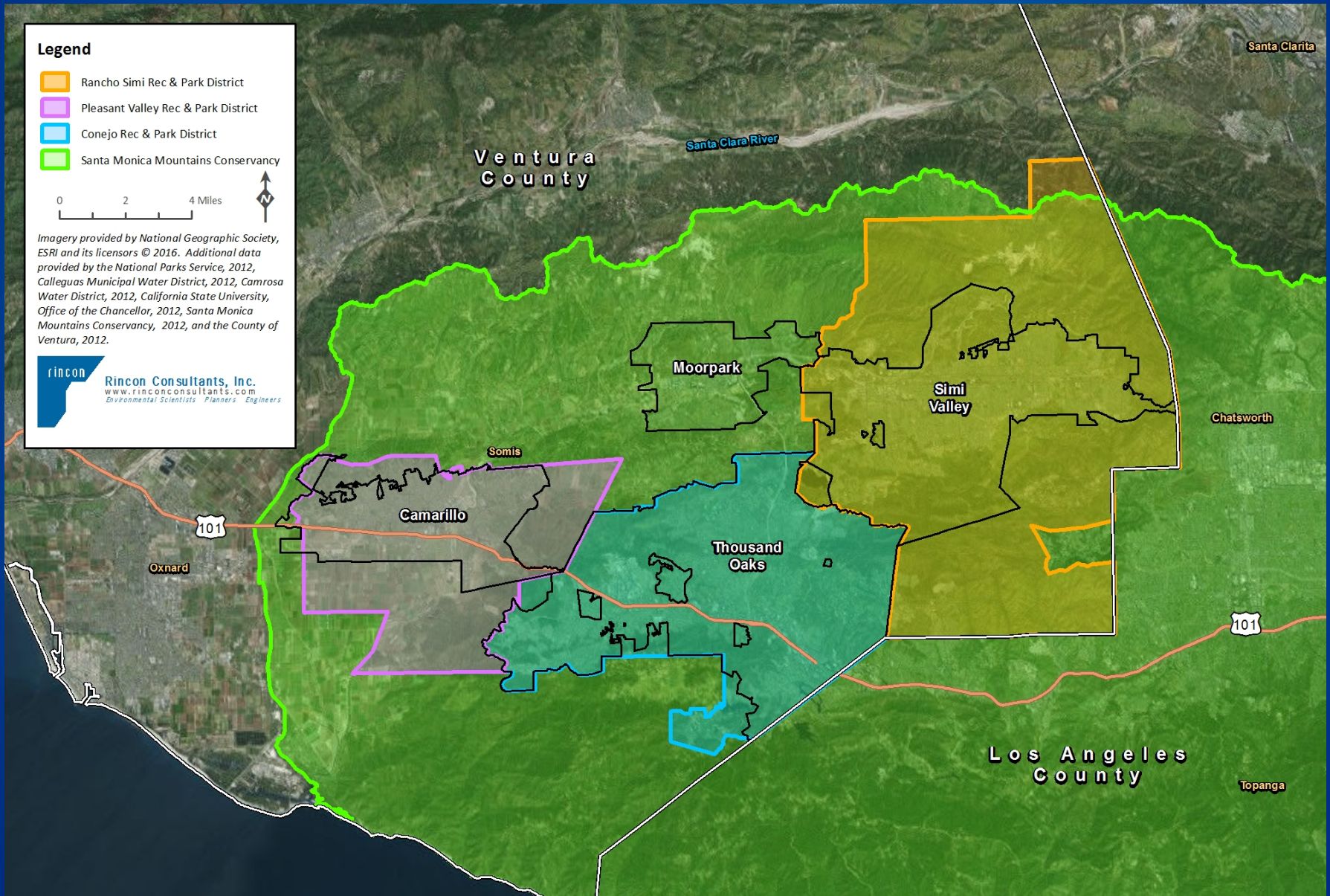
Midpeninsula Regional
Open Space District

Parks and Open Space

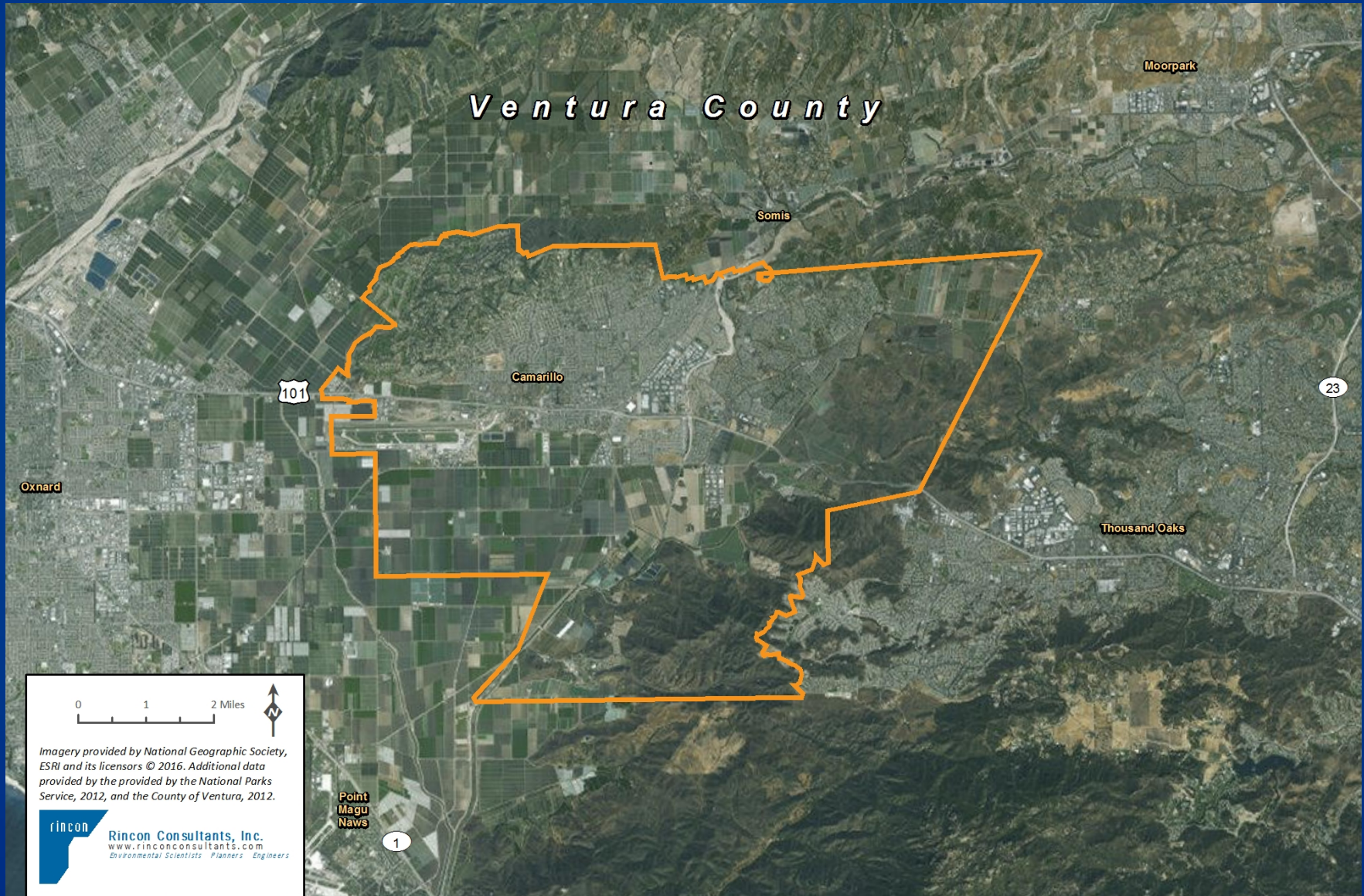
0 1.5 3 6 Miles

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Open Space District, 2016.

Regional Background



Local Context



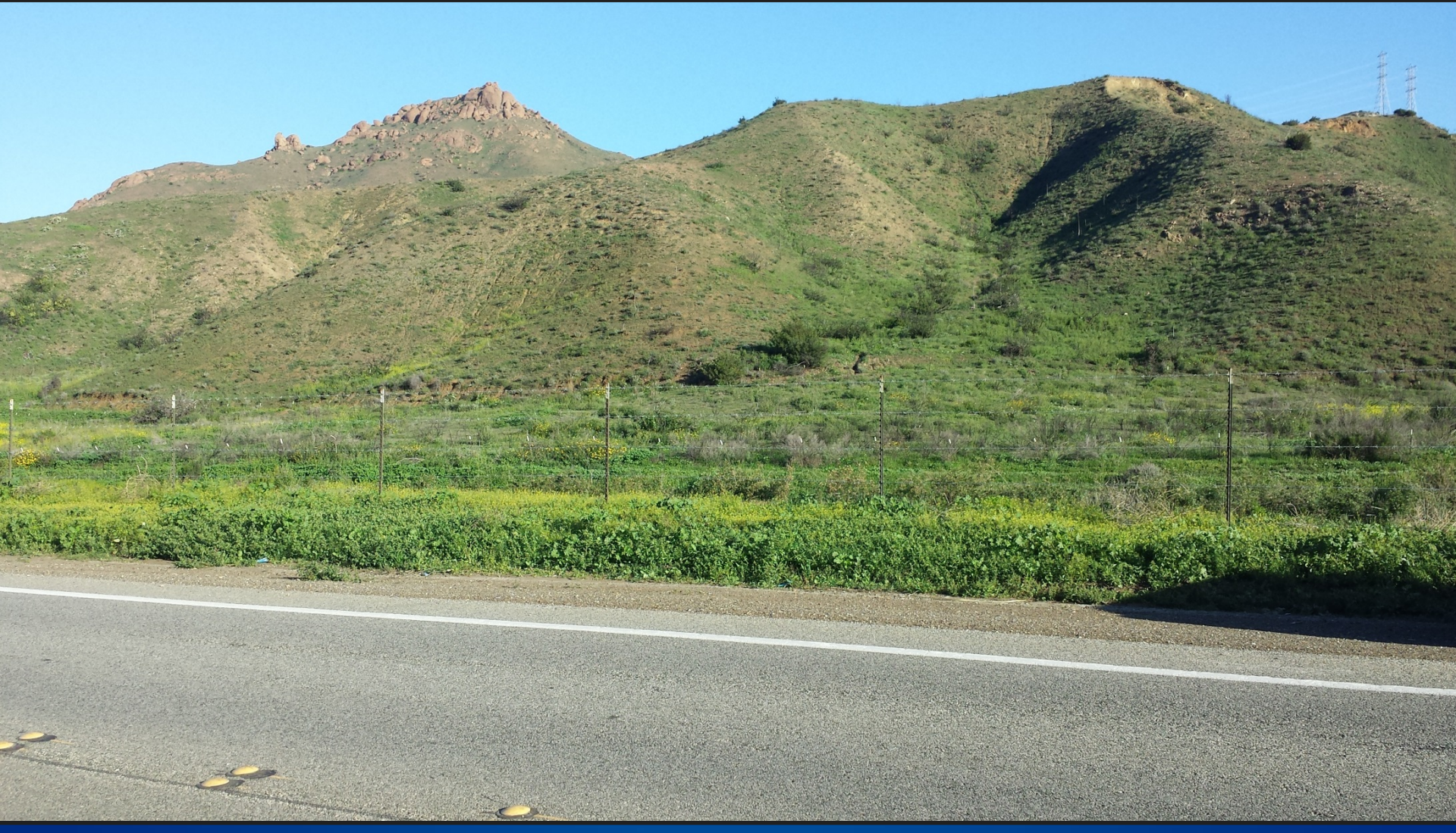


Pleasant Valley Recreation & Park District

- **PVRPD** Established in 1962
 - Boundaries extend beyond City of Camarillo
 - 45 square mile area
 - 27 parks; 300 acres
- **City of Camarillo** established in 1964
 - 19.5 square mile area
 - 2 small pocket parks; 6 acres
- **Camarillo Grove Park** only nature-based
 - Acquired in 2002 from Ventura County
 - 25 acres: trail system & nature center
 - Keystone location; connect to Santa Rosa Valley/Santa Monica Mountains















The First Step: Creating a Basemap

Basemap → a grouping of the most basic layers that provide background info for all GIS analysis

Typical layers in basemap:

- Geographic boundary of study area
- Roads
- Land ownership
- Aerial imagery

Study Area

Legend

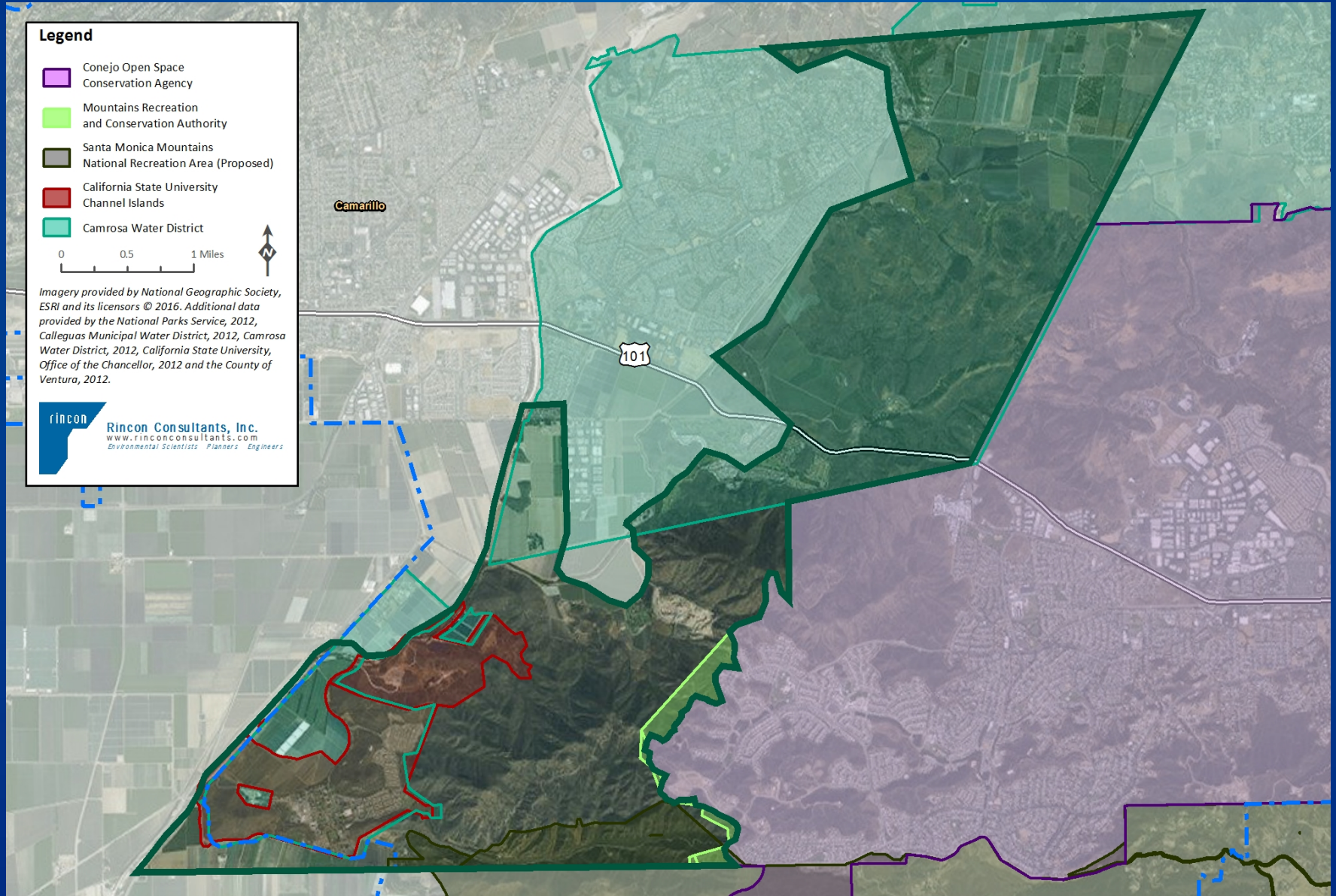
-  Conejo Open Space Conservation Agency
-  Mountains Recreation and Conservation Authority
-  Santa Monica Mountains National Recreation Area (Proposed)
-  California State University Channel Islands
-  Camrosa Water District

0 0.5 1 Miles



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Parcel Ranking System: Choosing Criteria

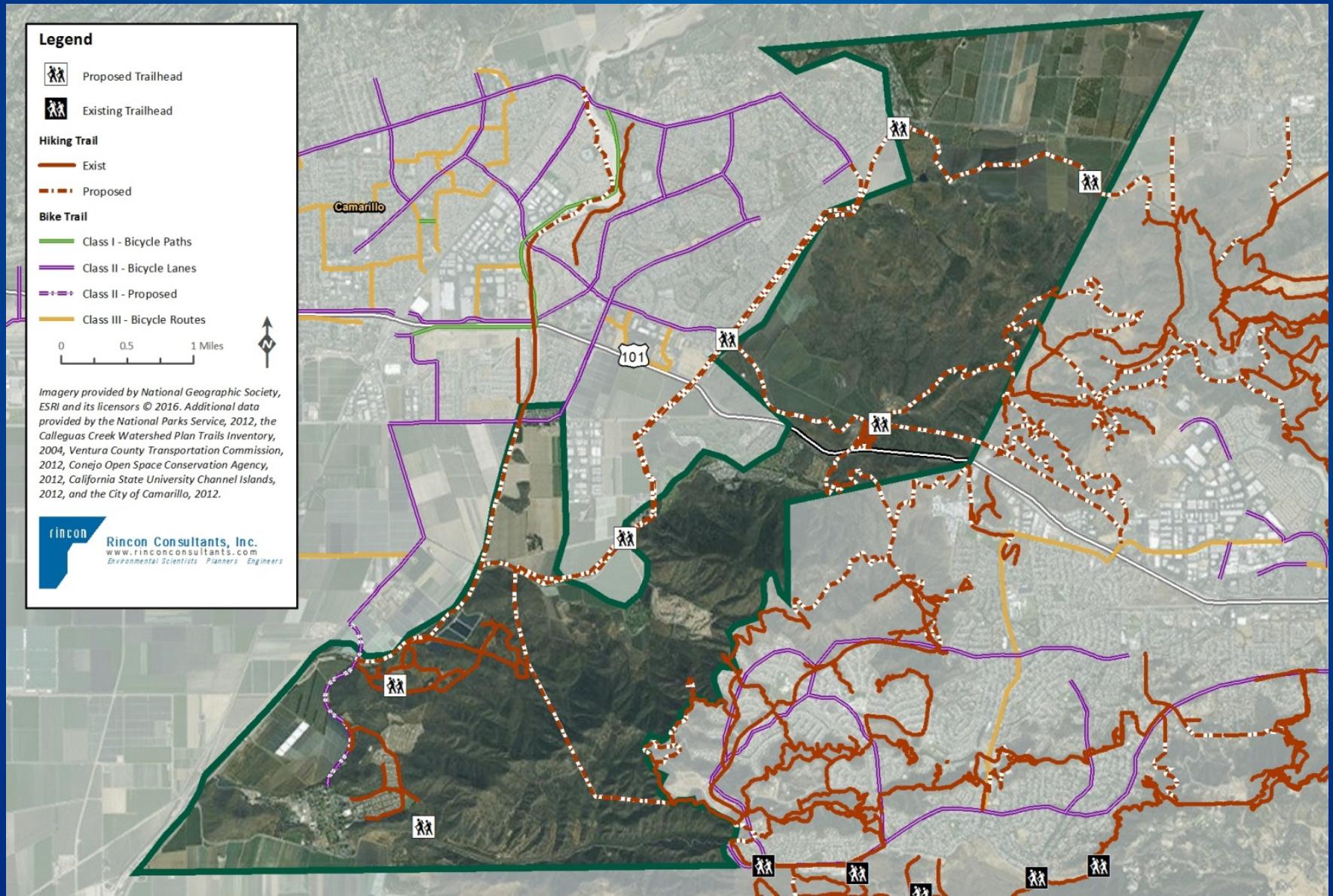
- 1) Proximity to trails and trailheads
- 2) Proximity to biological, cultural, and hydrological resources
- 3) Ownership: public or private?
- 4) Accessibility from bike trails and roadways
- 5) Topography



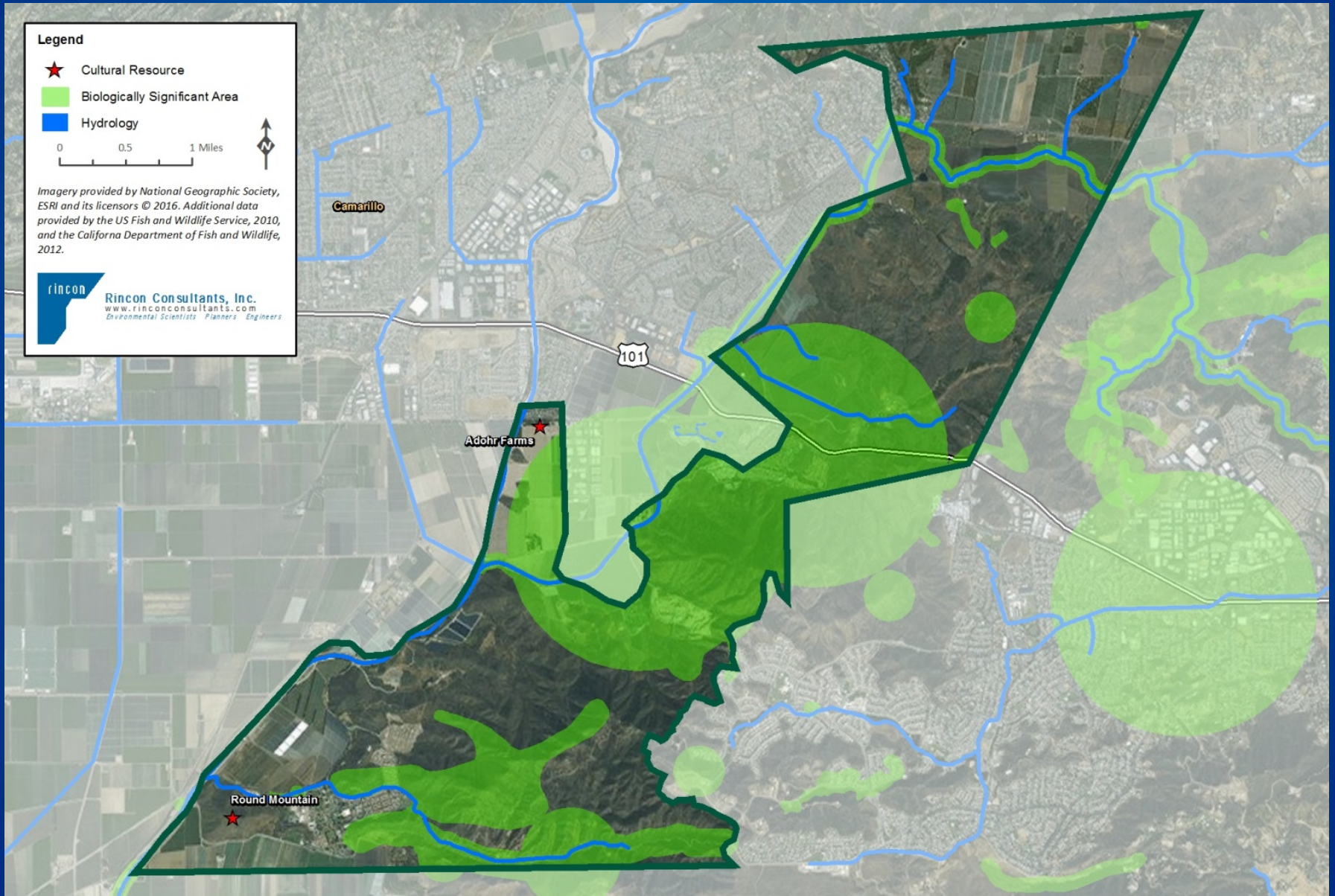
Setting up the Ranking System

- 1) Prioritize layers: assign each one a “weight.”
- 2) Choose a “suitability scale” for each layer.
- 3) Stack all layers to create final ranking map:
 - Sum of weight x suitability value for each layer = final ranking by parcel

Hiking Trails, Bikeways, and Roads



Natural and Cultural Resources



Land Ownership

Legend

- Private Ownership (8158 ac)
- State Ownership (1273 ac)
- County Ownership / Easement (116 ac)
- Utility Ownership (208 ac)
- Special District Ownership (93 ac)

0 0.5 1 Miles



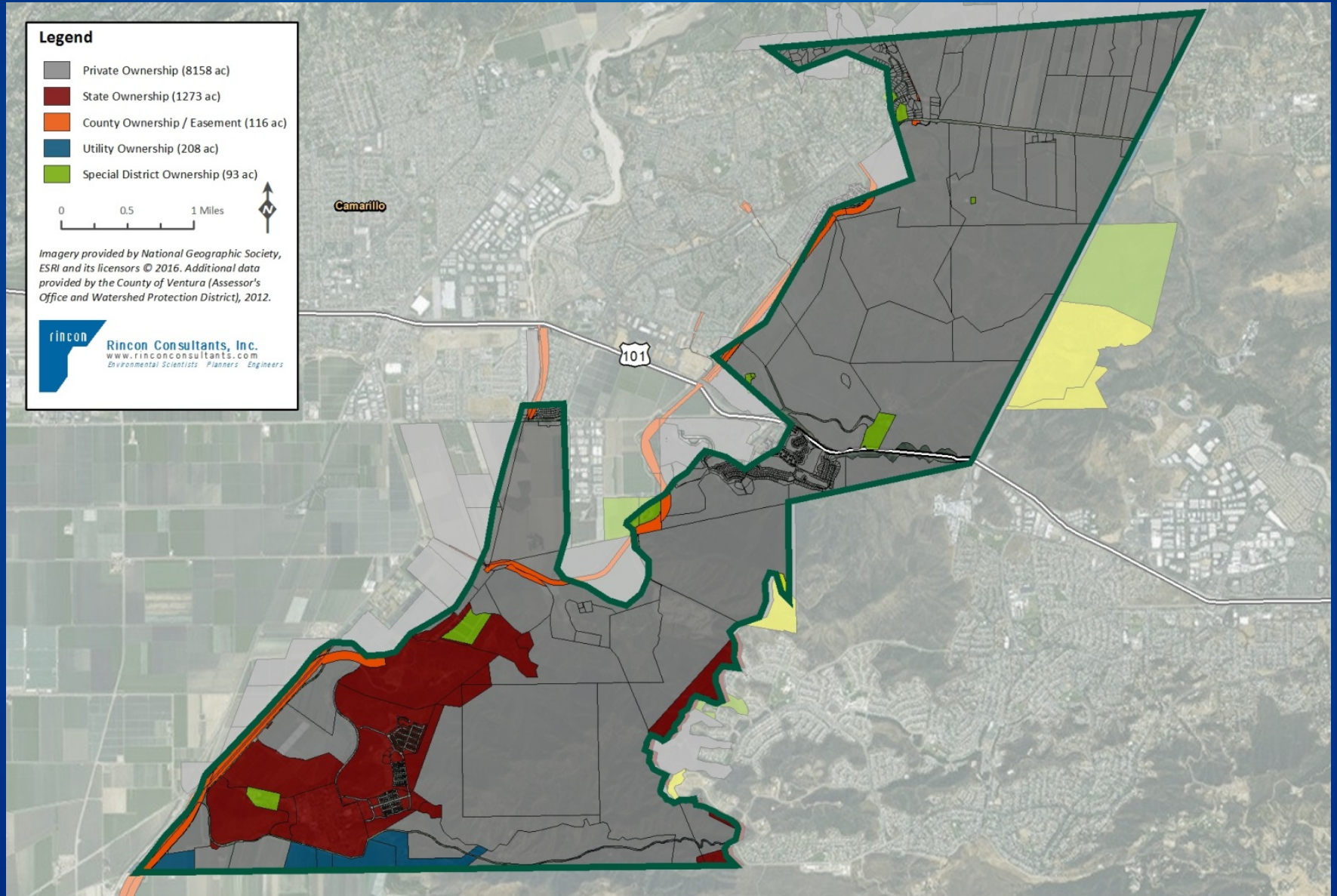
Camarillo

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Consolidated Ranking

Legend

Parcel Ranking Score

- 0 - Not part of Analysis
- 1 - Lowest Value
- 2
- 3
- 4 - Highest Value

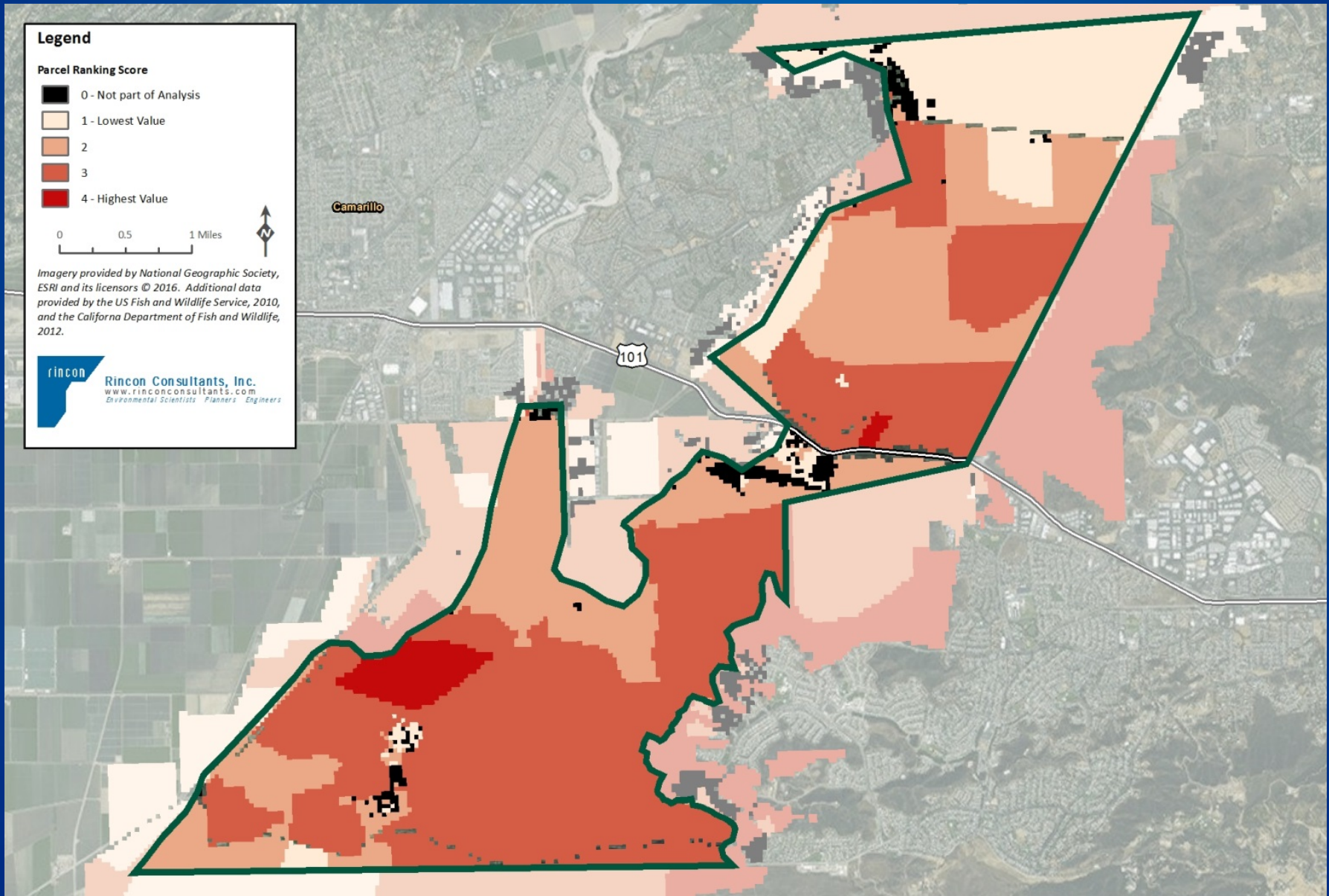
0 0.5 1 Miles

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Next Steps: Applying the GIS Analysis

- 1) Collaboration with stakeholders
- 2) Applications for grant funding
- 3) Land acquisition
- 4) Site-specific GIS analysis



Contact Info

Michele Kostenuik

Pleasant Valley Recreation & Park District

mkostenuik@gmail.com

Kathleen Mallory, MA, AICP

Planning & Energy/Entitlement Services

kmallory@PandES.net

Jonathan Berlin, MESM

Rincon Consultants

jberlin@rinconconsultants.com