

GIS & Regional Trails Planning

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GIS Day, November 3, 2021



SANTA CLARA
COUNTY PARKS



Presentation Overview

- ▶ Countywide Trails Master Plan
- ▶ 2015 Gaps Analysis and GIS Creation
- ▶ Role of GIS in Countywide Trails Planning
- ▶ Countywide Trails GIS Database Restructure and Update
- ▶ GIS Demo



Countywide Trails Master Plan (1995)

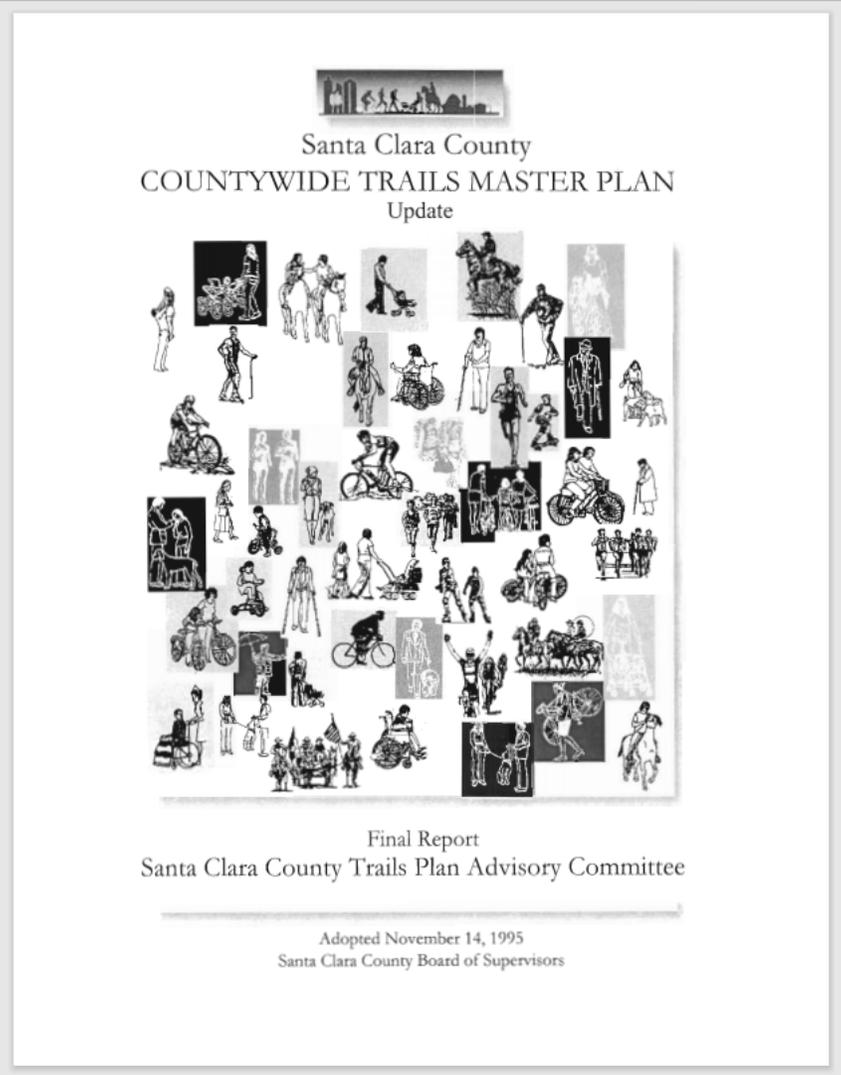


Photo: Aileen Wong



Photo: roadsidesecrets.com



Santa Clara County Trails Master Plan Update

County of Santa Clara Parks and Recreation Department

Countywide Trails Master Plan

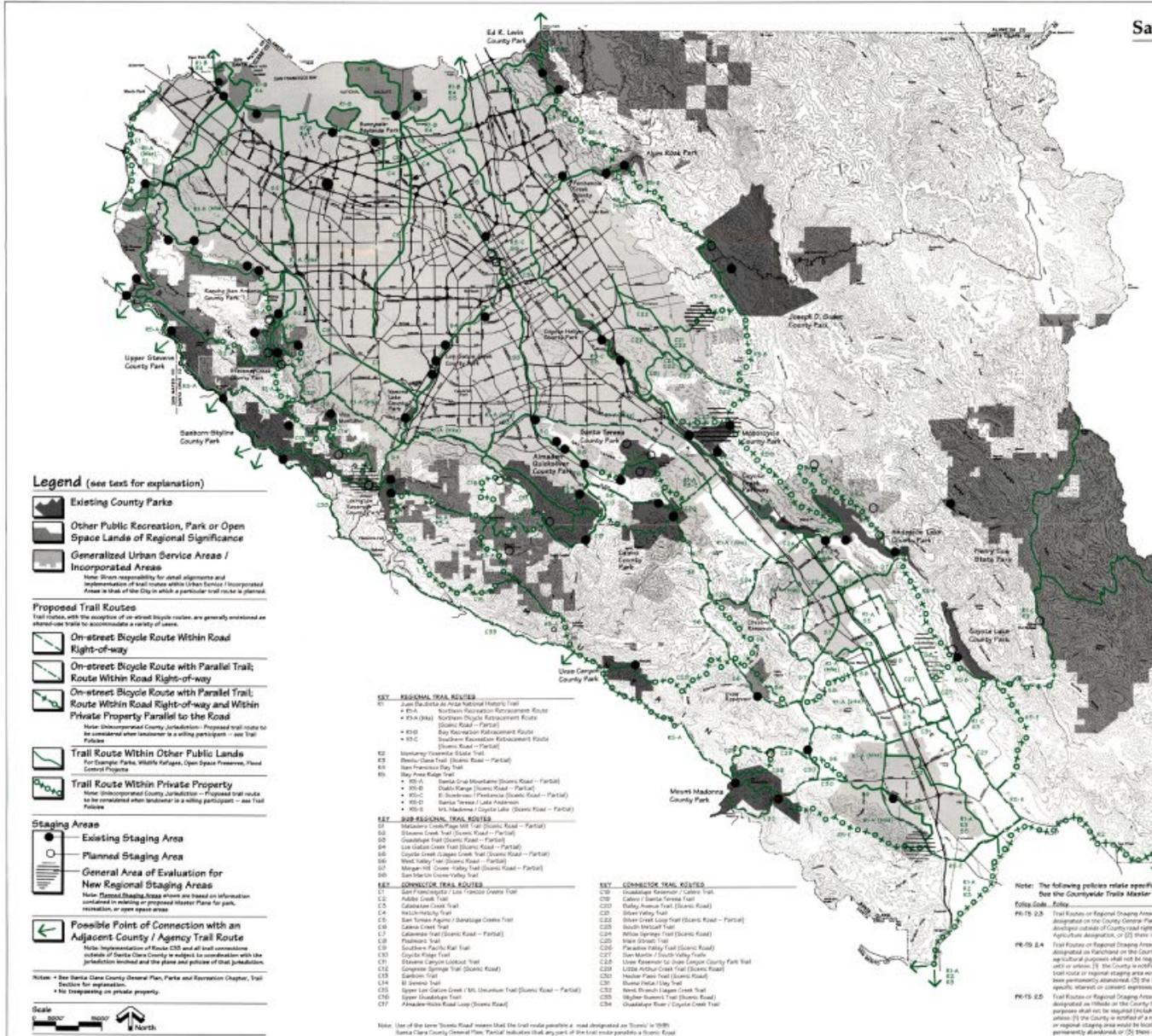
November, 1995

NOTE

Proposed trail routes indicated shall not be considered specific trail alignments; such alignments shall be obtained and developed pursuant to the trail implementation recommendations set forth in Santa Clara County General Plan. Trail dedications may only be requested along routes as are generally shown on this map. For further information on trail alignments and General Plan policies, please contact the Santa Clara County Parks and Recreation Department at (408) 358-3147.

THIS MAP IS NOT A TRAIL GUIDE

This map is a planning tool. Many of the routes or staging areas identified on the Map are simply proposed and not open to the public for any purpose. This map does not convey any rights to the public to use any trail routes shown on this drawing; nor does this map exempt any person from trespassing charges. For copies of maps about existing trails that are available for public use, contact the Santa Clara County Parks and Recreation Department.



Legend (see text for explanation)

- Existing County Parks
- Other Public Recreation, Park or Open Space Lands of Regional Significance
- Generalized Urban Service Areas / Incorporated Areas
- Proposed Trail Routes
- On-street Bicycle Route Within Road Right-of-way
- On-street Bicycle Route with Parallel Trail Route Within Road Right-of-way
- On-street Bicycle Route with Parallel Trail Route Within Road Right-of-way and Within Private Property Parallel to the Road
- Trail Route Within Other Public Lands
- Trail Route Within Private Property
- Existing Staging Area
- Planned Staging Area
- General Area of Evaluation for New Regional Staging Areas
- Possible Point of Connection with an Adjacent County / Agency Trail Route

- KEY REGIONAL TRAIL ROUTES**
- R1-A Juan Bautista de Anza National Historic Trail
 - R1-B Northern Recreation Retracement Route
 - R1-C Northern Regional Retracement Route
 - R1-D Day Retracement Retracement Route
 - R1-E Day Retracement Retracement Route
 - R1-F San Antonio County Park
 - R1-G San Antonio County Park
 - R1-H San Antonio County Park
 - R1-I San Antonio County Park
 - R1-J San Antonio County Park
 - R1-K San Antonio County Park
 - R1-L San Antonio County Park
 - R1-M San Antonio County Park
 - R1-N San Antonio County Park
 - R1-O San Antonio County Park
 - R1-P San Antonio County Park
 - R1-Q San Antonio County Park
 - R1-R San Antonio County Park
 - R1-S San Antonio County Park
 - R1-T San Antonio County Park
 - R1-U San Antonio County Park
 - R1-V San Antonio County Park
 - R1-W San Antonio County Park
 - R1-X San Antonio County Park
 - R1-Y San Antonio County Park
 - R1-Z San Antonio County Park
- KEY SUB-REGIONAL TRAIL ROUTES**
- S1 Matadero Creek/Elgin Road (Santa Clara - Partial)
 - S2 Stevens Creek Trail (Santa Clara - Partial)
 - S3 Guadalupe Trail (Santa Clara - Partial)
 - S4 San Antonio County Park (Santa Clara - Partial)
 - S5 Guadalupe Creek (Santa Clara - Partial)
 - S6 Guadalupe Creek (Santa Clara - Partial)
 - S7 West Valley (Santa Clara - Partial)
 - S8 Morgan Hill (Santa Clara - Partial)
 - S9 San Antonio County Park (Santa Clara - Partial)
- KEY CONNECTOR TRAIL ROUTES**
- C1 San Francisco / Los Trancos Creek Trail
 - C2 Public Creek Trail
 - C3 Galatierra Creek Trail
 - C4 Redwood Canyon Trail
 - C5 San Tomas Aquino / Guadalupe Creek Trail
 - C6 Galatierra Trail (Santa Clara - Partial)
 - C7 Redwood Canyon Trail
 - C8 San Antonio County Park Trail
 - C9 Guadalupe Creek Trail
 - C10 San Antonio County Park Trail
 - C11 San Antonio County Park Trail
 - C12 San Antonio County Park Trail
 - C13 San Antonio County Park Trail
 - C14 San Antonio County Park Trail
 - C15 San Antonio County Park Trail
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 - C50 San Antonio County Park Trail
- KEY CONNECTOR TRAIL ROUTES**
- C101 Guadalupe Retracement / Castro Trail
 - C102 Castro / Santa Teresa Trail
 - C103 Shiloh Avenue Trail (Santa Clara)
 - C104 Shiloh Valley Trail
 - C105 Shiloh Valley Trail
 - C106 Shiloh Valley Trail (Santa Clara - Partial)
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 - C147 Shiloh Valley Trail
 - C148 Shiloh Valley Trail
 - C149 Shiloh Valley Trail
 - C150 Shiloh Valley Trail

TABLE D-1: SUMMARY OF COUNTY-WIDE TRAIL ROUTES

MAP KEY	TRAIL	GENERAL ROUTE	LOCATION	APPX. LENGTH (miles)	LEAD AGENCIES	EXISTING STATUS*	INTENDED TRAIL USES	Priority Ranking	
						Completed Partially Completed	Hiking Bicycle (On-Road) Bicycle (Off-Road) Equestrian		
	REGIONAL TRAILS								
	Juan Bautista de Anza National Historic Trail --Northern Recreation Retracement Route (north to south)								
R1-A	Juan Bautista de Anza NHT - see also San Francisco / Los Trancos Creek Connector Trail (Route C1)	Arastrodero Rd.	From: Alpine Rd. To: Arastrodero Preserve	0.5	Palo Alto				
R1-A	Juan Bautista de Anza NHT - see also Matadero Creek Sub-regional Trail (Route S1)	Arastrodero Rd.	From: Arastrodero Preserve To: Arastrodero Preserve	1.0	Palo Alto				
R1-A	Juan Bautista de Anza NHT		From: Arastrodero Preserve To: Duve-neck-Windmill Pasture	3.0	Los Altos Hills				
R1-A	Juan Bautista de Anza NHT	Rancho San Antonio OSP	From: Duve-neck Windmill OSP To: Rancho San Antonio OSP	3.5	MROSD				
R1-A	Juan Bautista de Anza NHT		From: Rancho San Antonio OSP To: Rancho San Antonio County Park	2.25	MROSD Santa Clara County				
R1-A	Juan Bautista de Anza NHT		From: Foothill Exp. To: Cristo Rey	1.0	Los Altos Cupertino Santa Clara County				
R1-A	Juan Bautista de Anza NHT - see also Stevens Creek Sub-regional Trail (Route S2)		From: Cristo Rey / Rancho San Antonio Co. Park To: Stevens Creek Blvd.	1.0	Cupertino Santa Clara County			38	
R1-A	Juan Bautista de Anza NHT - see also Stevens Creek Sub-regional Trail (Route S2)		From: Stevens Creek Blvd. To: Stevens Canyon Road / Stevens Creek Co. Park	2.5	Cupertino Santa Clara County			38	



SANTA CLARA COUNTY PARKS

Gaps Analysis and GIS Data (2015)

Countywide Trails Prioritization and Gaps Analysis

Informational Report
March 17, 2015



 **SANTA CLARA COUNTY PARKS**
County of Santa Clara
Parks and Recreation Department

Santa Clara County Existing and Proposed Regional Trail Connections

Santa Clara County Parks - November 9, 2015

SCCParks_RegionalTrailConnections - Existing Regional Trail Connections

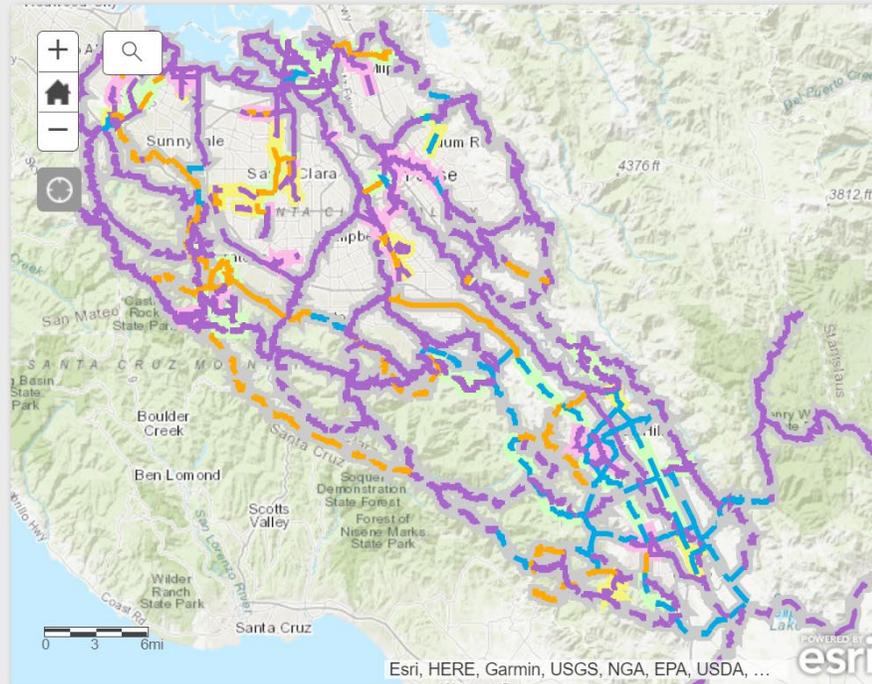
-  Off-Street Trail
-  On-Street Bike Route with Parallel Trail
-  On-Street Bike Route

SCCParks_RegionalTrailConnections - Proposed Regional Trail Connector

-  Off-Street Trail
-  On-Street Bike Route with Parallel Trail
-  On-Street Bike Route

SCCParks_RegionalTrailConnections - Relation to Countywide Trails Master Plan (CWTMP)

-  CWTMP Route
-  CWTMP Route with Modification Consistent with Local Plan
-  Other Regional Trail Routes
-  Not Included in CWTMP



Notes:

This map is not a trail guide. This map is a planning tool. Many of the routes identified on the map are simply proposed and not open to the public for any purpose.

This map only includes existing and proposed trails that are regionally significant. Other existing and proposed trails that are of local significance are not included, but are important parts of the trail network.

Proposed CWTMP trail routes indicated shall not be considered specific trail alignments; such alignments in the unincorporated portions of the County shall be obtained and developed pursuant to the trail implementation recommendations set forth in the Santa Clara County General Plan.

For more information, see the Santa Clara Countywide Trails Master Plan [webpage](#).



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Role of GIS in Countywide Trails Planning

High-Level Trail Concepts

- Track network status and progress
- Provide big picture view of regional trails
- Inform regional and local planning and decision-making

Refined Trail Planning

- Trail placement options (e.g., slope, habitat, infrastructure)
- Cost estimates (e.g., length of trail, bridges, other features)
- Localized connectivity

Goals of GIS Restructure and Update

Reflect “Living”
Countywide
Trails Network

Easily Answer
Key Questions

Inform County,
City, and Other
Planning
Decisions

Support Multi-
Jurisdictional
Coordination

Readily Provide
Information for
Decision-Makers
and Public

Build and
Maintain
Institutional
Knowledge



GIS Database Restructure and Update

- ▶ Parallel trails → split out features for on-street vs. off-street
- ▶ Use yes/no fields to easily summarize trail status
- ▶ Domains: standardization of trail names and other information
- ▶ New categories to track important qualities
- ▶ Break and merge trail segments to reflect changes and similarities in characteristics
- ▶ Structure database for flexibility for “living” trail network
- ▶ Update geometry and attributes for every segment (800+ features) to reflect current planning and status
- ▶ Future concepts: Priority scores, linking to relevant plans and information, dedication dates





Countywide Trails GIS Tool Demonstration

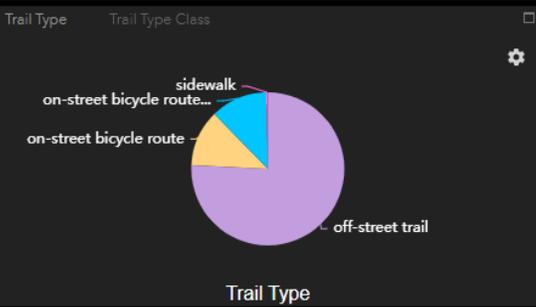


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Countywide Trails Master Plan Dashboard

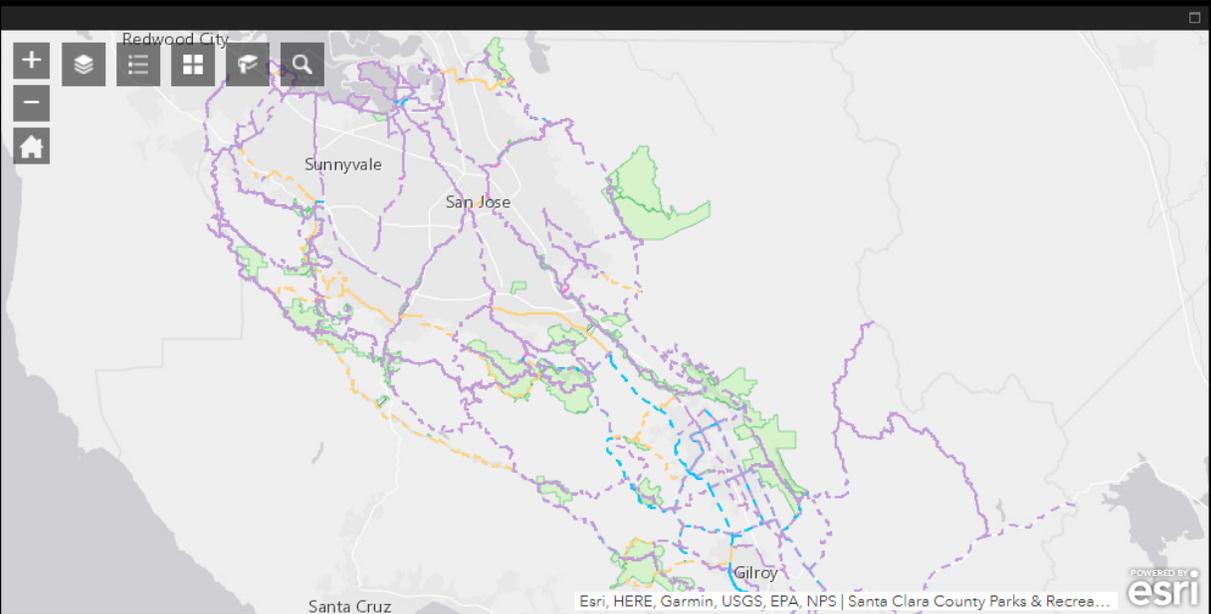
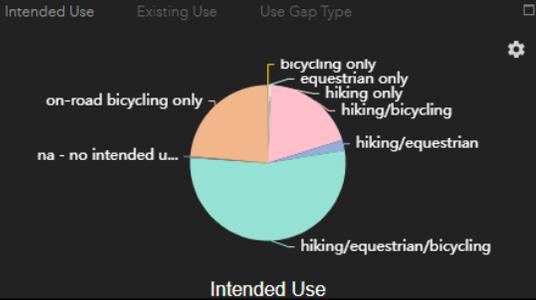
Santa Clara County Parks



Mileage counter

880.13

total miles



Filters

- Show only adopted CWTMP routes
- Trail selector
 - Trail is:
- Show only developed trails
- Show only undeveloped trails
- Detailed Development Status

About

The Countywide Trails Master Plan identifies a contiguous trail system to realize the County's vision of providing a network of trails that connects cities to one another, connects cities to the County's regional open space resources, connects County parks to County parks, and connects the northern and southern urbanized regions of the county.

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For more information, see the Santa Clara Countywide Trails Master Plan [webpage](#).



Questions?

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Questions	Answers
<p>1. Is there a way to filter trails that provide a loop?</p>	<p>No, that is not an aspect of the trails we are keeping track of here. The goal of the Countywide Trails Master Plan is to create an interconnected network of trails connecting cities, parks and other open spaces to one another throughout Santa Clara County, so there are trail loops on a large, regional level. The countywide trails network connects to many parks and open spaces that feature recreational trail loops on a smaller scale. However, since the Countywide Trails Master Plan is for regional planning purposes, the GIS web app does not show all trails within the county, only the routes that are considered regionally significant.</p>
<p>2. When do you intend to release this web app for the public?</p>	<p>The web app is anticipated to be released to the public by the end of 2021. Check the Countywide Trails Master Plan webpage at https://parks.sccgov.org/about-parks/plans-projects/countywide-trails.</p>
<p>3. Does your data show which trails allow dogs?</p>	<p>That is not a pre-configured filter we have in the app, but the information is captured in the data. You could find this by using the custom filter and showing only trails that do not have the Other Restrictions field equal to "no dogs allowed" or "no dogs allowed/public access restrictions."</p>
<p>4. Does the GIS shape length drive mileage reporting, or do those numbers come from planning docs/construction drawings?</p>	<p>The mileage is calculated from the GIS shape length, since alignments often change between the planning process and trail construction.</p>
<p>5. After a trail is complete, how is the final path determined? Does someone do a GPS walk/survey?</p>	<p>Currently, most trail alignments are determined from looking at aerial imagery. Some trail alignments are also from GIS data provided from cities or other jurisdictions that is walked with GPS. In the future, we may further refine our trail alignments through walking the trail with GPS, but since this data is for large-scale (in the non-mapping sense of the word) planning purposes we do not include that much precision in the mileage measurement.</p>

Q & A

Q & A

Questions	Answers
6. Are these trails data available online for public?	Yes, currently you can find a web map of the Countywide Trails Master Plan trails, last updated in 2015, on the County Parks Department's website. This updated version with the dashboard web app will be available before the end of this year.
7. Are you using crowdsourced data? If so, how can people help? Links?	No, we are not using crowdsourced data. The information on planned trail types, development status, etc. comes from the County's data as well as data/discussions with Cities and other entities that are working on building trails.
8. Is there any info about mobile phone dead zones?	Attendee responded; Open Signal provides cell coverage data. We do not have information about mobile phone dead zones in our data but may enable users to load other data into the map viewer when using the web app dashboard.
9. Is the trail data 3D? I'm curious about what lengths derived from geometry tell us on steep terrain	The trail data is not 3D since the geometry is largely based on aerial imagery. This data is for planning purposes, so we do not that much precision in the mileage measurement. More precise and accurate trail length data may be found in the guide maps for the parks and open space areas that these trails go through.
10. I would like to know if there a link to the trail detail map	Check the Countywide Trails Master Plan webpage at for the 2015 version of the CWTMP trails, which will eventually be replaced by the dashboard web app with updated data. Guide maps for Santa Clara County Parks can be found at https://parks.sccgov.org/plan-your-visit/maps-gis