



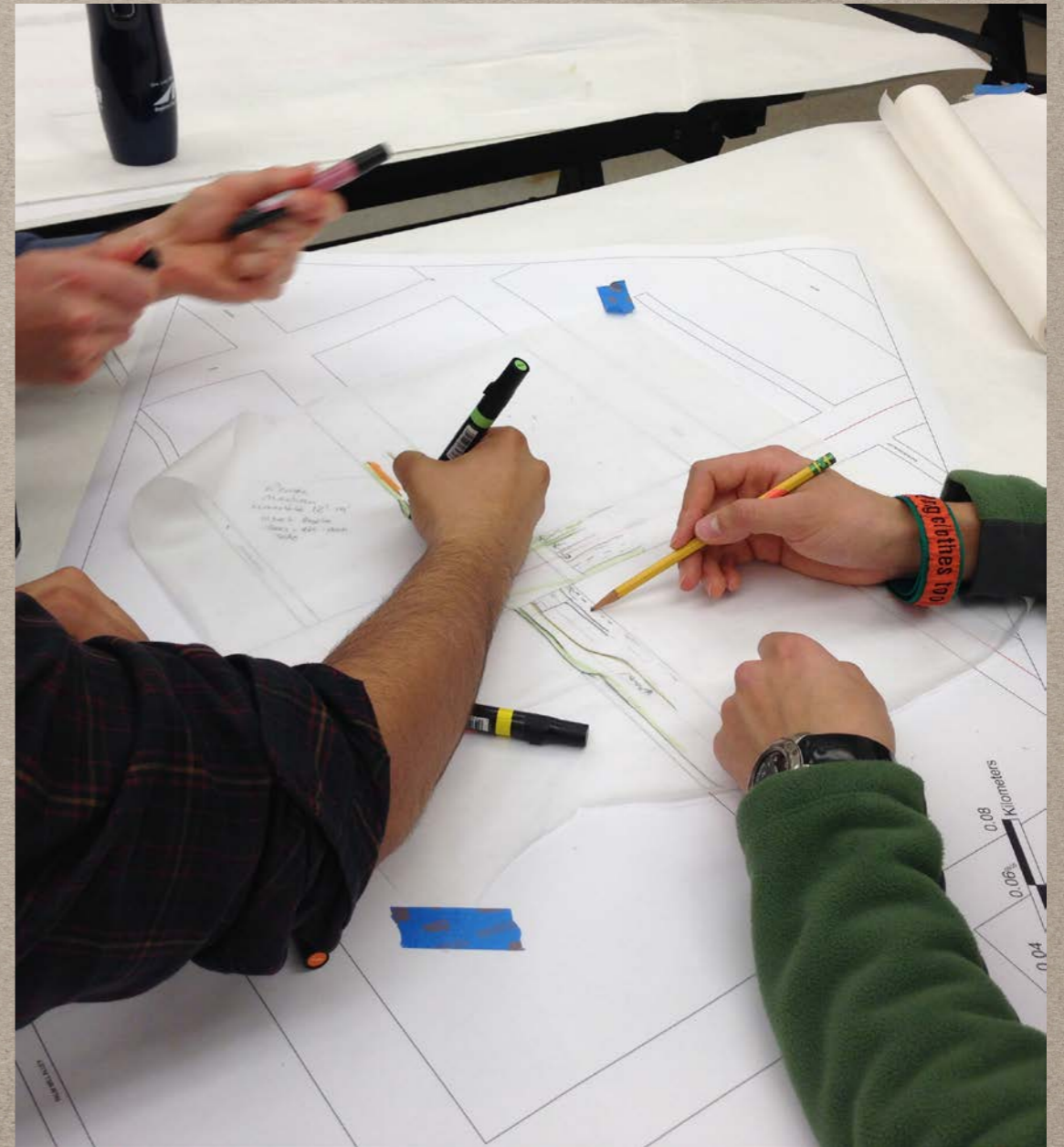
IMPROVING ACTIVE TRANSPORTATION DATA IN HIAS WITH AUTOMATED COUNTERS

LESSONS FROM CA

WILLIAM RIGGS, PHD

PRESENTATION OUTLINE

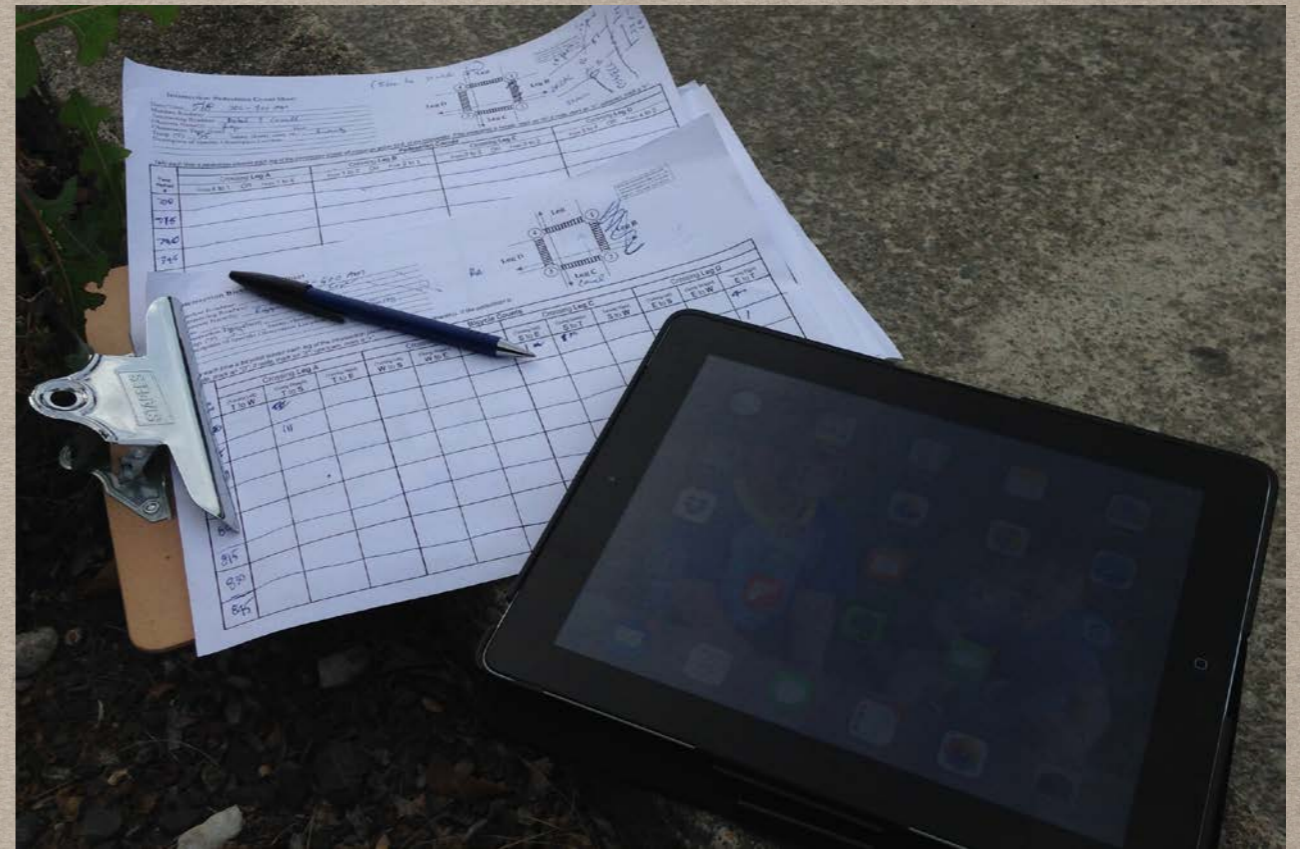
- Introduction
- Policy Role
- Cases
- Findings
- Key Take Aways



INTRODUCTION

- Data Essential for ATP & HIA Inserts
- Gathered in formative and evaluative phases
- Automated counters
- Varies in equipment, cost, purpose and output





CASES
CITY
CONCORD

OPEN SPACE
DISTRICT
SAN LUIS OBISPO (SLO)



CONCORD

- 1) Equip / Methods: Eco-Visio Ecocounter & Manual
- 2) Purpose: Sidewalk & Bikeway volumes counts to inform HIA / ATP
- 3) Policy and Research Outcome: Consistent Error & Site Applicability Lessons to Prior Academic Work
- Available: <http://works.bepress.com/williamriggs/18/>

WARNING
CROSS WITH CAUTION





Comment Wall

What is YOUR VISION for bicycles and pedestrians in the City of Concord?

Light sensors to signal lights to change when we are the only ones at the intersection (bike/peds)

start bike sharrows

equal share of roads

seconds count down @ lights when crossing so you know ahead time is left to cross the intersection

Bike lanes across (under) primary arterials

Longer time @ you can get across the intersection

Take speed for bikes!

You present an issue find the cause

The bike path... (faded)

Concord City

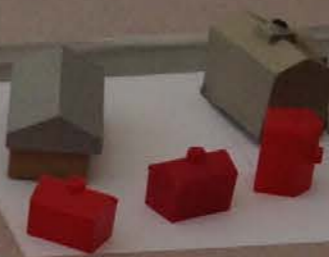
What Do You Like Most?

Please place your stickers on the bicycle and/or pedestrian designs you like

- Class I Bike Paths
- Class II Bike Lanes
- Class II Bike Lanes Painted Green
- Bike Parking Racks
- Diagonal "Scramble" Crossings
- Bike Box Turning Lanes
- Zebra Striping Painted Crosswalks
- Wide Sidewalks
- Pedestrian Crossing Islands
- Pedestrian Streets



DOS SANTOS
PLAZA



MT. DIA

FEEL THE

SLO



- 1) Equip / Methods: Eco-Visio Ecocounter, Infrared Motion Sensor, Mobile Phones & Manual
- 2) Trail volumes counts for health and economic impacts of open space study
- 3) Policy and Research Outcome: Decreased reliability due to variety of factors, possibility for combining with other methods for access / EJ assessment & exploration of more cost-effective rapidly deployable methods
- Available: <http://works.bepress.com/williamriggs/35>

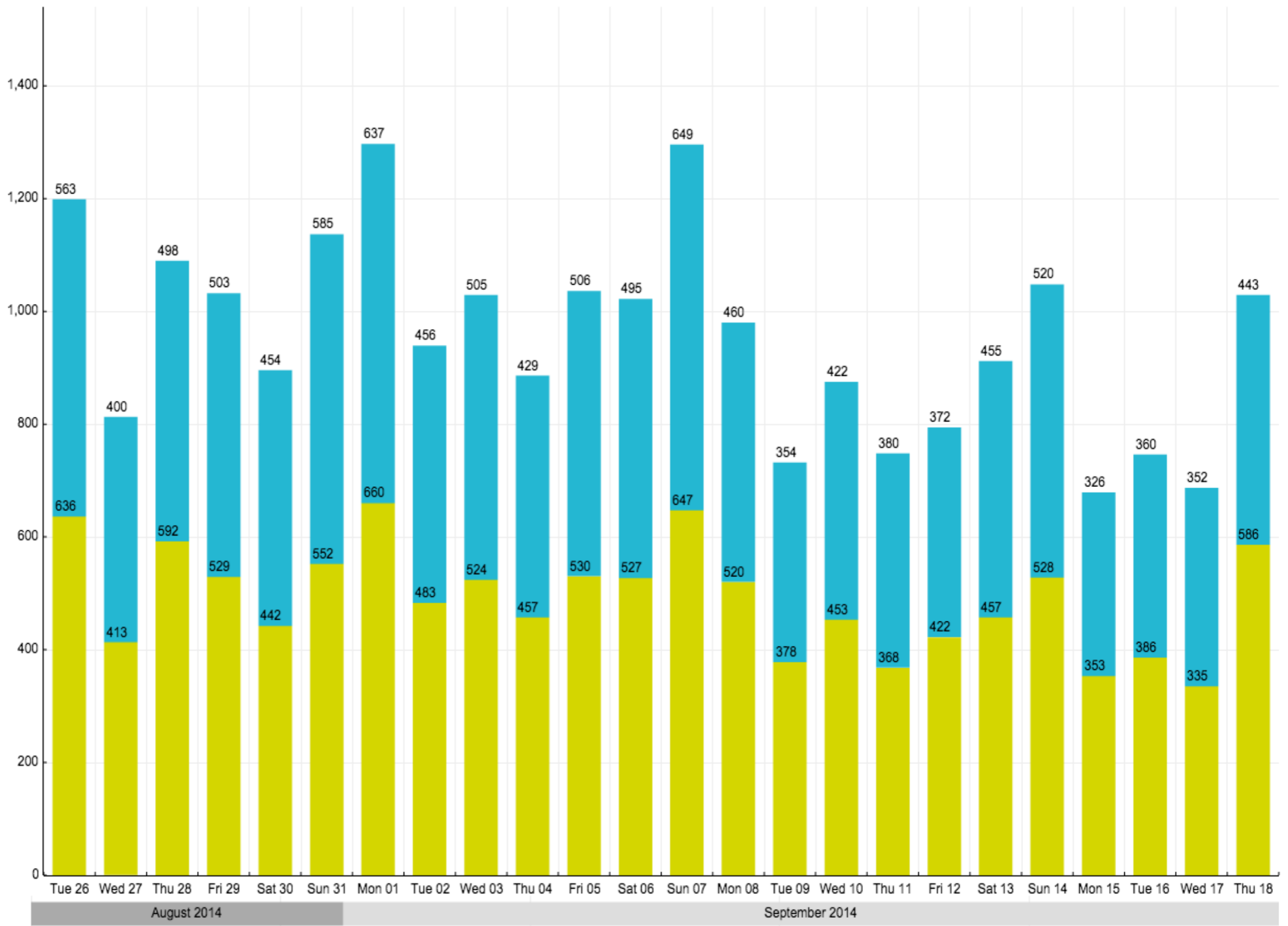
CITY OF SAN LUIS OBISPO
FERRINI RANCH OPEN SPACE
OPEN SPACE IS A PRECIOUS RESOURCE
PLEASE ASSIST WITH ITS PROTECTION
AND PRESERVATION BY OBSERVING
THE FOLLOWING:
• NO FIRES OF ANY KIND • BICYCLES PROHIBITED
• NO OVERNIGHT CAMPING • STAY ON DESIGNATED TRAILS

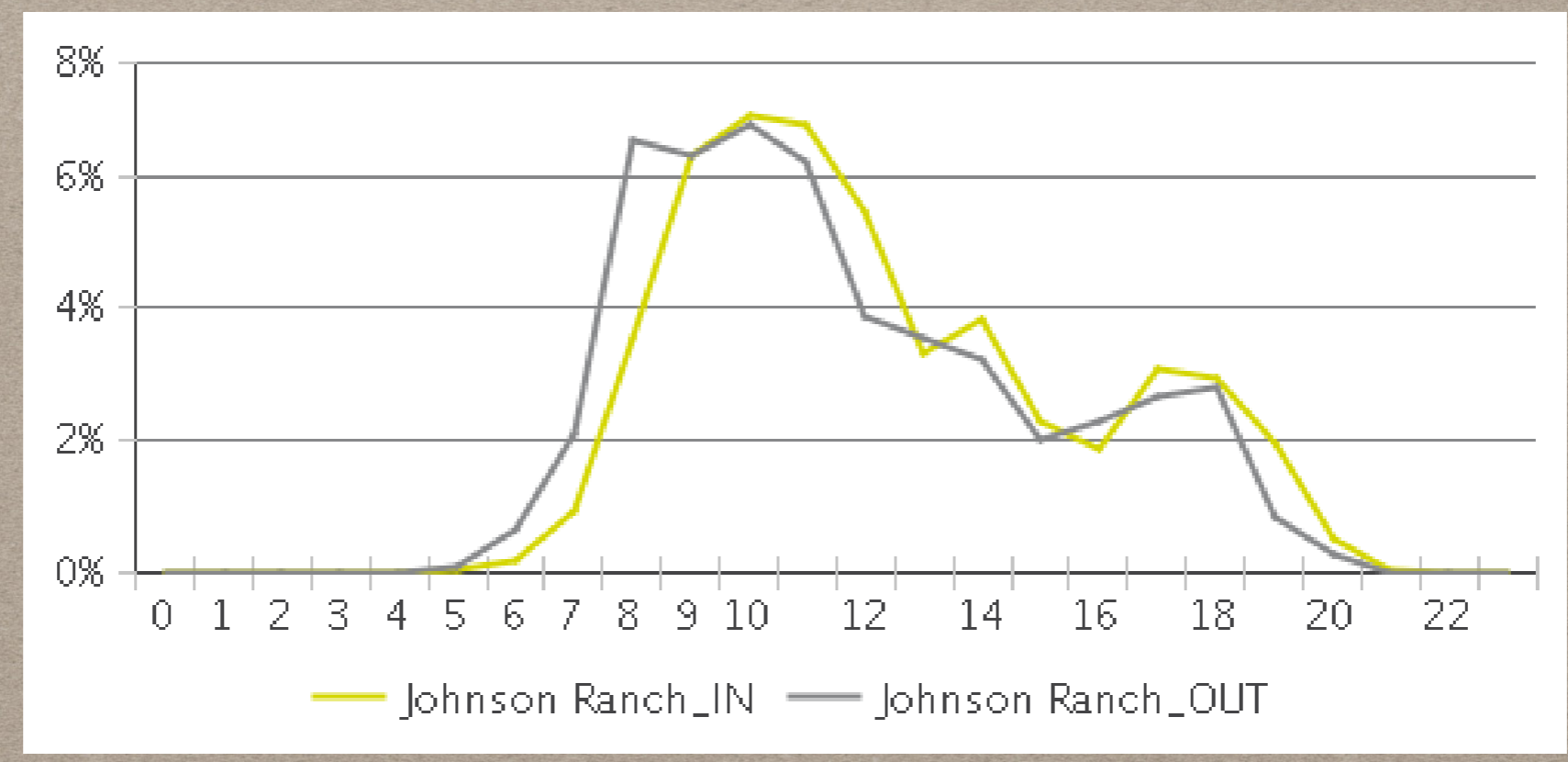
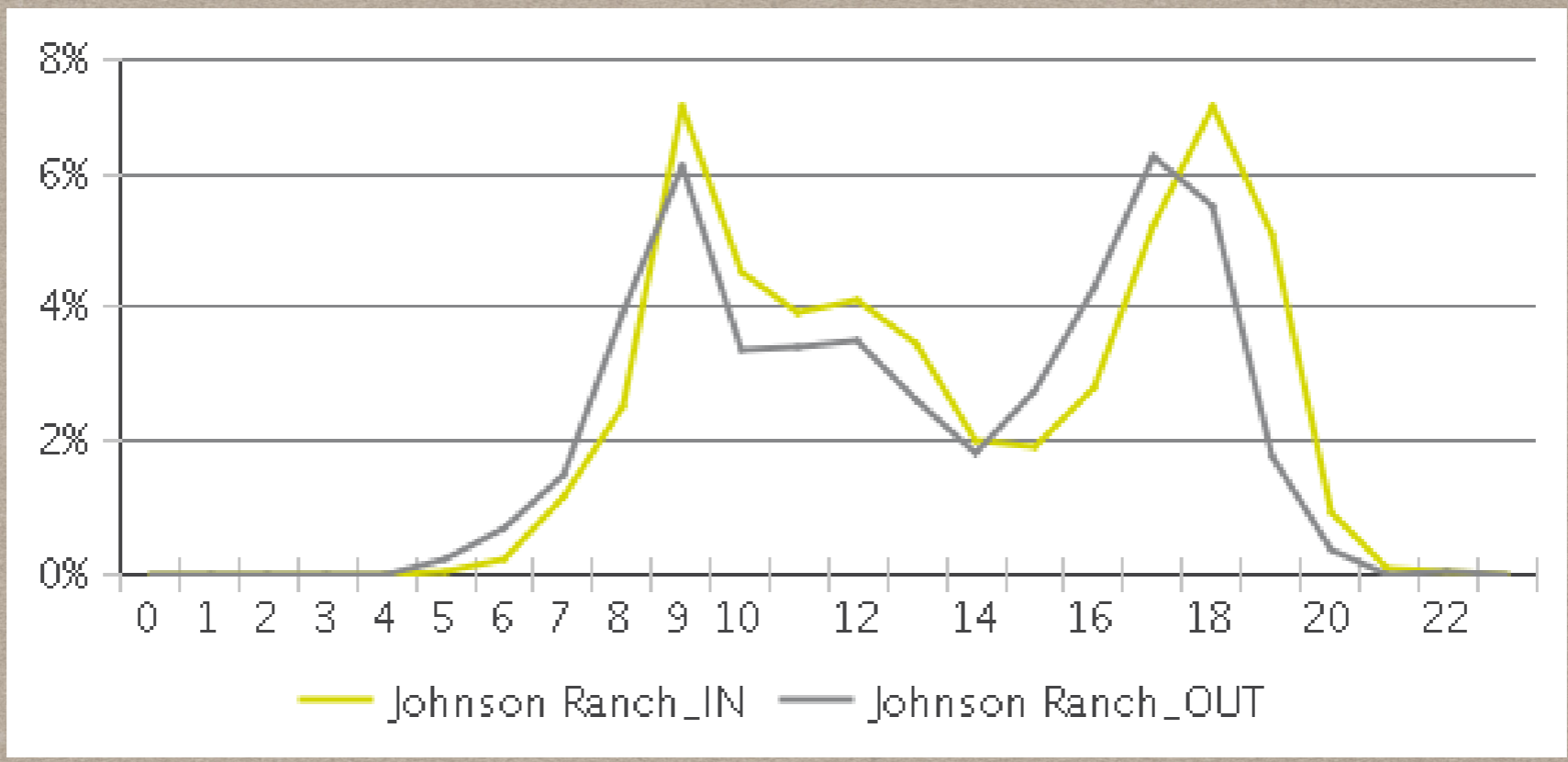
PLEASE OBSERVE
THE FOLLOWING:
• STAY ON
DESIGNATED TRAILS
• BICYCLES PROHIBITED
• NO LEASH
• PICK UP AFTER
YOUR DOG
• NO FEEDING
• NO ALCOHOL
• NO DRUGS



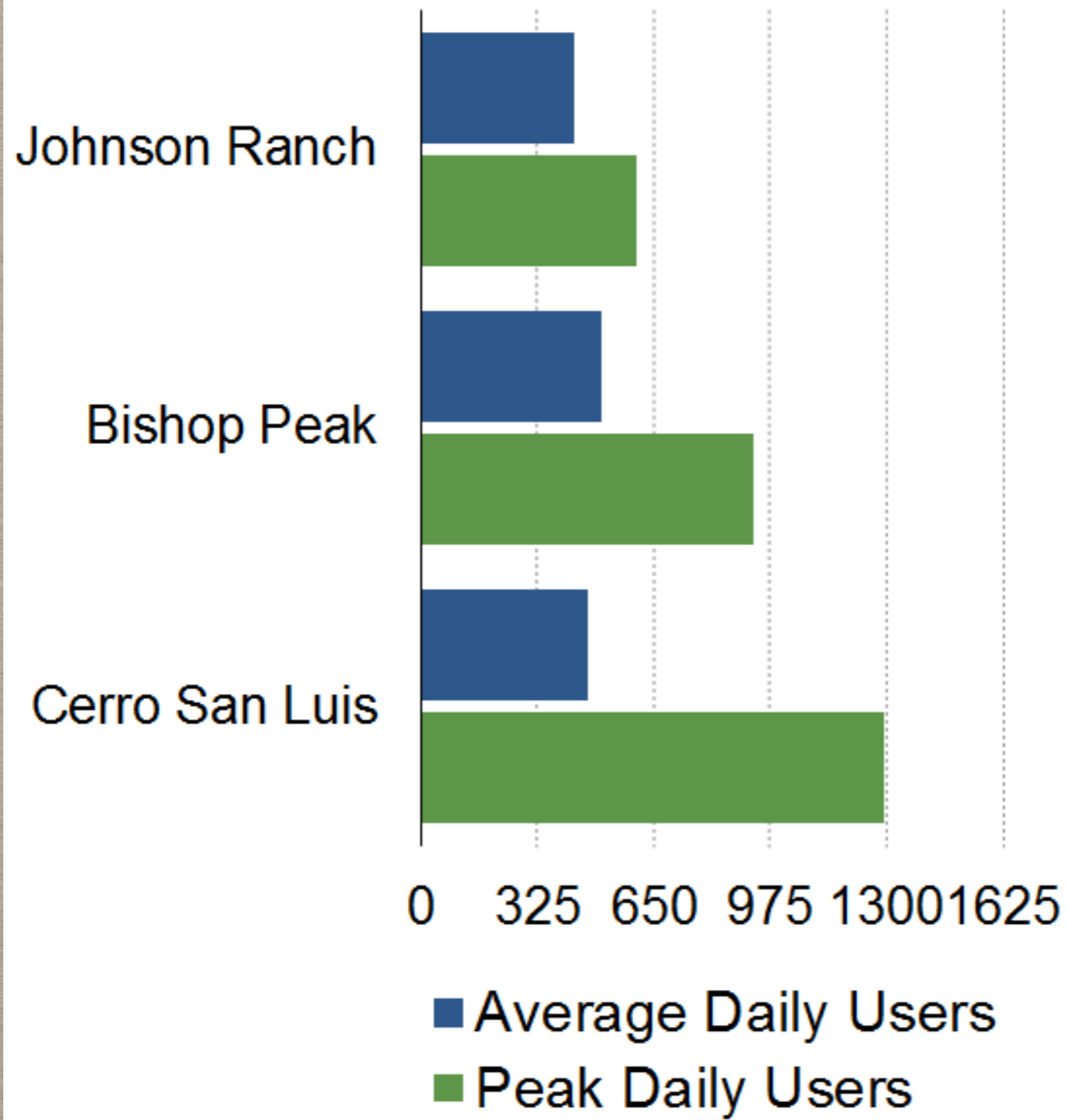
08/26/2014 - 09/18/2014

Johnson Ranch_IN 
Johnson Ranch_OUT 

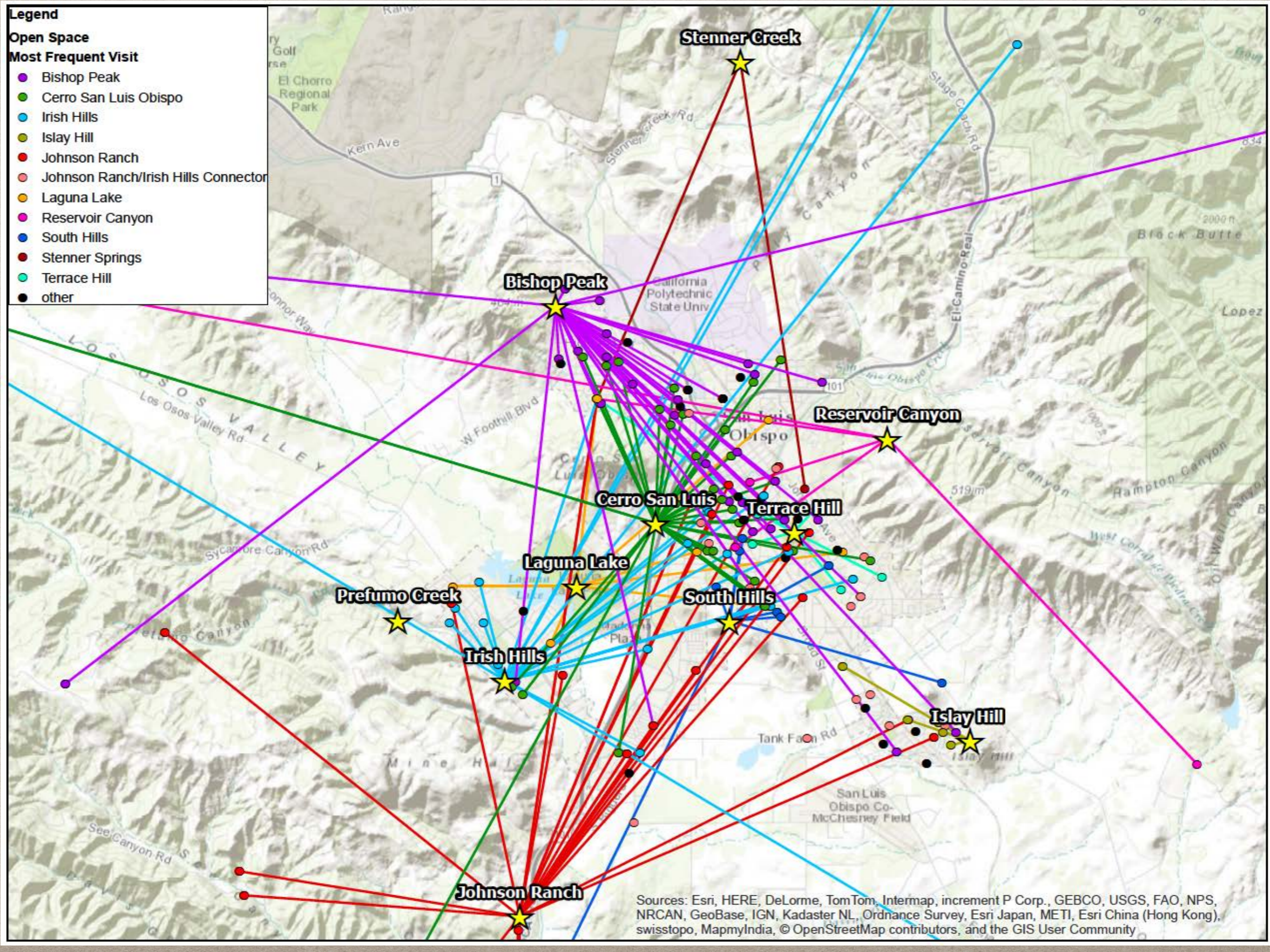




User Stats



- Legend**
- Open Space**
- Most Frequent Visit**
- Bishop Peak
 - Cerro San Luis Obispo
 - Irish Hills
 - Islay Hill
 - Johnson Ranch
 - Johnson Ranch/Irish Hills Connector
 - Laguna Lake
 - Reservoir Canyon
 - South Hills
 - Stenner Springs
 - Terrace Hill
 - other



Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

FINDINGS

- Confirmation of prior results with regard to error although more erratic / volatile for open space
- Opportunities to combine with other methods for sophisticated O/D & accessibility evaluation
- Opportunities to experiment with more rapidly deployable devices





 **SIMMONS**



04-02-2015 19:54:09



 SIMMONS



04-05-2015 09:26:56

KEY TAKE AWAYS

- Data - lots of it consistently over time
- Many application - campus, street, open space
- Expensive and inexpensive options (rapidly deployable)
- Variability in technology and accuracy
- Opportunity for mixed methods, creativity and innovation

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