

we all need



PNA+

# APPENDIX B

# RURAL STUDY

# AREA PROFILES

This project was previously called the Regional and Rural Edition (RRE) to emphasize its focus on regional and rural recreation needs and priorities. This project name was used during the data collection, and community engagement and outreach phases which occurred primarily in 2021. As this report was being completed in 2022, DPR decided to rename the project the Parks Needs Assessment Plus (PNA+) to clarify and better communicate that this project complements and offers new information not previously included in the 2016 Parks Needs Assessment (PNA), such as mapping and analyses related to population vulnerability, environmental benefits, environmental burdens, and priority areas for environmental conservation, environmental restoration, regional recreation, and rural recreation. (Please note that there remains some text and graphic references to the RRE in this document because that was the project name when some components of this study were completed.)

# LEONA VALLEY/LAKE HUGHES/ LAKE ELIZABETH RURAL STUDY AREA PROFILE

## RURAL STUDY AREA ID #3 / PNA STUDY AREA ID #6

- » Study Area Description
- » Study Area Demographics
- » Population Vulnerability
- » Rural Recreation and Conservation Sites
- » Rural Recreation Site Access
- » Recreation Opportunity Types
- » Community Engagement Themes
- » Rural Recreation Priority Analysis
- » Rural Recreation Priority Areas
- » Priority Project Types

### Note

This profile is not intended to stand alone. For definitions of key terms and a full description of the analysis summarized within please refer to Chapter 5 of the main report as well as Appendix C: Technical Resources.



# STUDY AREA DESCRIPTION

## PHYSICAL CONTEXT

The Leona Valley/Lake Hughes/Elizabeth Lake Study Area is located in the Antelope Valley Regional Study Area. The Leona Valley/Lake Hughes/Elizabeth Lake Study Area is bordered by the Antelope Valley to the north and east and the Angeles National Forest to the south and west. The Study Area encompasses approximately 60 square miles. The unincorporated communities of Lake Hughes, Leona Valley, and Elizabeth Lake are in the Study Area.

## STUDY AREA CONSIDERATIONS

The Study Area has constraints, including natural hazards, such as earthquakes and wildfire, limited infrastructure, including public transit service, and limited water supply. It should be noted that the proximity of the San Andreas Fault to the Study Area and the increasing likelihood of catastrophic wildfires into the future has a significant impact on development in the Study Area. While the desirability of rural living and the availability of affordable housing have led to recent population growth in unincorporated communities in the County, the Study Area's population has declined since 2010. Many residents commute long distances because employment opportunities in the Study Area are limited.

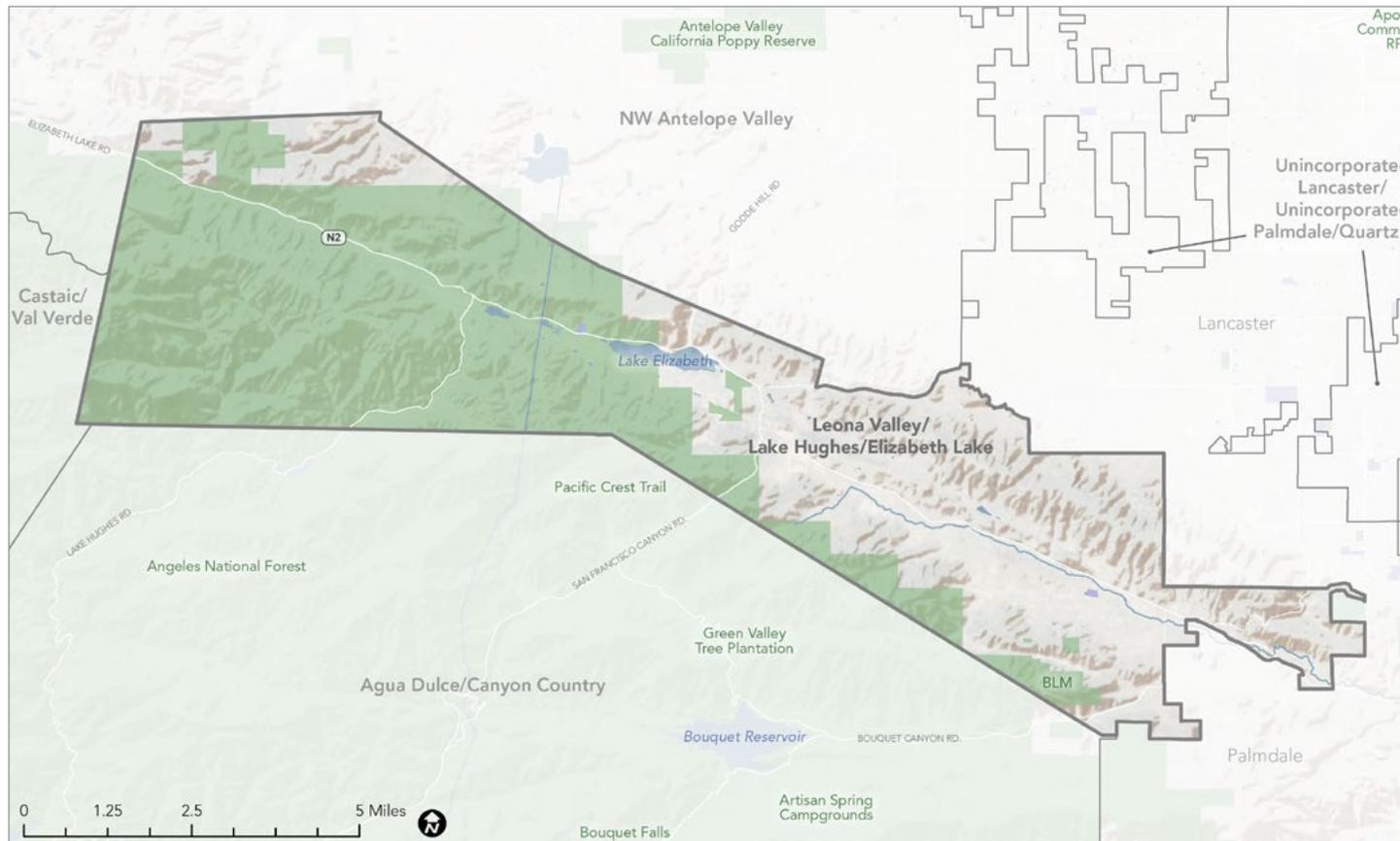
## KEY ANALYSIS TAKEAWAYS

- » Environmental vulnerability is the most prevalent dimension of population vulnerability in the Study Area.
- » Only 10% of residents live within walking distance of a rural recreation site.
- » No rural recreation sites in the Study Area are served by public transit.
- » The majority of rural recreation site area in the Study Area falls under Nature-Based Recreation Area. The Study Area contains no Local Park or Regional Recreational Park area.
- » Study Area residents live within proximity to very few types of recreation opportunities.
  - » A very small proportion of Study Area residents live within a 5-mile drive of gathering spaces (0.2%), sports facilities (1.4%), water-based recreation opportunities (1.2%), general recreation facilities (2.6%), health and fitness facilities (2.6%), and support facilities (1.6%).
- » The Study Area has access to few recreation opportunity types.

## KEY COMMUNITY ENGAGEMENT TAKEAWAYS

- » Safety, time, distance, lack of information about facilities and cost are identified barriers to park use for residents who live in the Study Area.
- » Residents say they need more outdoor and water recreation facilities, more green spaces and natural areas, expanded and maintained hiking and equestrian trails, and facilities for horses.
- » Greatest needs are for places to play, swim and attend fitness classes; gather with friends and family and be surrounded by nature.
- » Nearly one-third of survey respondents from the study area (29%) say they are recreating outside less often, and one-quarter (24%) say they are recreating outside more often due to the pandemic. 93% are looking for more recreation activities closer to home because of COVID.

# LEONA VALLEY/LAKE HUGHES/LAKE ELIZABETH RURAL STUDY AREA



Map source: PNA, 2016; US Census, 2019; Esri, 2021; MIG, 2021; LAC GIS, 2021; USGS NHD, 2021

Note: All Rural Study Area Profile maps in this chapter include and refer to the sources listed here as basemap layers.

# STUDY AREA DEMOGRAPHICS

## Population, Race, Ethnicity, Gender, Income, Age, and Education Level

Population	
<b>Total</b>	<b>3,179</b>

Race	Percentage
White	89%
Black or African American	2.9%
American Indian and Alaska Native	0.9%
Asian	3%
Native Hawaiian and Other Pacific Islander	0%
Some Other Race	2.05%
Two or More Races	2.2%
<b>Total</b>	<b>100%</b>

Ethnicity	Percentage
Hispanic or Latino	11.8%
Not Hispanic or Latino	88.2%
<b>Total</b>	<b>100%</b>

Income	Percentage
Less than \$25,000	13.15%
\$25,000-\$49,999	16.15%
\$50,000-\$74,999	14.65%
\$75,000-\$99,999	15.35%
\$100,000-\$150,000	21.4%
\$150,000	19.3%
<b>Total</b>	<b>100%</b>

Gender	Percentage
Female	53.04%
Male	46.96%
<b>Total</b>	<b>100%</b>

Age	Percentage
Under 5 years	3.7%
5 to 9 years	7.25%
10 to 14 years	6.1%
15 to 19 years	7.55%
20 to 29 years	7.5%
30 to 39 years	8.95%
40 to 49 years	15.55%
50 to 59 years	24.2%
60 to 69 years	11.6%
70 to 79 years	3.5%
80+ years	3.05%
<b>Total</b>	<b>100%</b>

Education Level	Percentage
High School Diploma	24.3%
Some College, No Degree	29.65%
Associates Degree	11.3%
Bachelor's Degree	17.3%
Master's Degree	11.6%
Other	5.9%
<b>Total</b>	<b>100%</b>

Source: 2016 PNA, U.S. Census Bureau, 2014 ACS 5-year Estimate Subject Tables, See Technical Appendix for Census Tracts included in each Study Area.

Note: At the time that this report was prepared, 2020 Census results were not available.

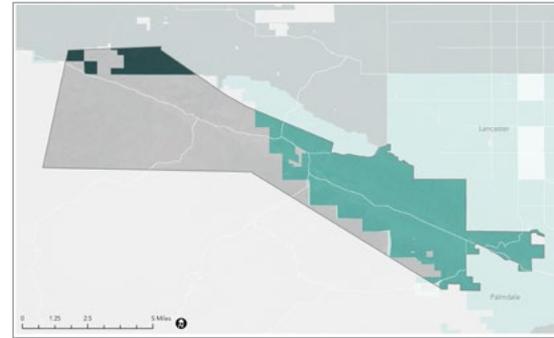
# POPULATION VULNERABILITY DIMENSIONS

## Social Barriers Dimension



- Indicators:
- » High Poverty Rate
  - » High Unemployment Rate
  - » Majority-Minority Population
  - » High % of Young Children
  - » High % of Elderly Residents
  - » High % of Non-English-Speaking Residents
  - » Low % of Two-Parent Households

## Transportation Barriers Dimension



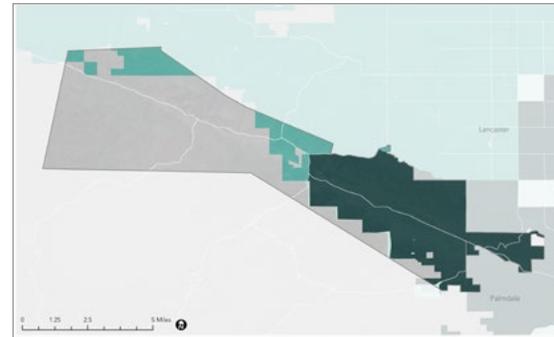
- Indicators:
- » Low Automobile Access
  - » Low Public Transit Access
  - » Low Active Commuting Rate
  - » High Traffic Density
  - » High Pedestrian Injuries

## Health Vulnerability Dimension



- Indicators:
- » Low Park Access
  - » Low Tree Canopy
  - » High % Impervious Surface
  - » High Number of Excessive Heat Days
  - » High Urban Heat Island Index Score

## Environmental Vulnerability Dimension



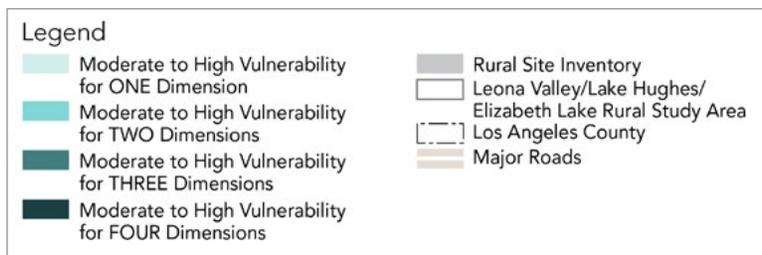
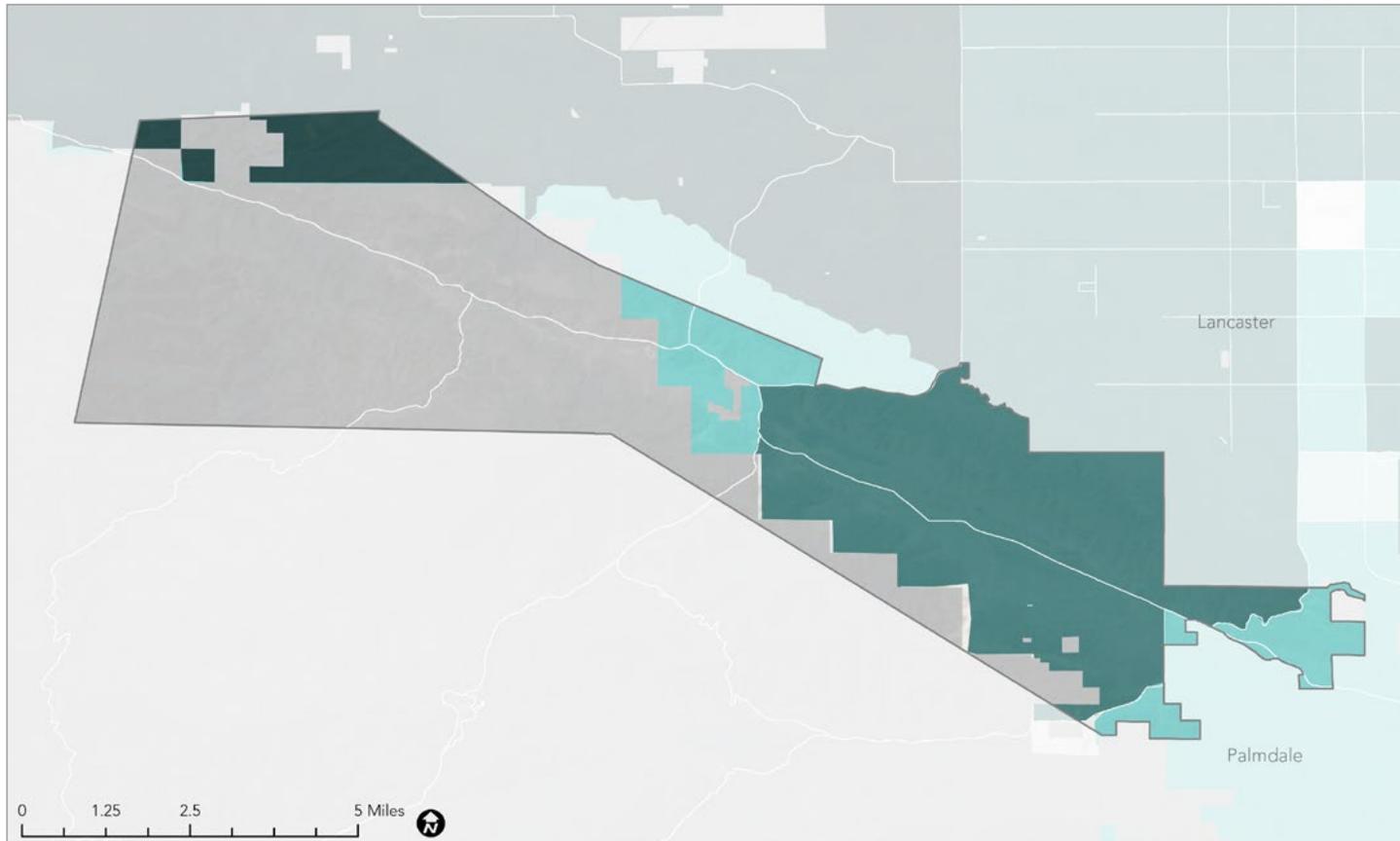
- Indicators:
- » Reduced Life Expectancy at Birth
  - » High Pollution Levels

### Legend

- Low
- Moderate
- High
- Rural Site Inventory
- Leona Valley/Lake Hughes/Elizabeth Lake Rural Study Area
- Los Angeles County
- Major Roads

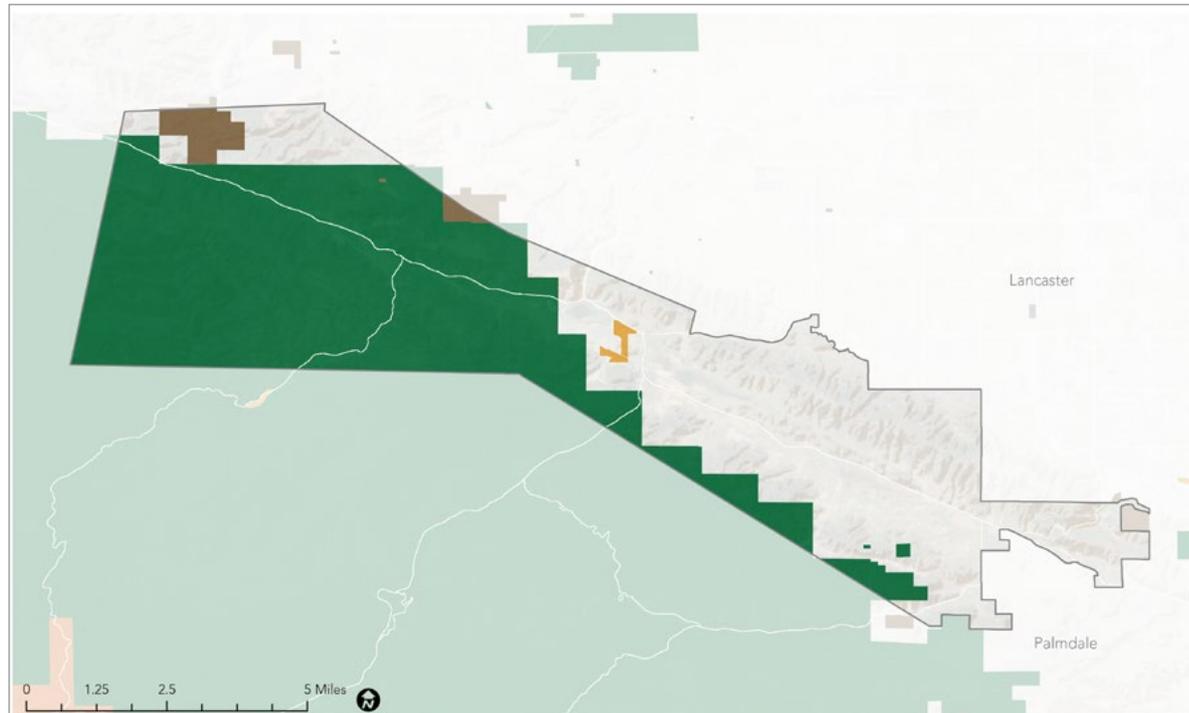
Maps source: HPI, 2021; 2021 RRE Inventory

## COMPOSITE POPULATION VULNERABILITY

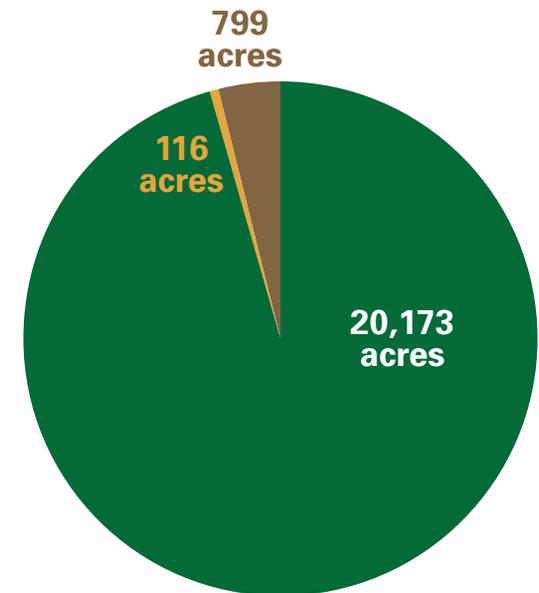


Map source: HPI, 2021; 2021 RRE Inventory

# RURAL SITE INVENTORY



Map source: 2021 RRE Inventory





**21,089**

**TOTAL ACRES OF RURAL RECREATION AND CONSERVATION AREA LAND LOCATED WITHIN THE STUDY AREA**



**54.1%**

**OF THE TOTAL LAND AREA WITHIN THE STUDY AREA IS RURAL RECREATION AND CONSERVATION AREA LAND**



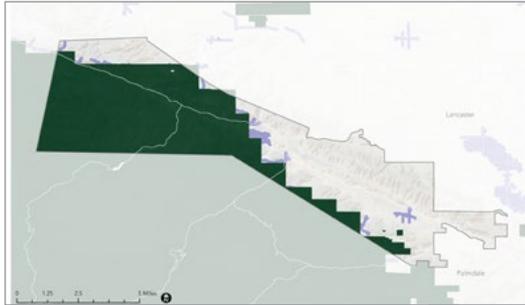
**6,634**

**ACRES OF RURAL RECREATION AND CONSERVATION AREA LAND PER 1000 STUDY AREA RESIDENTS**

- REGIONAL RECREATION PARKS
- NATURE-BASED RECREATION AREAS
- REGIONAL SPECIALIZED RECREATION AREAS
- CONSERVATION AREAS
- OTHER PUBLIC AND SEMI-PUBLIC OPEN SPACE
- LOCAL PARKS

# RURAL RECREATION SITE ACCESS

Walking Distance (0.5 miles from entry)

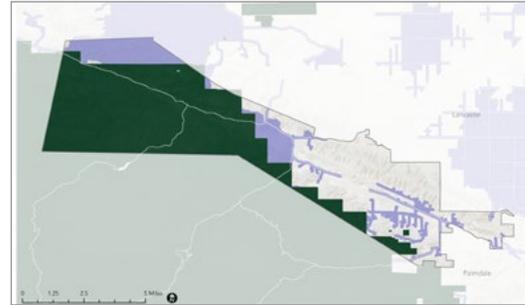


**10%**   
OF STUDY AREA  
RESIDENTS LIVE  
WITHIN WALKING  
DISTANCE  
OF A RURAL  
RECREATION SITE

Legend

-  Areas within a 0.5-mile walk of a Rural Recreation Site
-  Rural Recreation Site
-  Leona Valley/Lake Hughes/Elizabeth Lake Rural Study Area
-  Los Angeles County
-  Major Roads

Cycling Distance (2.5 miles from entry)

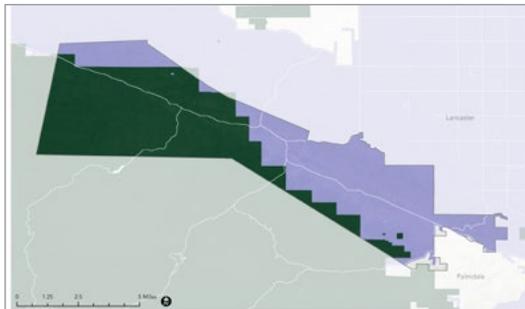


**46%**   
OF STUDY AREA  
RESIDENTS LIVE  
WITHIN CYCLING  
DISTANCE  
OF A RURAL  
RECREATION SITE

Legend

-  Areas within a 2.5-mile bicycle ride of a Rural Recreation Site
-  Rural Recreation Site
-  Leona Valley/Lake Hughes/Elizabeth Lake Rural Study Area
-  Los Angeles County
-  Major Roads

Driving Distance (5 miles from entry)

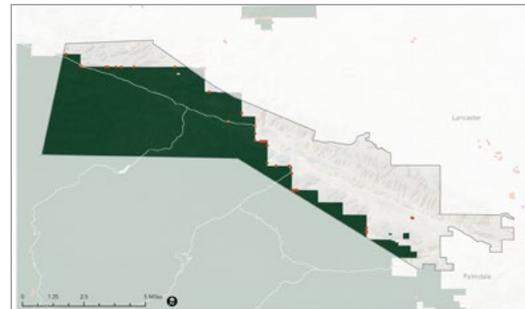


**91%**   
OF STUDY AREA  
RESIDENTS LIVE  
WITHIN DRIVING  
DISTANCE  
OF A RURAL  
RECREATION SITE

Legend

-  Areas within a 5-mile drive of a Rural Recreation Site
-  Rural Recreation Site
-  Leona Valley/Lake Hughes/Elizabeth Lake Rural Study Area
-  Los Angeles County
-  Major Roads

Transit Service (entry is within 0.5 miles of transit stop)



**0%**   
OF RURAL  
RECREATION  
SITES ARE  
SERVED BY  
PUBLIC TRANSIT

Legend

-  Entry Point Served by Public Transit (located within a half mile of a Transit Stop)
-  Entry Point Not Served by Public Transit (not located within a half mile of a Transit Stop)
-  Rural Recreation Site
-  Leona Valley/Lake Hughes/Elizabeth Lake Rural Study Area
-  Los Angeles County
-  Major Roads

Maps source: ArcGIS StreetMap Premium, 2021; 2021 RRE Inventory

# RURAL RECREATION OPPORTUNITIES

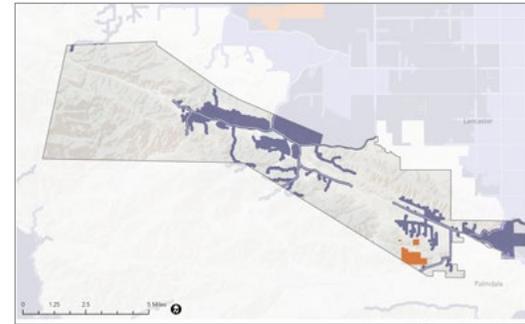
## Gathering Spaces



### Legend

- Rural Recreation Sites with Gathering Spaces
- Leona Valley/Lake Hughes/Elizabeth Lake Rural Study Area
- Los Angeles County
- Major Roads

## Proximity to Sites With Gathering Spaces

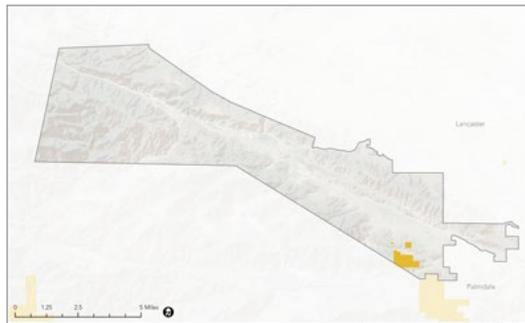


**0.2%**  
OF RESIDENTS  
LIVE WITHIN A  
5-MILE DRIVE

### Legend

- Areas within a 5-mile drive of a Rural Recreation Site with Gathering Spaces
- Areas within a 10-mile drive of a Rural Recreation Site with Gathering Spaces
- Rural Recreation Sites with Gathering Spaces
- Leona Valley/Lake Hughes/Elizabeth Lake Rural Study Area
- Los Angeles County
- Major Roads

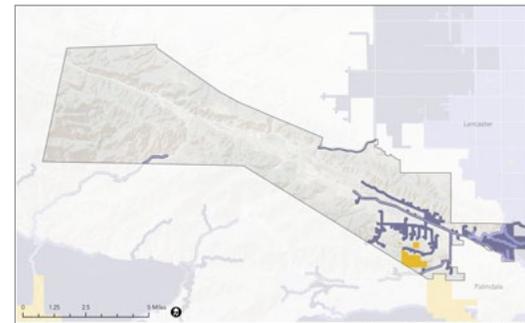
## Sports Facilities



### Legend

- Rural Recreation Sites with Sports Facilities
- Leona Valley/Lake Hughes/Elizabeth Lake Rural Study Area
- Los Angeles County
- Major Roads

## Proximity to Sites With Sports Facilities



**1.4%**  
OF RESIDENTS  
LIVE WITHIN A  
5-MILE DRIVE

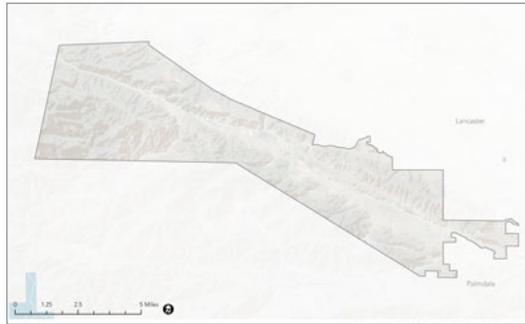
### Legend

- Areas within a 5-mile drive of a Rural Recreation Site with Sports Facilities
- Areas within a 10-mile drive of a Rural Recreation Site with Sports Facilities
- Rural Recreation Sites with Sports Facilities
- Leona Valley/Lake Hughes/Elizabeth Lake Rural Study Area
- Los Angeles County
- Major Roads

Maps source: PNA, 2016; ArcGIS StreetMap Premium, 2021; 2021 RRE Inventory

# RURAL RECREATION OPPORTUNITIES

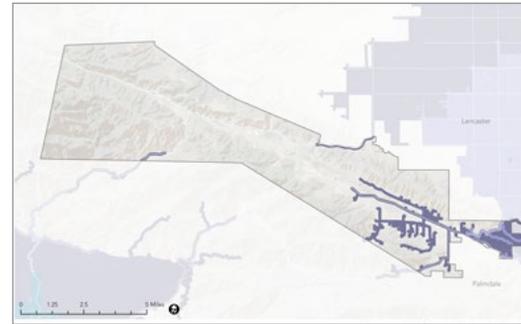
## Water-Based Recreation



### Legend

- Rural Recreation Sites with Water-Based Recreation
- Leona Valley/Lake Hughes/Elizabeth Lake Rural Study Area
- Los Angeles County
- Major Roads

## Proximity to Sites With Water-Based Recreation

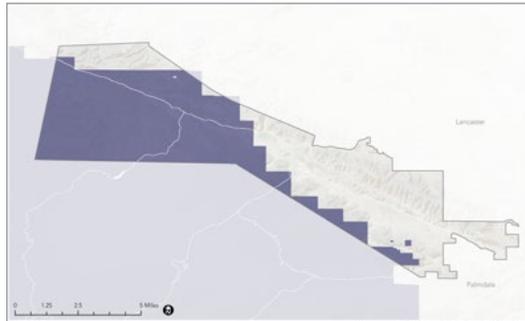


**1.2%**  
OF RESIDENTS  
LIVE WITHIN A  
5-MILE DRIVE

### Legend

- Areas within a 5-mile drive of a Rural Recreation Site with Water-Based Recreation
- Areas within a 10-mile drive of a Rural Recreation Site with Water-Based Recreation
- Rural Recreation Sites with Water-Based Recreation
- Leona Valley/Lake Hughes/Elizabeth Lake Rural Study Area
- Los Angeles County
- Major Roads

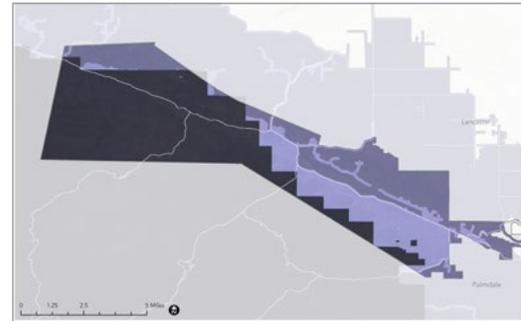
## Overnight Accommodations



### Legend

- Rural Recreation Sites with Overnight Accommodations
- Leona Valley/Lake Hughes/Elizabeth Lake Rural Study Area
- Los Angeles County
- Major Roads

## Proximity to Sites With Overnight Accommodations



**70.9%**  
OF RESIDENTS  
LIVE WITHIN A  
5-MILE DRIVE

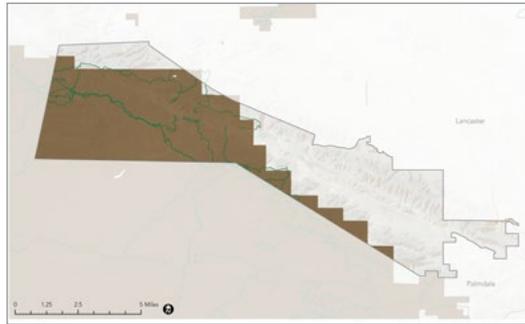
### Legend

- Areas within a 5-mile drive of a Rural Recreation Site with Overnight Accommodations
- Areas within a 10-mile drive of a Rural Recreation Site with Overnight Accommodations
- Rural Recreation Sites with Overnight Accommodations
- Leona Valley/Lake Hughes/Elizabeth Lake Rural Study Area
- Los Angeles County
- Major Roads

Maps source: ArcGIS StreetMap Premium, 2021; 2021 RRE Inventory

# RURAL RECREATION OPPORTUNITIES

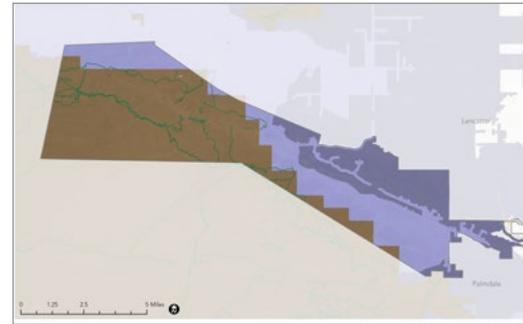
## Trails and Pathways



### Legend

- Rural Recreation Sites with Trails and Pathways
- Regional Trails
- Regional Bikeways
- Leona Valley/Lake Hughes/Elizabeth Lake Rural Study Area
- Los Angeles County
- Major Roads

## Proximity to Sites With Trails and Pathways

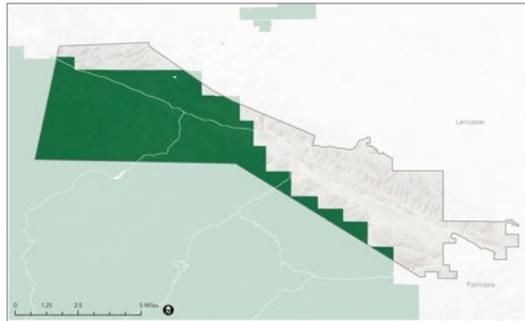


**75.4%**  
OF RESIDENTS  
LIVE WITHIN A  
5-MILE DRIVE

### Legend

- Areas within a 5-mile drive of a Rural Recreation Site with Trails and Pathways
- Areas within a 10-mile drive of a Rural Recreation Site with Trails and Pathways
- Rural Recreation Sites with Trails and Pathways
- Regional Trails
- Regional Bikeways
- Leona Valley/Lake Hughes/Elizabeth Lake Rural Study Area
- Los Angeles County
- Major Roads

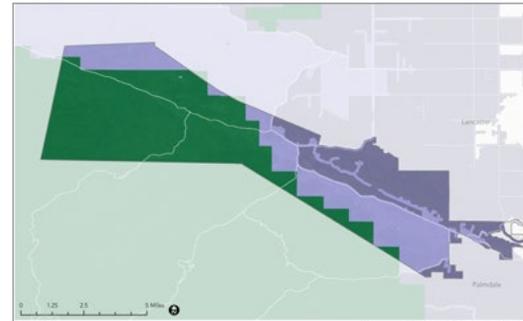
## Experiential Learning Opportunities



### Legend

- Rural Recreation Sites with Experiential Learning Opportunities
- Regional Trails
- Regional Bikeways
- Leona Valley/Lake Hughes/Elizabeth Lake Rural Study Area
- Los Angeles County
- Major Roads

## Proximity to Sites With Experiential Learning Opportunities



**75.4%**  
OF RESIDENTS  
LIVE WITHIN A  
5-MILE DRIVE

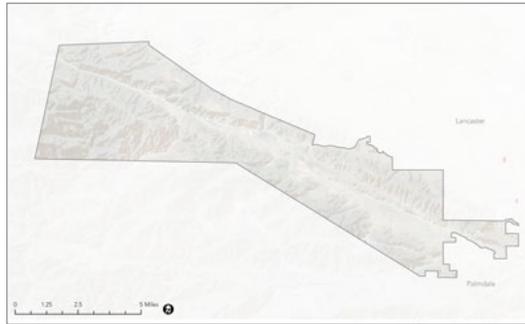
### Legend

- Areas within a 5-mile drive of a Rural Recreation Site with Experiential Learning Opportunities
- Areas within a 10-mile drive of a Rural Recreation Site with Experiential Learning Opportunities
- Rural Recreation Sites with Experiential Learning Opportunities
- Regional Trails
- Regional Bikeways
- Leona Valley/Lake Hughes/Elizabeth Lake Rural Study Area
- Los Angeles County
- Major Roads

Maps source: PNA, 2016; ArcGIS StreetMap Premium, 2021; 2021 RRE Inventory

# RURAL RECREATION OPPORTUNITIES

## General Recreation Facilities



### Legend

- Rural Recreation Sites with General Recreation Facilities
- Leona Valley/Lake Hughes/Elizabeth Lake Rural Study Area
- Los Angeles County
- Major Roads

## Proximity to Sites With General Recreation Facilities

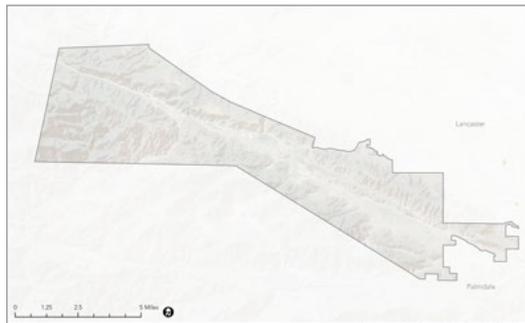


**2.6%**  
OF RESIDENTS  
LIVE WITHIN A  
5-MILE DRIVE

### Legend

- Areas within a 5-mile drive of a Rural Recreation Site with General Recreation Facilities
- Areas within a 10-mile drive of a Rural Recreation Site with General Recreation Facilities
- Rural Recreation Sites with General Recreation Facilities
- Leona Valley/Lake Hughes/Elizabeth Lake Rural Study Area
- Los Angeles County
- Major Roads

## Health and Fitness Facilities



### Legend

- Rural Recreation Sites with Health and Fitness Facilities
- Leona Valley/Lake Hughes/Elizabeth Lake Rural Study Area
- Los Angeles County
- Major Roads

## Proximity to Sites With Health and Fitness Facilities



**2.6%**  
OF RESIDENTS  
LIVE WITHIN A  
5-MILE DRIVE

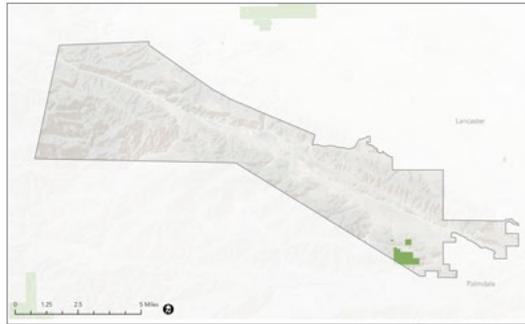
### Legend

- Areas within a 5-mile drive of a Rural Recreation Site with Health and Fitness Facilities
- Areas within a 10-mile drive of a Rural Recreation Site with Health and Fitness Facilities
- Rural Recreation Sites with Health and Fitness Facilities
- Leona Valley/Lake Hughes/Elizabeth Lake Rural Study Area
- Los Angeles County
- Major Roads

Maps source: ArcGIS StreetMap Premium, 2021; 2021 RRE Inventory

# RURAL RECREATION OPPORTUNITIES

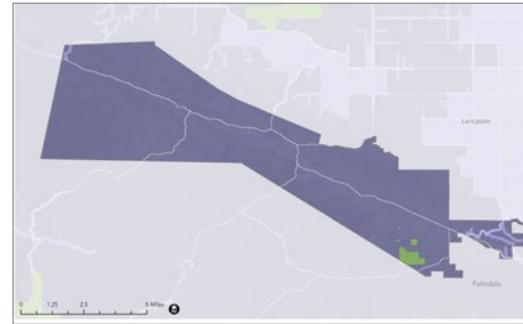
## Support Facilities



### Legend

- Rural Recreation Sites with Support Facilities
- Leona Valley/Lake Hughes/Elizabeth Lake Rural Study Area
- Los Angeles County
- Major Roads

## Proximity to Sites With Support Facilities



**1.6%**  
OF RESIDENTS  
LIVE WITHIN A  
5-MILE DRIVE

### Legend

- Rural Recreation Sites with Support Facilities
- Areas within a 5-mile drive of a Rural Recreation Site with Support Facilities
- Areas within a 10-mile drive of a Rural Recreation Site with Support Facilities
- Leona Valley/Lake Hughes/Elizabeth Lake Rural Study Area
- Los Angeles County
- Major Roads

Maps source: PNA, 2016; ArcGIS StreetMap Premium, 2021; 2021 RRE Inventory

# COMMUNITY ENGAGEMENT THEMES

## BARRIERS RESIDENTS EXPERIENCE TO USING PARKS AND FACILITIES



### SAFETY CONCERNS

Residents don't feel safe at parks. Safer trails for hikers and horse riders are needed.



### TIME

Many residents do not have time, due to work or other reasons, to travel to and/or use parks and facilities.



### DISTANCE

Many residents and families have to travel long distances to parks and facilities.



### COST

Fees to enter and/or park at some parks and facilities or rent equipment is often too expensive.



### LACK OF INFORMATION

Residents do not know where parks are located, what facilities are available, or how to use and get to amenities.



### NOT ENOUGH MAINTENANCE AT PARKS AND FACILITIES

Park facilities and trails need repairs, maintenance and restoration.



### LACK OF NEARBY GREEN SPACE

Many residents do not have access to parks or green spaces near to where they live.



### LACK OF FACILITIES AND PROGRAMMING

Nearby parks lack tennis courts and swimming pools, and spaces for walking/jogging paths.



### LACK OF CONNECTIVITY

Not enough trail networks or safe biking and pedestrian options.

"We really don't have anything classified as a "park" close to home."

"Lack of parking for horse trailers; lack of safe designated trails."

"Our local trails are not maintained and offroad bikes and motorcycles have ruined them by causing ruts in the trail.... The trail heads are obscured by thick brush and berms."

# COMMUNITY ENGAGEMENT THEMES

## COMMUNITY SUGGESTIONS TO INCREASE AND IMPROVE VISITS TO RURAL PARKS AND FACILITIES



### MORE SHADE

Shaded seating, play areas and walking trails, and more trees between and around parks.



### ACCESS TO WATER

Additional water facilities and features like swimming pools and access to waterways for activities like fishing.



### BETTER ACCESS TO INFORMATION

More information about events at parks and available amenities.



### IMPROVED MAINTENANCE AND INFRASTRUCTURE

Clean and maintain restrooms and trails and provide more wildfire mitigation and removal of dead vegetation.



### MORE RECREATION FACILITIES

Extend facilities hours, provide more tennis and racquetball courts, swimming facilities, walking and jogging tracks, and open gathering spaces.



### MORE FACILITIES FOR EQUESTRIAN USE

Parking for horse trailers at equestrian staging areas and trailheads, and places to hold equestrian events.



### MORE TRAILS FOR EQUESTRIAN AND PEDESTRIAN USE

Additional trails for horse riding, and walking trails.



### DEDICATED USE TRAILS

Provide separate trails for hiking, biking, equestrian use to help mitigate conflict and increase safety for all users along trails.



### ENHANCE CONNECTIVITY

Provide greenways and trail networks that connect communities, parks and trails and provide safe transportation corridors for bicyclists, equestrians and pedestrians.



### EXPAND GREEN SPACE

More trees, native habitat gardens, and natural open space.

“More trees, more community gardens.”

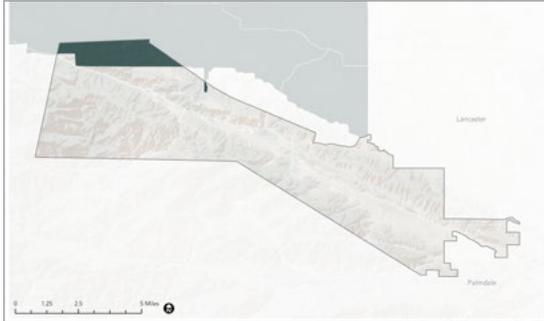
“[We need] places where nature is supported.”

“Preserve our extensive trail system [and] our easements to trails. Designate our trails for hiking and horses only. Preserve our trails for the future for horseback trail riding.”

“Walking/jogging paths within my community.”

# RURAL RECREATION PRIORITY ANALYSIS

## Areas Experiencing the Highest Levels of Overall Population Vulnerability



**High Levels of Social and Transportation Barriers**



**High Levels of Health and Environmental Vulnerability**

### Legend

- Areas of Moderate to High Vulnerability Across All Four Dimensions
- Leona Valley/Lake Hughes/Elizabeth Lake Rural Study Area
- Los Angeles County
- Major Roads

Map source: HPI, 2021; 2021 RRE Inventory

## Areas Located in Low Proximity to Rural Recreation Sites



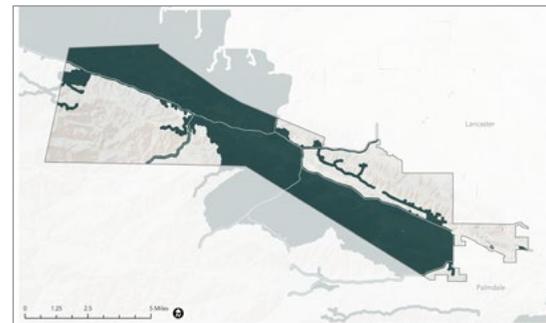
**Low Proximity to Rural Recreation Sites**

### Legend

- Areas in Low Proximity to Rural Recreation Sites (beyond a 5-mile drive to any Regional Recreation Park Entry Points, Nature-Based Recreation Area Entry Points or Local Park Entry Points)
- Rural Site Inventory
- Leona Valley/Lake Hughes/Elizabeth Lake Rural Study Area
- Los Angeles County
- Major Roads

Map source: ArcGIS StreetMap Premium, 2021; 2021 RRE Inventory

## Areas With Access to the Fewest Recreation Opportunity Types



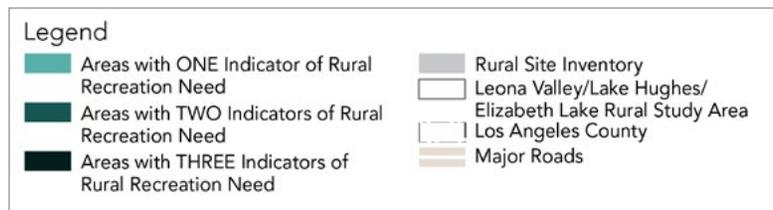
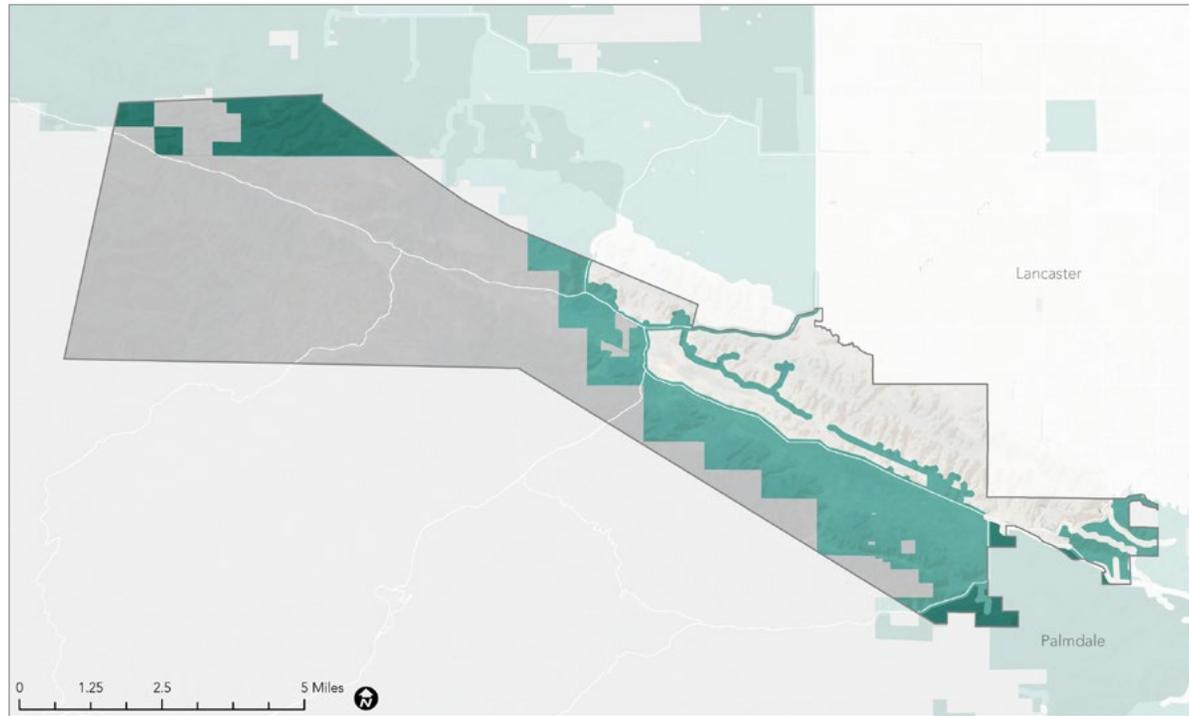
**Proximity to Fewest Recreation Opportunity Types**

### Legend

- Areas in proximity (5-mile driving distance) to THREE OR FEWER Rural Recreation Opportunity Types
- Leona Valley/Lake Hughes/Elizabeth Lake Rural Study Area
- Los Angeles County
- Major Roads

Map source: ArcGIS StreetMap Premium, 2021; 2021 RRE Inventory

## RURAL RECREATION PRIORITY AREAS

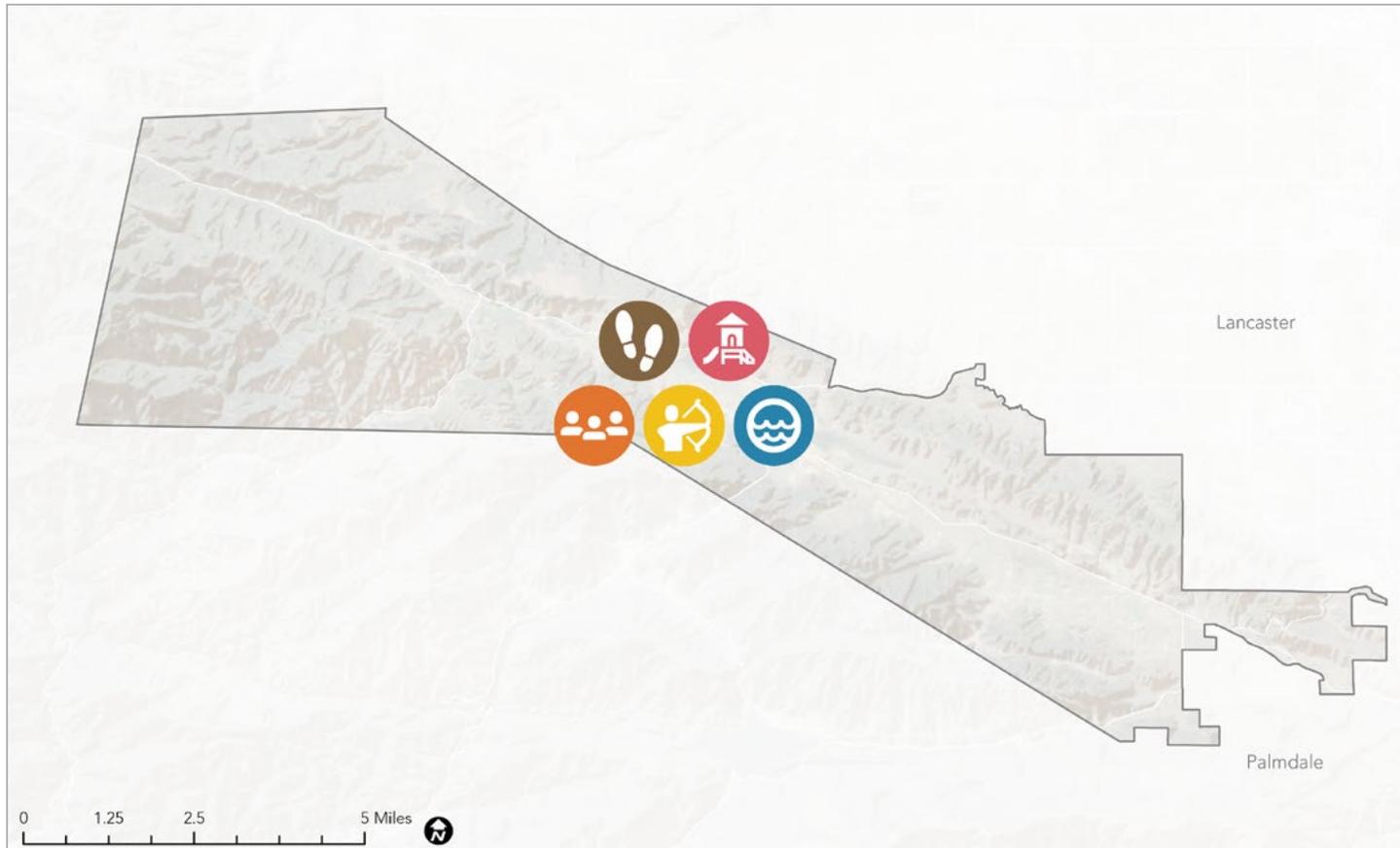


Areas with:



Map source: HPI, 2021; ArcGIS StreetMap Premium, 2021; 2021 RRE Inventory

## PRIORITY PROJECT TYPES



## PRIORITY PROJECTS

- » Equestrian Center
- » Trails
- » Multipurpose Field- Grass
- » Playground
- » Community/Recreation Center
- » Swimming Pool
- » Amphitheater
- » Picnic Shelters

### Legend

- |                                     |                          |
|-------------------------------------|--------------------------|
| Gathering Spaces                    | Overnight Accommodations |
| Sports Facilities                   | General Recreation       |
| Experiential Learning Opportunities | Health and Fitness       |
| Water-Based Recreation              | Support Facilities       |
| Trails and Pathways                 |                          |

Map source: PNA, 2016

Note: Priority projects are based on lists of priority projects from the 2016 PNA and updated public input gathered as part of 2022 RRE.