



TRAIL TECHNOLOGY:

SPREADING THE WORD ABOUT TRAILS
WITHIN LOS ANGELES COUNTY

PREVIEW OF TODAY'S DISCUSSION

1. Making authorized trail information accessible
2. Lessons learned since the launch of the website
3. Determining where we go from here





LA COUNTY TRAILS

MAKING AUTHORIZED TRAIL INFO ACCESSIBLE

“TRAIL USERS ARE AMONG THE MOST PASSIONATE AND INFORMED OUTDOOR ENTHUSIASTS...”

Russ Guiney, Former Director of LACo Parks

RESPONDING TO AN INCREASED DEMAND

- ▶ Recognized the growing popularity of outdoor recreation enjoyed on paths through parks and natural areas
- ▶ Running/jogging/trail running, bicycling and hiking were among the top five most popular outdoor activities*

*Source: 2014 Outdoor Recreation Participation Report by the non-profit Outdoor Foundation



Photo Credit: Rough Riders Blog

EXPANDING AWARENESS OF AUTHORIZED TRAILS

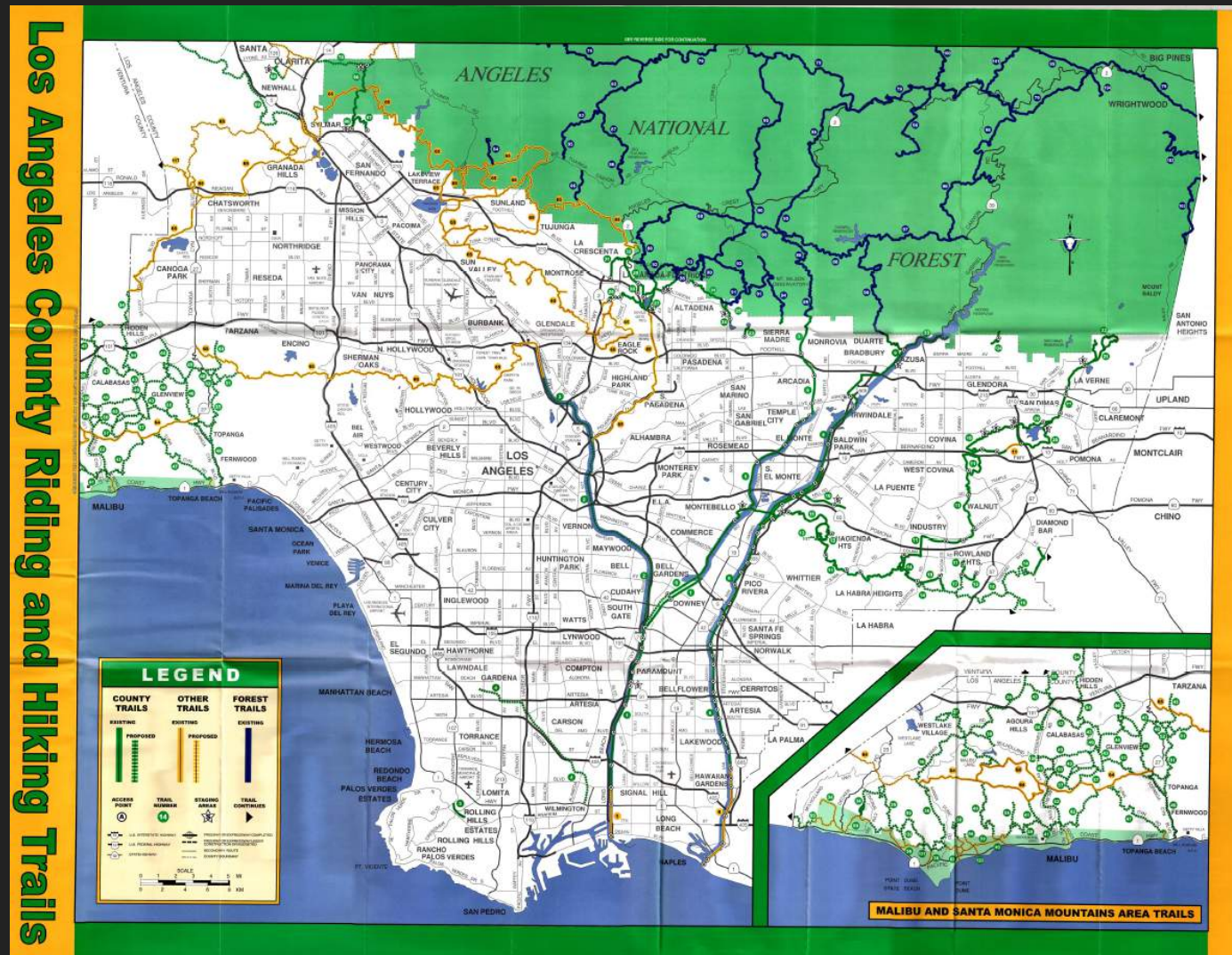
- ▶ Encourage residents and visitors to take advantage of one of the world's most diverse and expansive multi-use trail systems
- ▶ Expand opportunities to enjoy healthy outdoor recreation
- ▶ Deepen their knowledge about trails and our natural resources
- ▶ Decrease incidents of trespassing and degradation to environmentally sensitive areas



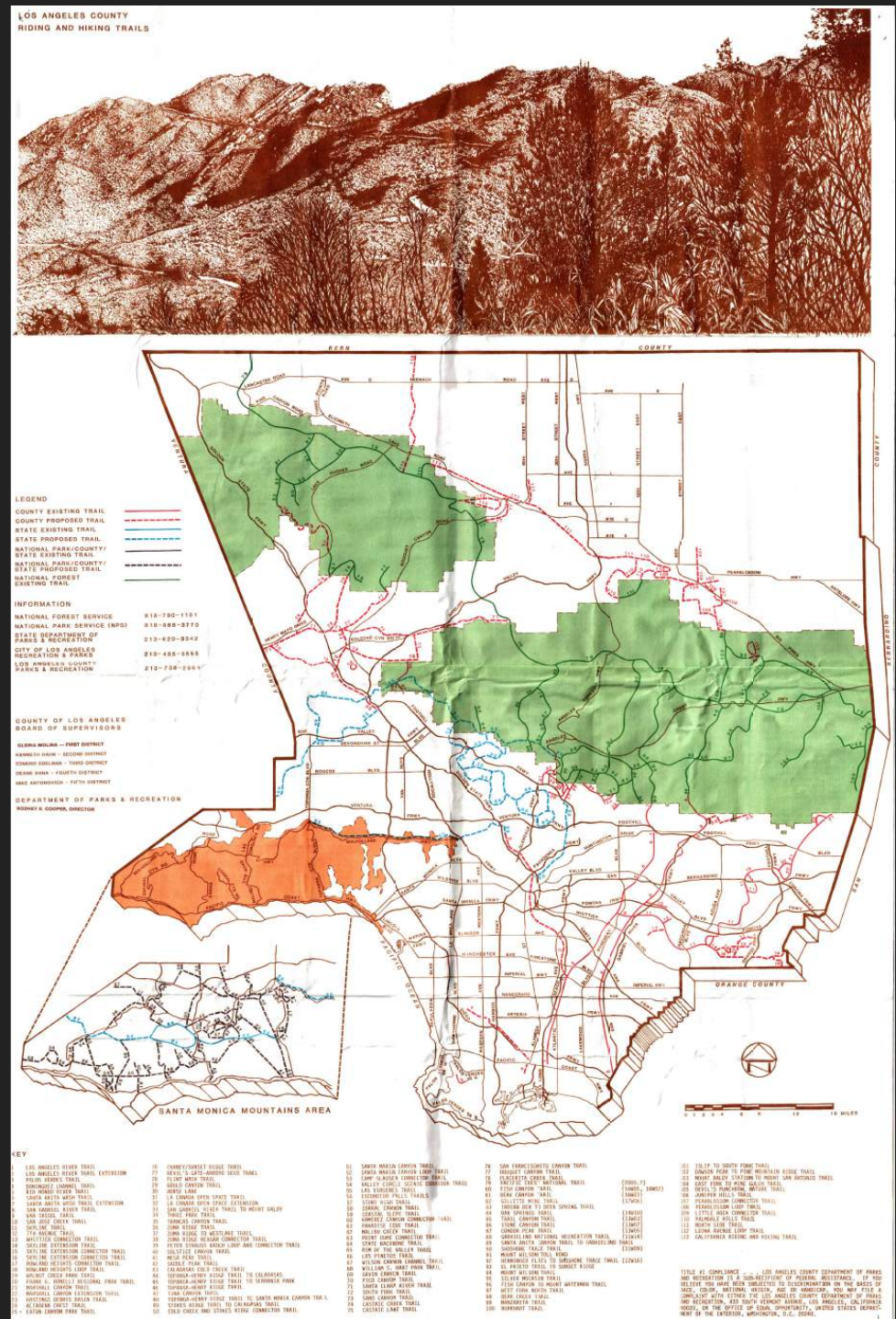
MAKING AUTHORIZED TRAIL INFO ACCESSIBLE

PRE-2014: FOLD-OUT MAPS

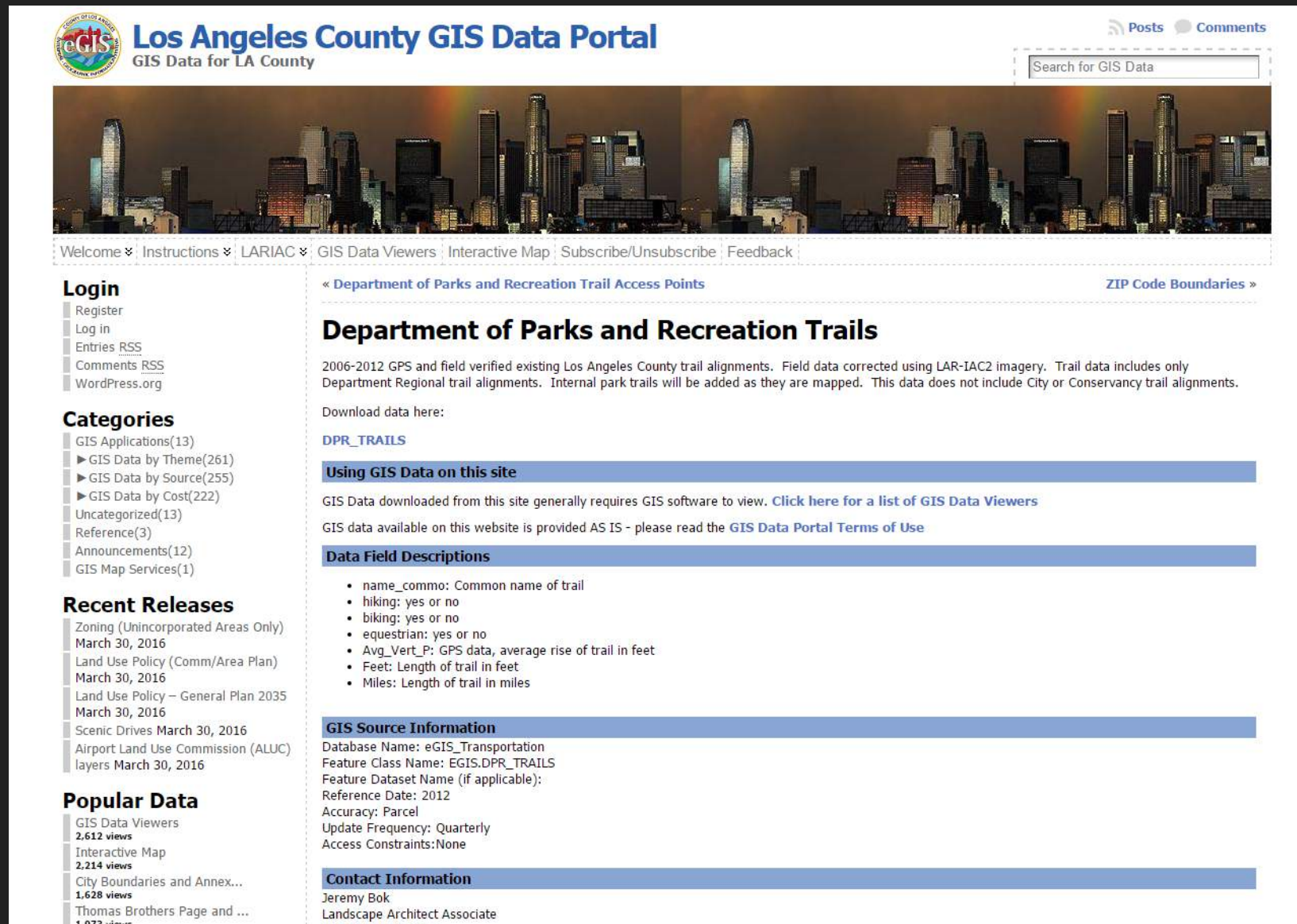
LACo Riding and Hiking Trails (2001)



LACo Riding and Hiking Trails (1986)



PRE-2014: LA COUNTY GIS DATA PORTAL



The screenshot shows the Los Angeles County GIS Data Portal website. The header includes the eGIS logo, the title "Los Angeles County GIS Data Portal", and a search bar. A navigation menu contains links for "Welcome", "Instructions", "LARIAC", "GIS Data Viewers", "Interactive Map", "Subscribe/Unsubscribe", and "Feedback". The main content area is titled "Department of Parks and Recreation Trails" and provides information about the 2006-2012 GPS and field-verified trail alignments. It includes a "Data Field Descriptions" section with a list of fields such as "name_commo", "hiking", "biking", "equestrian", "Avg_Vert_P", "Feet", and "Miles". Other sections include "Using GIS Data on this site", "GIS Source Information", and "Contact Information". The left sidebar contains sections for "Login", "Categories", "Recent Releases", and "Popular Data".

Los Angeles County GIS Data Portal
GIS Data for LA County

Welcome | Instructions | LARIAC | GIS Data Viewers | Interactive Map | Subscribe/Unsubscribe | Feedback

Login
Register
Log in
Entries RSS
Comments RSS
WordPress.org

Categories
GIS Applications(13)
► GIS Data by Theme(261)
► GIS Data by Source(255)
► GIS Data by Cost(222)
Uncategorized(13)
Reference(3)
Announcements(12)
GIS Map Services(1)

Recent Releases
Zoning (Unincorporated Areas Only) March 30, 2016
Land Use Policy (Comm/Area Plan) March 30, 2016
Land Use Policy – General Plan 2035 March 30, 2016
Scenic Drives March 30, 2016
Airport Land Use Commission (ALUC) layers March 30, 2016

Popular Data
GIS Data Viewers 2,612 views
Interactive Map 2,214 views
City Boundaries and Annex... 1,628 views
Thomas Brothers Page and ... 1,073 views

Department of Parks and Recreation Trails
2006-2012 GPS and field verified existing Los Angeles County trail alignments. Field data corrected using LAR-IAC2 imagery. Trail data includes only Department Regional trail alignments. Internal park trails will be added as they are mapped. This data does not include City or Conservancy trail alignments.

Download data here:
DPR_TRAILS

Using GIS Data on this site
GIS Data downloaded from this site generally requires GIS software to view. [Click here for a list of GIS Data Viewers](#)
GIS data available on this website is provided AS IS - please read the [GIS Data Portal Terms of Use](#)

Data Field Descriptions

- name_commo: Common name of trail
- hiking: yes or no
- biking: yes or no
- equestrian: yes or no
- Avg_Vert_P: GPS data, average rise of trail in feet
- Feet: Length of trail in feet
- Miles: Length of trail in miles

GIS Source Information
Database Name: eGIS_Transportation
Feature Class Name: EGIS.DPR_TRAILS
Feature Dataset Name (if applicable):
Reference Date: 2012
Accuracy: Parcel
Update Frequency: Quarterly
Access Constraints:None

Contact Information
Jeremy Bok
Landscape Architect Associate



DIGITALIZING OUR ASSETS

Detailed, foot-by-foot assessments collected on **210 miles** of trails into a rich GIS database

Included a geo-referenced inventory of:

- ▶ A variety of maintenance issues
- ▶ Access points, trailheads, and amenities
- ▶ All existing signage
- ▶ Trail type, surface, grade



DEVELOPMENT OF TRAILS.LACOUNTY.GOV

1. WEB DEVELOPMENT

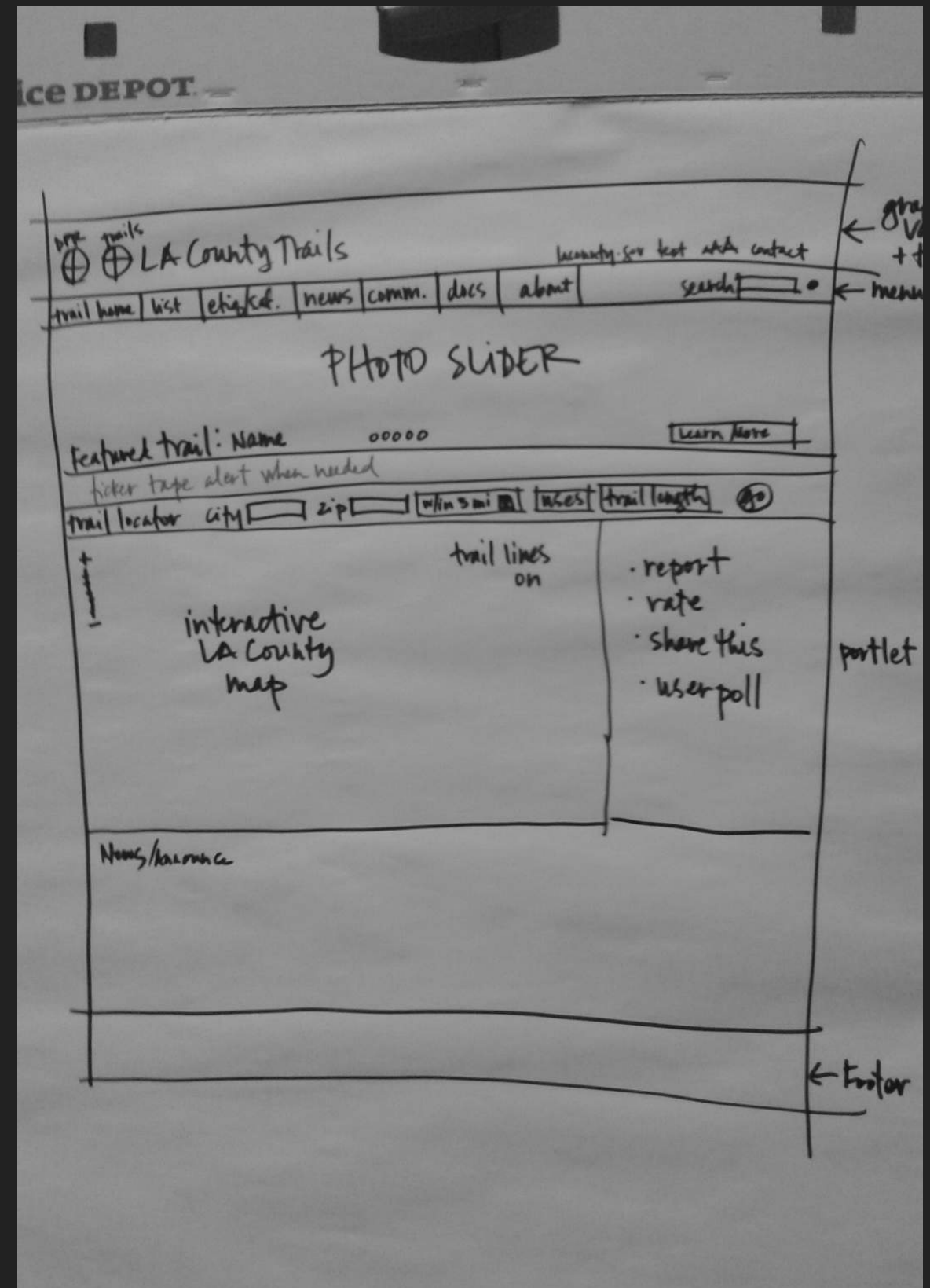
[August 2012] Began developing desktop and mobile trails website. New components of the site were tested as they were developed.

2. WEB & MOBILE LAUNCH

[November 2014] Publicly launched desktop and mobile trails website hosting multiple agencies' trails and trail-related information. Changes in web development software provided additional features and budget savings

3. WEB & MOBILE REFINEMENT

[February 2015] Began refining desktop and mobile app website with additional features based on feedback using portion of cost savings from web development efficiencies



MUST-HAVE FEATURES

Provide regularly-updated information on trails in the county, and allow users to:

- ▶ Show or search for trails based on current location or city/zip
- ▶ View, sort, and filter trail results to be viewed in list view or map view
- ▶ Provide trail information, directions to trailhead and access points, an interactive map, elevation profile, etc.
- ▶ Data synchronization between the mobile and desktop site



INTERAGENCY WEBSITE PARTNERS

Website includes trails operated by a number of partner agencies:

- ▶ National Park Service
- ▶ California State Parks
- ▶ Mountains Restoration Trust
- ▶ Santa Monica Mountains Conservancy
- ▶ Mountains Recreation and Conservation Authority



OVERVIEW OF THE DESKTOP HOME PAGE

- ▶ Featured trail every month
- ▶ Search for a trail by city or zip, trail name, or park name
- ▶ Use the interactive map
- ▶ Create an account to rate and review trails
- ▶ Other information on preparedness, trail etiquette, events, FAQ, and relevant planning documents

Department of Parks and Recreation
Trails
County of Los Angeles

PARKS HOME | LACOUNTY.GOV | CONTACT US

search [] Search

Create an Account Login

Trails Home About Trails List of Trails Safety & Etiquette News & Events Community Corner FAQ Documents

Featured Trail: Waterfall Trail [more info](#)

Trail Locator

Search By City or Zip: [] Search

Search By Trail Name: [] Search

Search By Park Name: [] Search

WATERFALL TRAIL

Trailhead
Get Directions
Parking: Staging Area

LA County Trails information

The County of Los Angeles Department of Parks and Recreation proudly provides recreational opportunities for more than 20 million visitors each year who enjoy our local, community and regional parks, our lakes, golf courses, gardens, cultural and entertainment venues including the John Anson Ford Amphitheatre and the world famous Hollywood Bowl. The Department has 2,500 employees with more than 150 job classifications in a variety of fields including recreation, grounds maintenance, landscape architecture, planning and development, golf, contracts, special districts and administration. Our incredible volunteers play a vital role in helping the Department meet it's mission and goals as well as our many wonderful friends, partners, and organizations who support us in so many ways. The Department maintains a number of

[Read More](#)

User Poll

What kinds of amenities do you want to see at trailheads?

- a. Shade structures & picnic tables
- b. Bike repair station
- c. Restroom
- d. Horse ties
- e. All of the above!

[Submit Vote](#)

[View Results](#)

Twitter Feed

3/30/2016 - @lacountyparks
LA Co Supervisors appoint parks veteran John Wicker as Director. @CountyofLA @LACountyCEO [L.A. Co Supervisors appoint parks veteran John Wicker as Director. @CountyofLA @LACountyCEO L.A. Co Supervisors appoint parks veteran John Wicker as Director. @CountyofLA @LACountyCEO pic.twitter.com/EhdEp3KRB](#)

3/29/2016 - @lacountyparks
Thx @WhittierCollege women's lacrosse 4 running drills w/ @LomaAlta Park @lacrosse team! Awesome! @mikeantonovich [pic.twitter.com/LbzvYDWY6f](#)

3/29/2016 - @lacountyparks
Spring Awakening Fest @ #EatonCanyon to educate public on native traditions & local wildlife ext to 2 days 5/21 & 22 [pic.twitter.com/22pRX1JphG](#)

[See More Tweets](#)

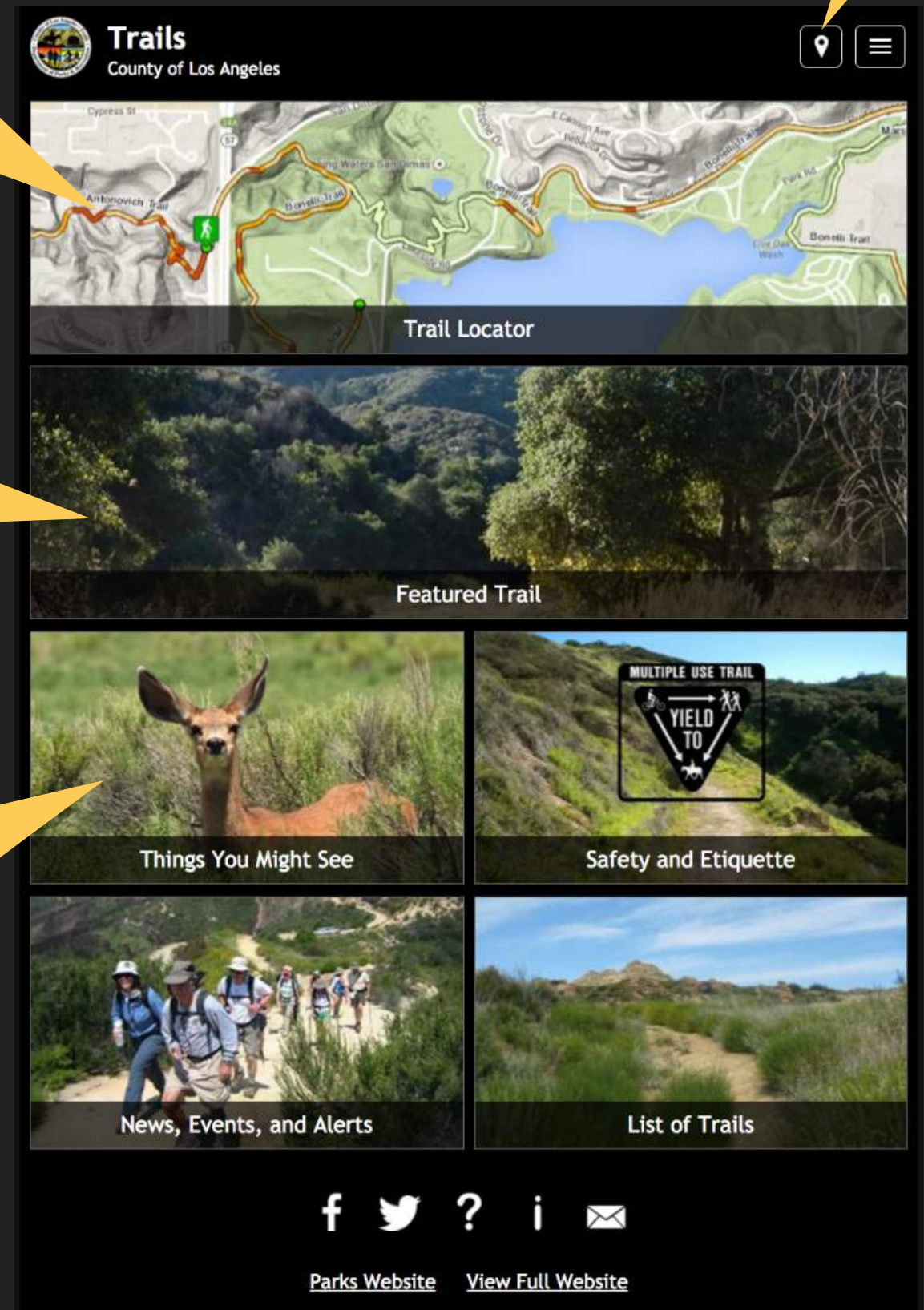
DO YOU NEED HELP?
211 LA County
LA County Helps
Public Alerts

DEPARTMENT LINKS:
Department of Parks & Recreation
Planning & Development
Regional Park & Open Space
Parks Accessibility

Site Map | Privacy Policy | Language | Site Accessibility | Disclaimer

OVERVIEW OF THE MOBILE HOME PAGE

- ▶ Trail locator
- ▶ Featured trail
- ▶ Things you might see, safety and etiquette, news, events, and alerts, list of trails
- ▶ ...and more



2ND GENERATION REFINEMENTS

New features that allow users to:

- ▶ Rate trails
- ▶ Report trail maintenance issues
- ▶ Learn about native ecology
- ▶ Search by park name
- ▶ Added features to the interactive maps

The screenshot displays the website interface for the Waterfall Trail. At the top, the header includes the Department of Parks and Recreation logo, navigation links (Trails Home, About Trails, List of Trails, Safety & Etiquette, News & Events, Community Corner, FAQ, Documents), and utility links (PARKS HOME, LACOUNTY.GOV, CONTACT US, Search, Create an Account, Login). The main content area features a large photo of the trail, local weather (HI: 82, Low: 55), and an Air Quality Level (AQI: 67, Moderate). A detailed description of the trail is provided, along with a 'Get Directions to Trailhead' link. Below the description are interactive options: 'Quick Guide & Map', 'Download KML file', 'Download GPX file', 'Upcoming Events', 'Report Maintenance Issue', 'Rate This Trail', and 'Add To My Trails'. A 'Reviews' section shows '(0)' reviews. The central feature is an interactive map of the trail area, with a pop-up window for 'WATERFALL TRAIL' showing trailhead, directions, and parking information. A legend on the right side of the map defines 'Line Types' (Slope, Normal, Surface) and 'Symbols' (Trailhead, Primary Access, Secondary Access, End of Public Trail). Below the map, an 'Elevation Profile' graph shows the trail's elevation gain of 357 feet over 0.58 miles. At the bottom, a 'What You Might See' section displays a carousel of images of local wildlife and plants.

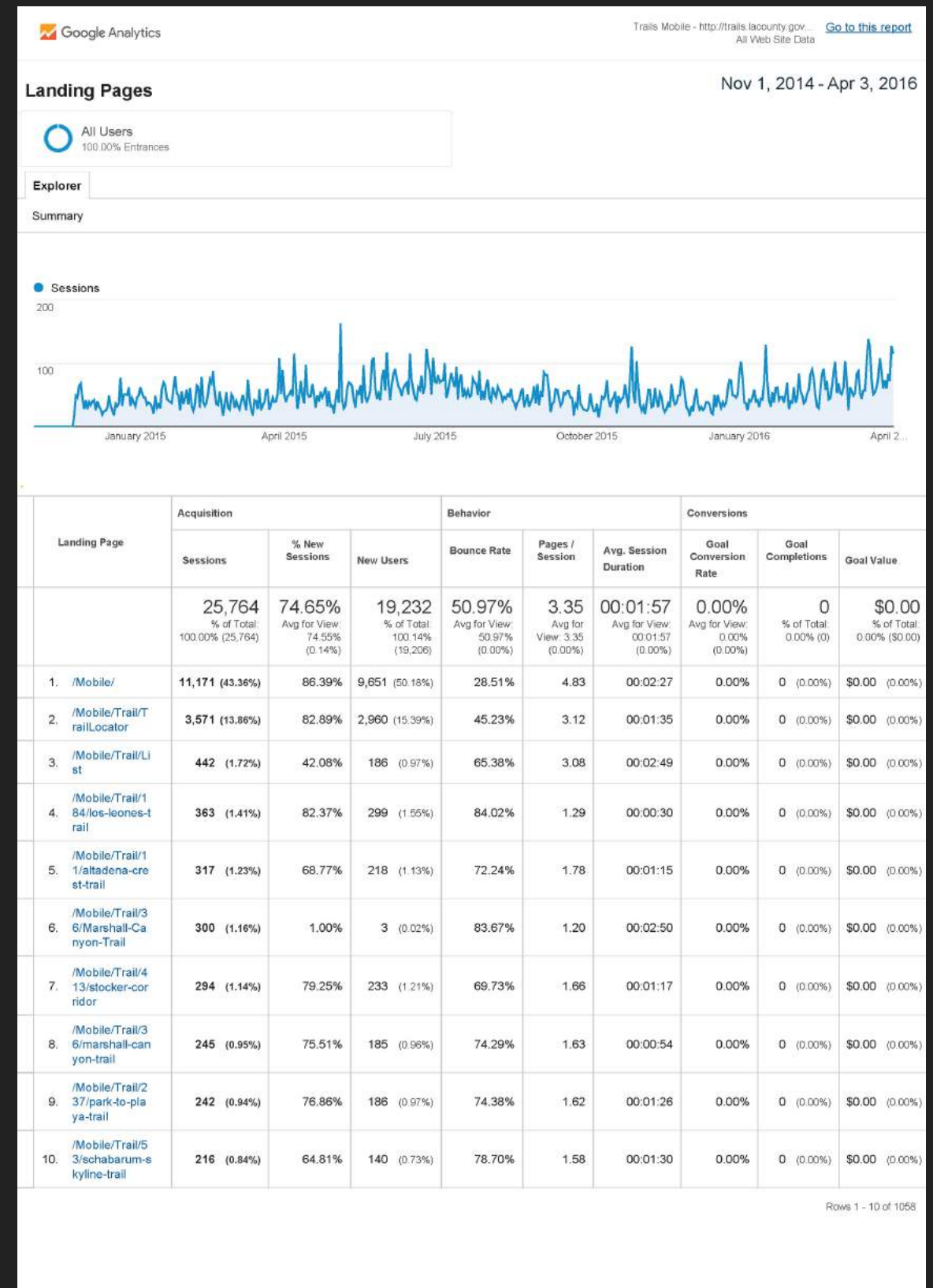
MAKING AUTHORIZED TRAIL INFO ACCESSIBLE

TRACKING WEBSITE TRAFFIC

Since the 2014 launch, trails.lacounty.gov:

- ▶ Desktop site has received **29k** sessions (53%)
- ▶ Mobile site has received **25k** sessions (47%)

Traffic is low when compared to the Department's website





LA COUNTY TRAILS

**LESSONS
LEARNED**

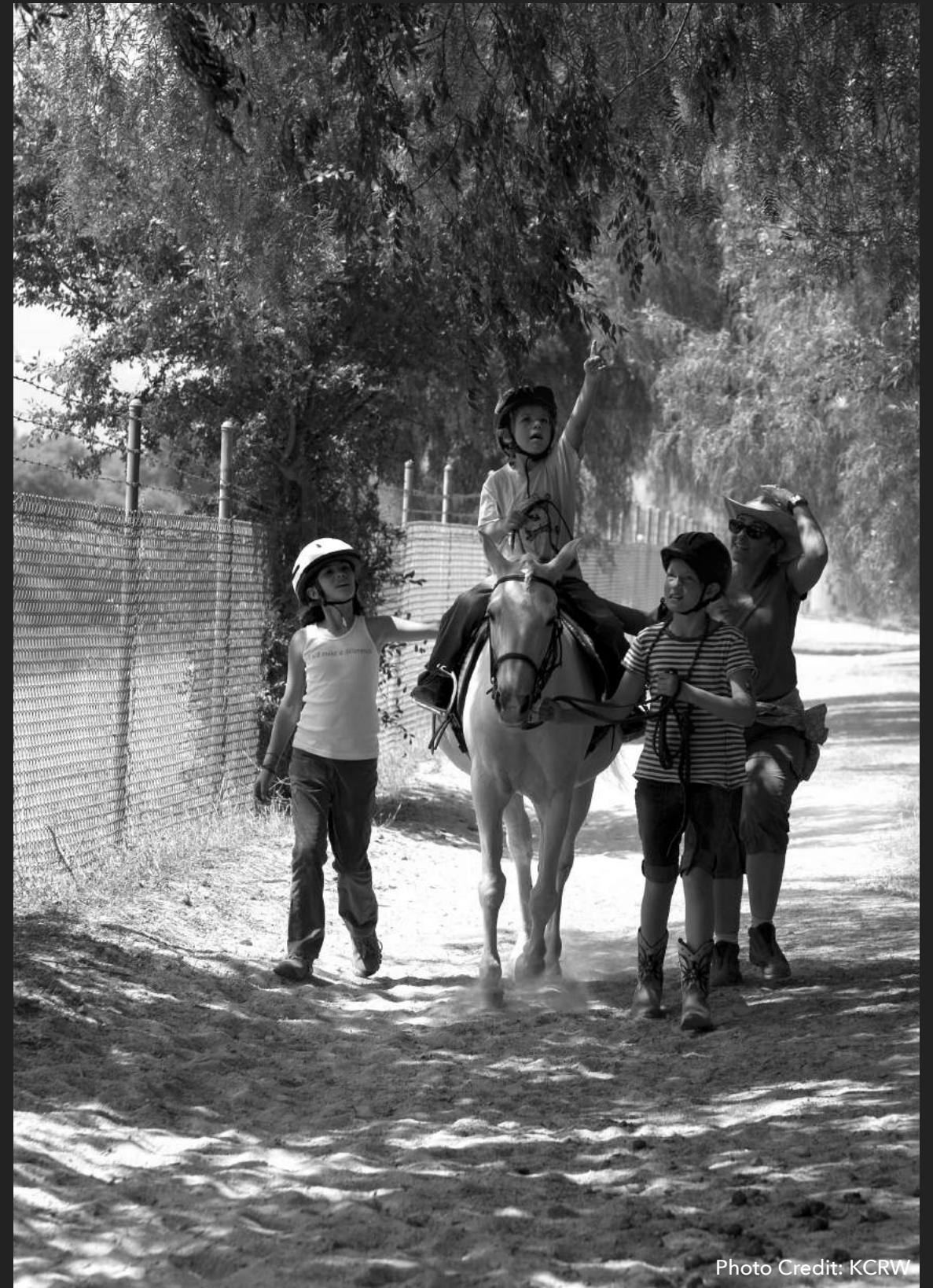
MARKETING STRATEGY

No formal marketing strategy to-date, limited promotion has been made through:

- ▶ Board meeting presentation
- ▶ Press releases
- ▶ Department's social media channels

Recommended that we:

- ▶ Consider new strategies to promote the site through county channels, park signage, local businesses
- ▶ Seek out partner sites that would provide links to trails.lacounty.gov to increase traffic from referrals
- ▶ Invest resources into search engine optimization



ADDITIONAL PHOTOGRAPHY

Photos on the site typically don't show people actually using the trails.

Recommended that we get more pictures with people in them by:

- ▶ Utilizing the Department's photographer and county staff on a semi-regular basis
- ▶ Developing a program to encourage trail users to submit their own pictures to be posted



EFFORTS TO BRING ON MORE PARTNERS

- ▶ Before launch, we made a significant effort to get trails from federal and state agencies, conservancies, and trusts on the website
- ▶ One-stop source for authorized trail information **within** the County of L.A.
- ▶ Develop a strategies to reach out to more local jurisdictions to join the trails website





LA COUNTY TRAILS

**DIRECTION
MOVING FORWARD**

TECHNOLOGICAL TRENDS

Quickly changing and competitive marketplace for outdoor recreational apps

We needed to answer the following questions:

- ▶ *What are the available options to reach more users? What are the advantages and disadvantages of each approach?*
- ▶ *Who is our target audience?*
- ▶ *How much are the initial development costs of a new or improved platform? How much will it cost to update and maintain?*
- ▶ *How long will it take to develop?*



FEASIBILITY STUDY: ASSESSING THE OPTIONS AVAILABLE

- A. Add functionality to existing desktop and mobile sites
- B. Create a fully-featured native app from scratch
- C. Develop an app using a minimum viable product approach
- D. Leverage the framework of other app developers

OPTION A: **ADD FUNCTIONALITY TO EXISTING DESKTOP AND MOBILE SITES**

Advantages:

- ▶ Economical
- ▶ Low barrier to access
- ▶ Guaranteed compatibility

Disadvantages:

- ▶ Limited ability to accommodate all desired features
- ▶ Less desirable user experience
- ▶ Not discoverable on app store and google play



OPTION B: CREATE A FULLY-FEATURED NATIVE APP FROM SCRATCH

Advantages:

- ▶ Endless possibilities to customize
- ▶ Discoverable on app store and google play Compatibility

Disadvantages:

- ▶ Relatively expensive
- ▶ User adoption uncertain
- ▶ Lengthy timeframe to develop



OPTION C: DEVELOP AN APP USING A MINIMUM VIABLE PRODUCT APPROACH

Advantages:

- ▶ Economical
- ▶ Less risk for user adoption
- ▶ Learn from the directly from the users
- ▶ Improved metrics

Disadvantages:

- ▶ Initial launch will have limited features
- ▶ Costs could increase as it progresses



OPTION D: **LEVERAGE THE FRAMEWORK OF OTHER APP DEVELOPERS**

Advantages:

- ▶ Economical
- ▶ Quick deployment
- ▶ Enables county to keep up with quickly changing technology

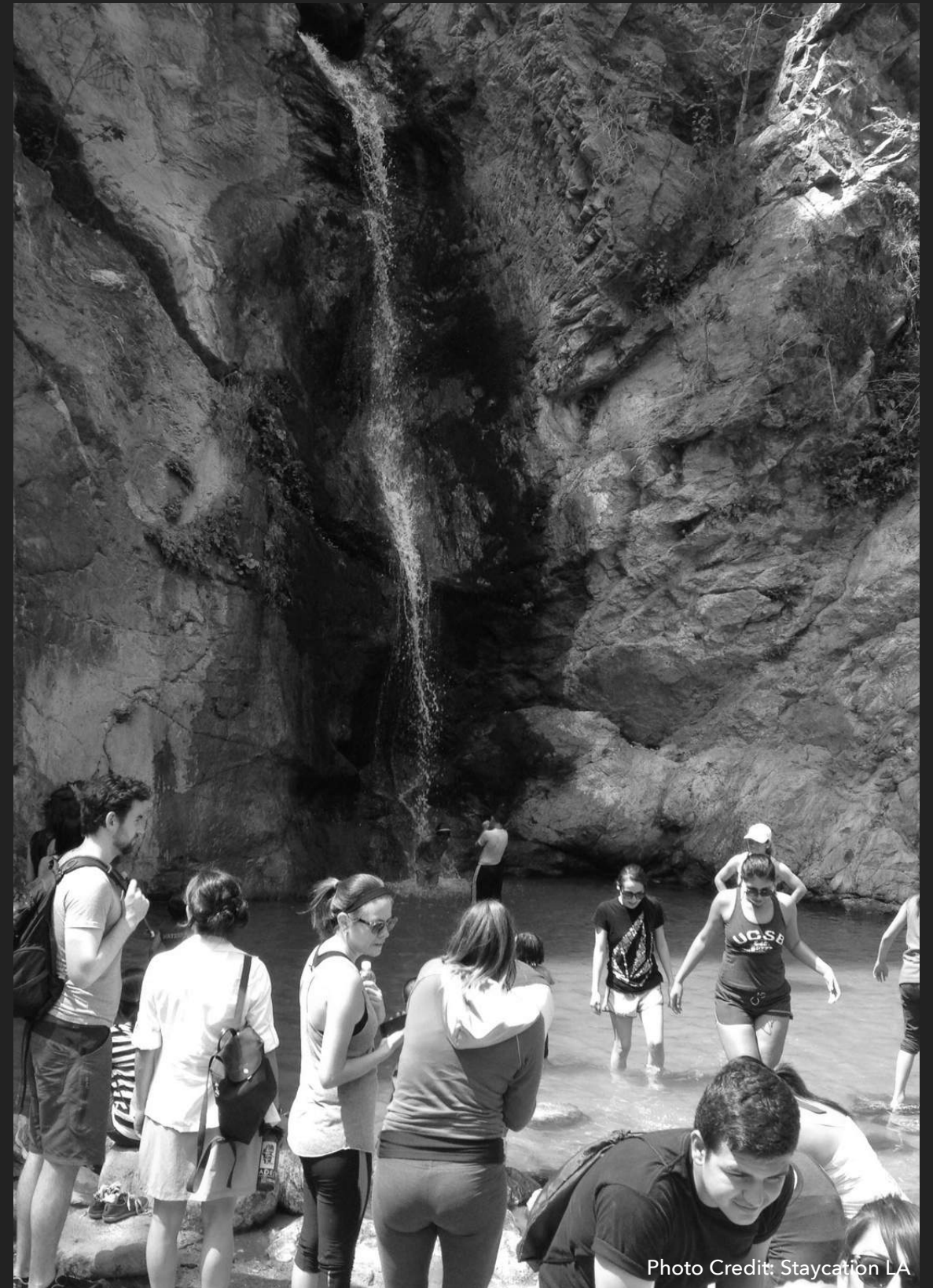
Disadvantages:

- ▶ May require flexibility to integrate data into existing framework



SUMMARY OF MAIN POINTS

- ▶ Goal is to make information about trails as **accessible and user-friendly** as possible
- ▶ Learned that there is tremendous room for growth with a strong marketing strategy and more partnering jurisdictions
- ▶ Looking forward, the County has many avenues to expand the reach of authorized trail information



LOS ANGELES COUNTY TRAILS

TRAIL TECHNOLOGY

Zachary Likins, Trail Planner
County of Los Angeles | Department of Parks and Recreation