

Santa Cruz County Climate Adaptation Vulnerability Assessment and Priorities Report (CAVA)

Milestone 2 – Draft Prioritization June 2024

Santa Cruz County Regional Transportation Commission (SCCRTC)

SCC Office of Response, Recovery, and Resilience (SCC OR3)

SCC Community Development & Infrastructure (County Public Works and Planning)



Agenda

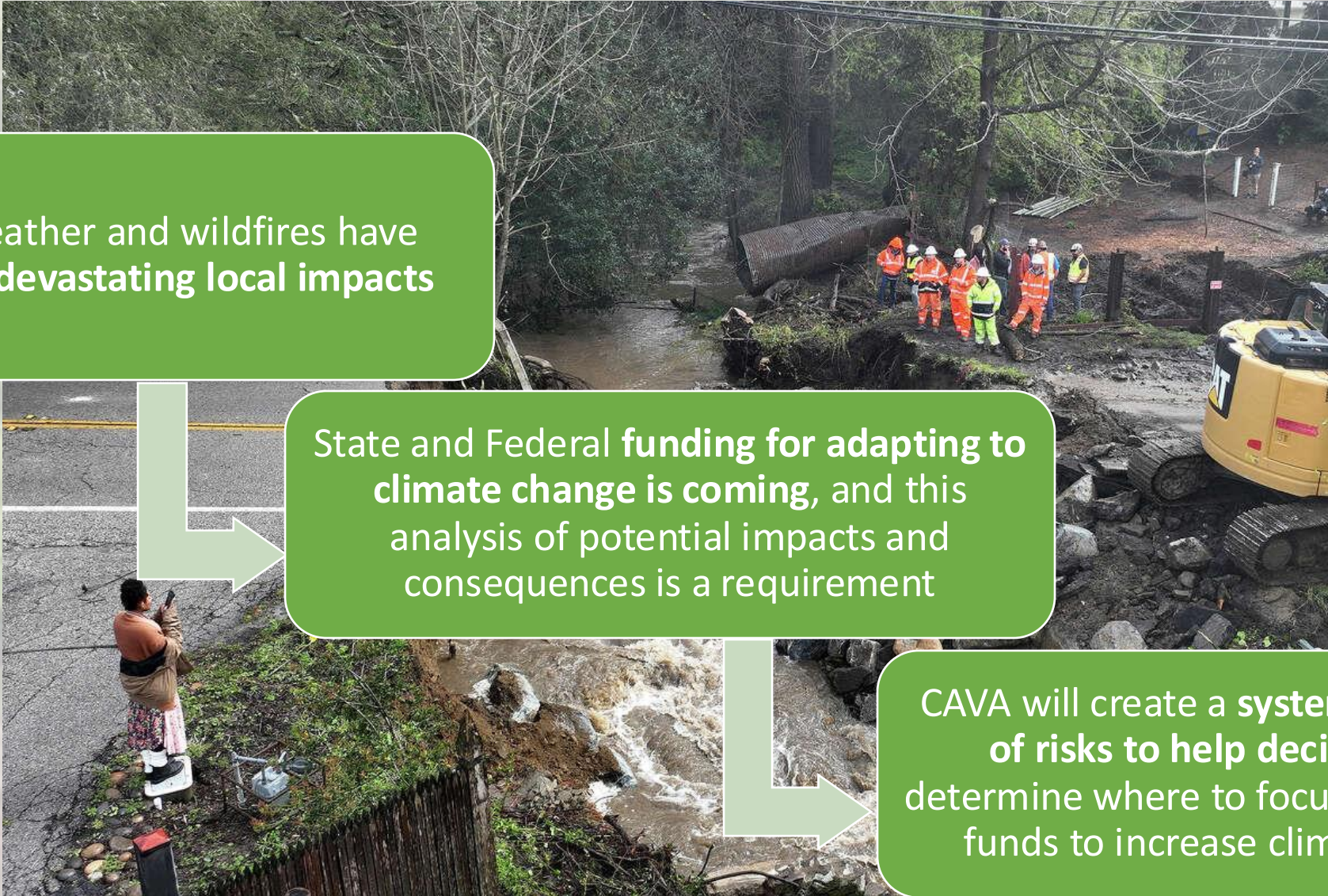
1. Why Analyze Climate Vulnerability?
2. Climate Hazards and Transportation Assets
3. Community Consequences and Overall Risk
4. CAVA Analysis Framework
5. Milestone 2 Draft Prioritization Outreach
6. Model Calibration and Draft Final Prioritization

Why Analyze Vulnerability?

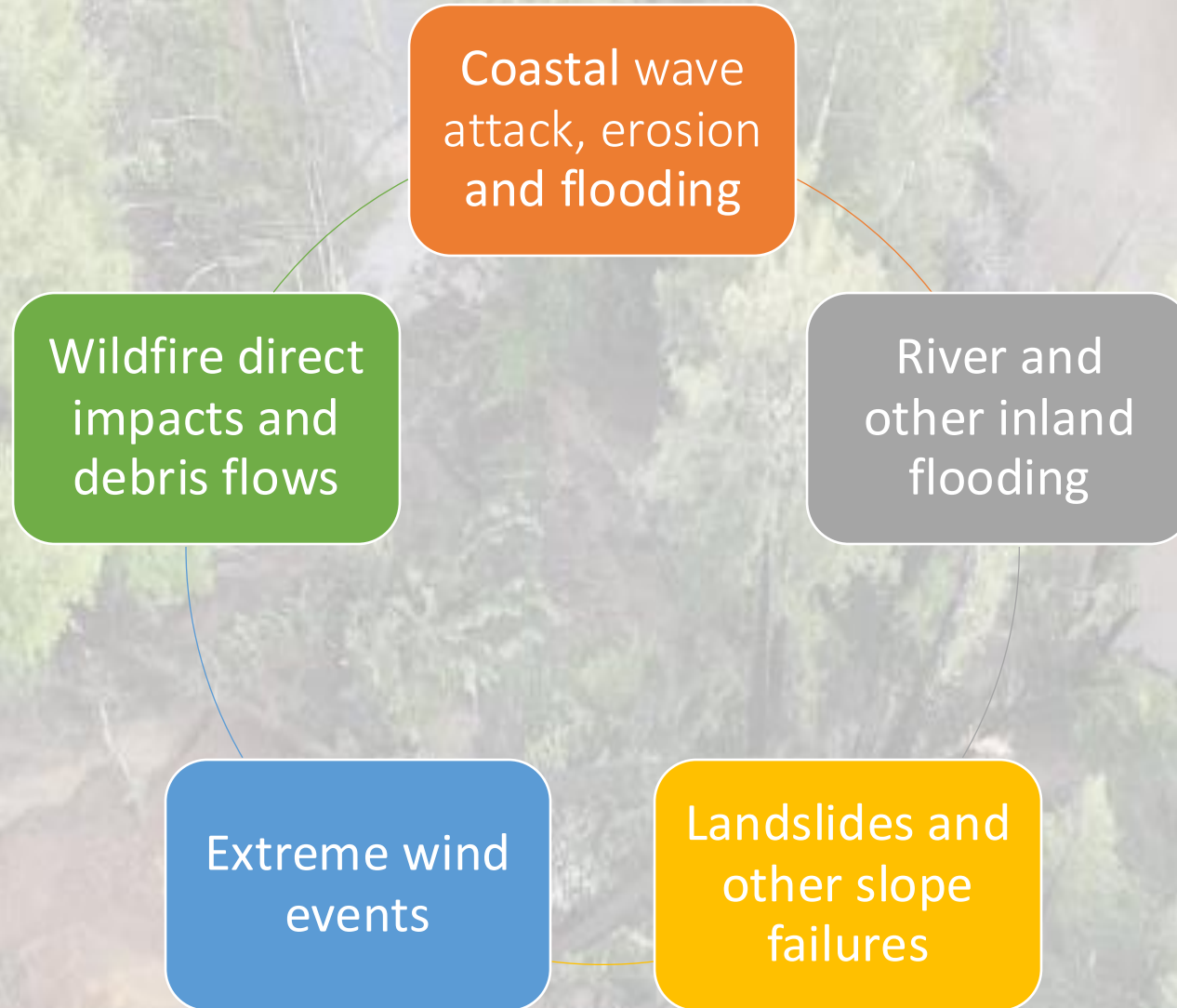
Extreme weather and wildfires have already had **devastating local impacts**

State and Federal **funding for adapting to climate change is coming**, and this analysis of potential impacts and consequences is a requirement

CAVA will create a **system-wide analysis of risks to help decision makers** determine where to focus pursuit of grant funds to increase climate resiliency



Climate Change Accelerated Natural Hazards



Climate hazards being considered include:



Santa Cruz County Transportation Assets

Unincorporated County:

- Road segments
- Culverts
- Bridges

Santa Cruz Branch Rail Line

- Rail line segments
- Culverts
- Bridges



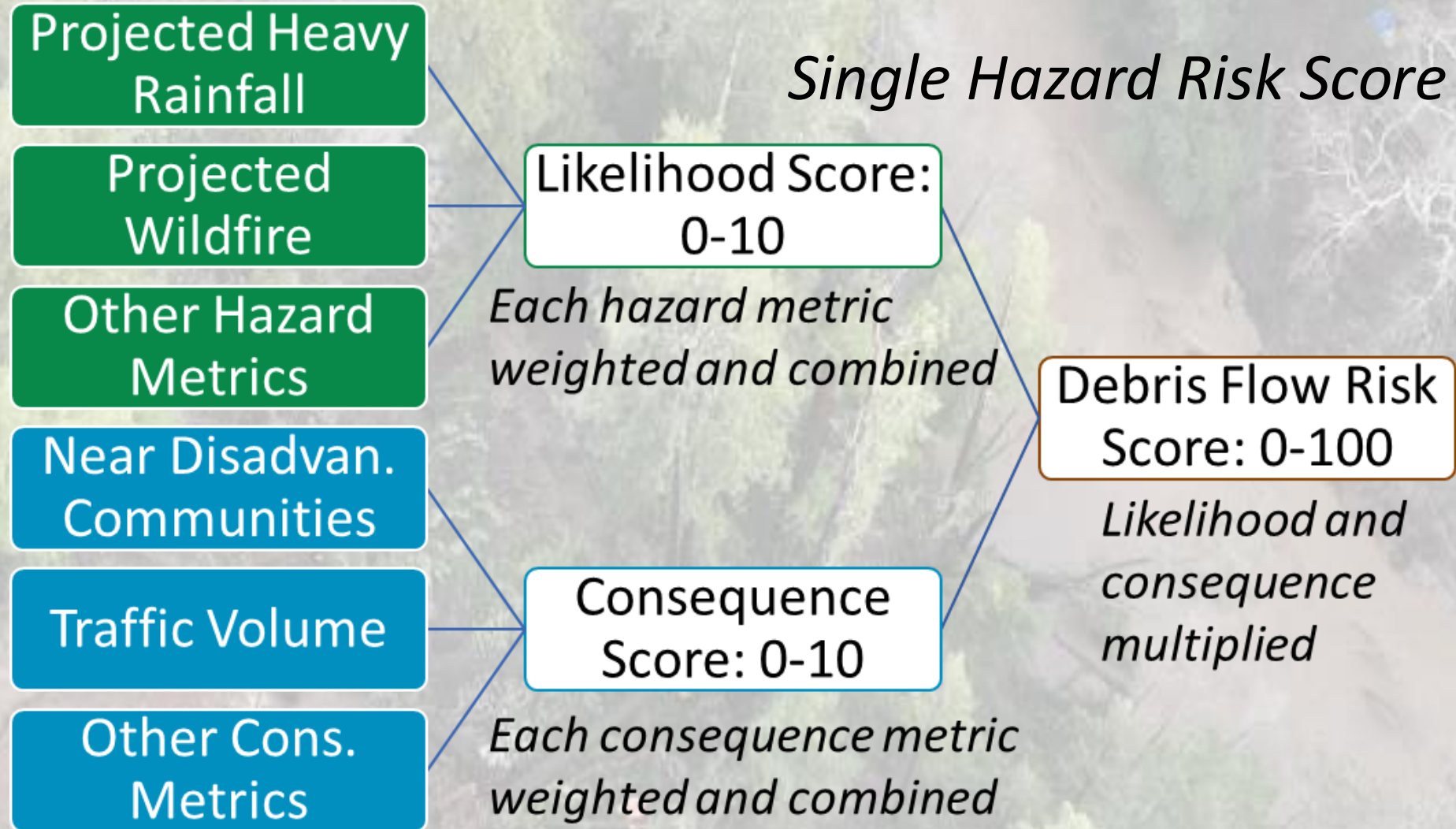
Consequences for the Community

- Average or projected **daily users**
- Routes serving **Equity** Priority Communities (at right)
- Time to detour around damage, including **no detour**
- Existing or planned **bicycle, walking, or transit** facilities
- Access to **critical facilities** such as hospitals and evacuation centers

Equity Priority Population Scoring

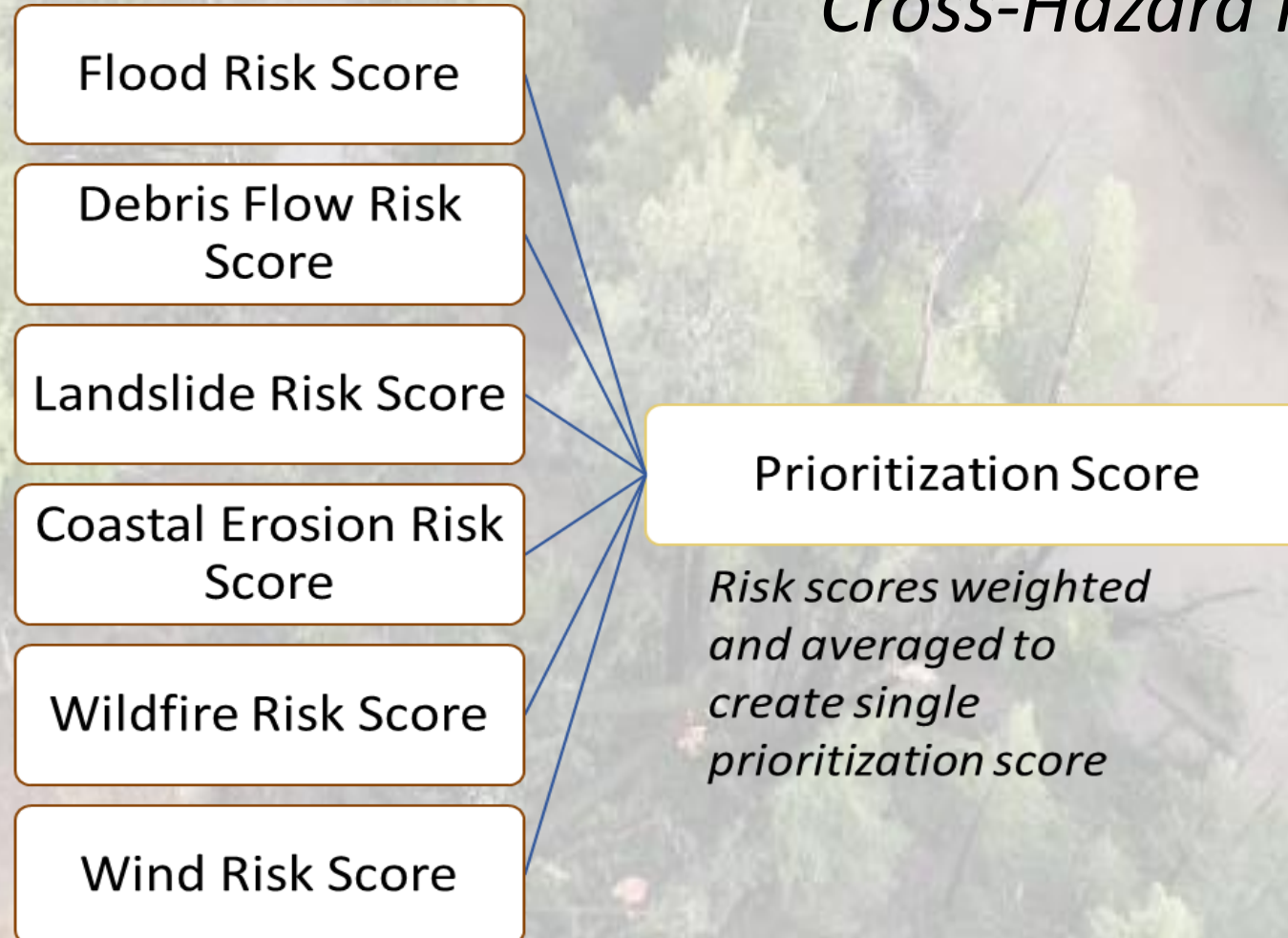
Poverty	25% or more of families earned less than the 2015 federal poverty level	10 points
Low-Income	33% or more of families earn less than 200% of the 2015 federal poverty level	7 points
Communities of Color	65% or more of the total population is non-white	5 points
Low Community Engagement	15% or more of households where English is not spoken "very well"	1 point
	15% or more of people are over the age of 25 without a high school diploma	1 point
Low Mobility	5% or more of households have zero car ownership	1 point
	11.35% or more of the population have a disability	1 point
	Senior population (65 or older) has 15% or more that are below poverty level	1 point

CAVA Analysis: Framework for Prioritization



CAVA Analysis: Framework for Prioritization

Cross-Hazard Risk Score



Draft Final Prioritization Results

- Top 20% of Cross-Hazard Risk **Scores** = Red/#1 Priority
- Bottom 20% of Cross-Hazard Risk **Scores** = Dark Blue/#5 Priority



Cross-Hazard Risk Score Results

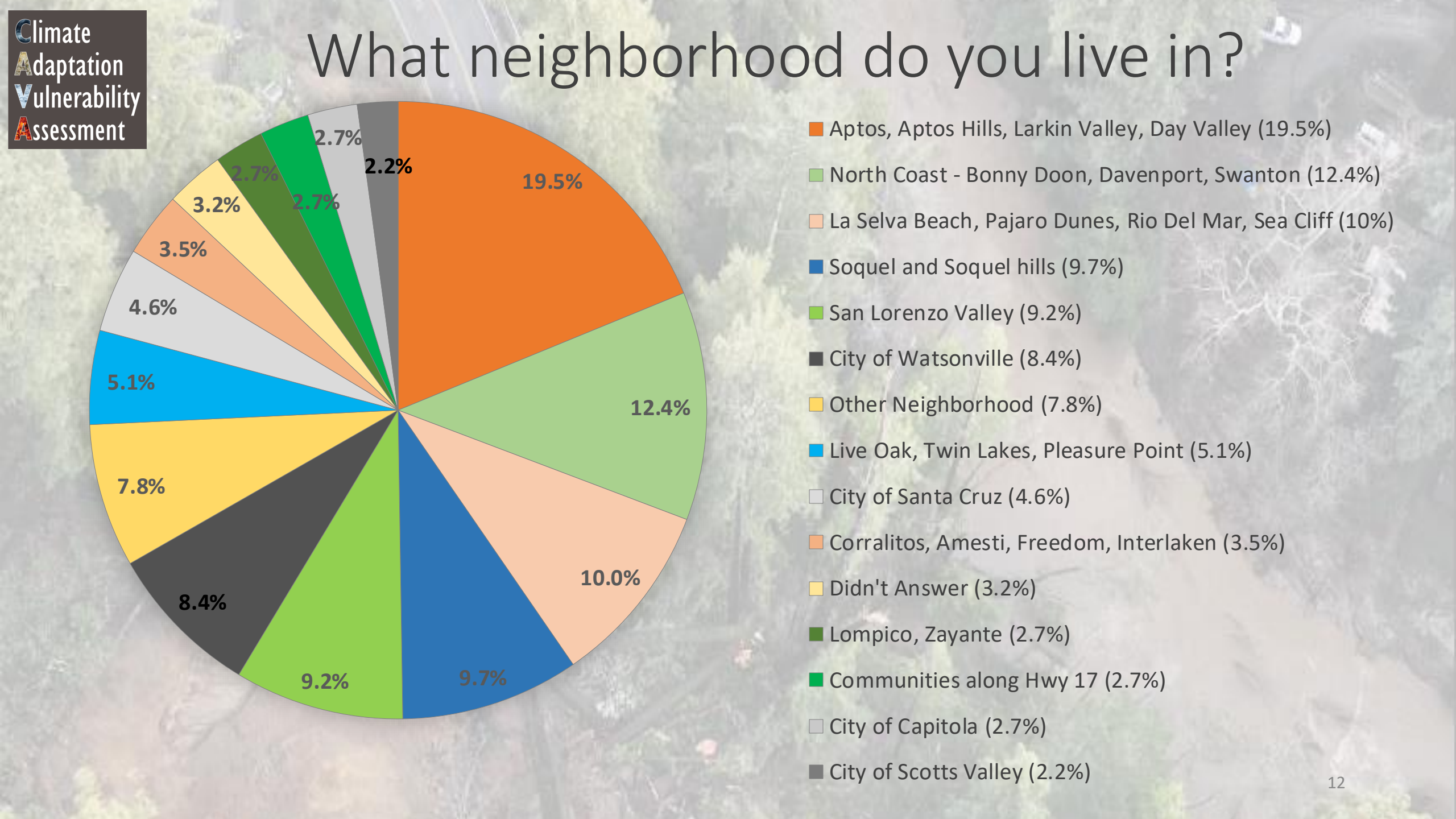


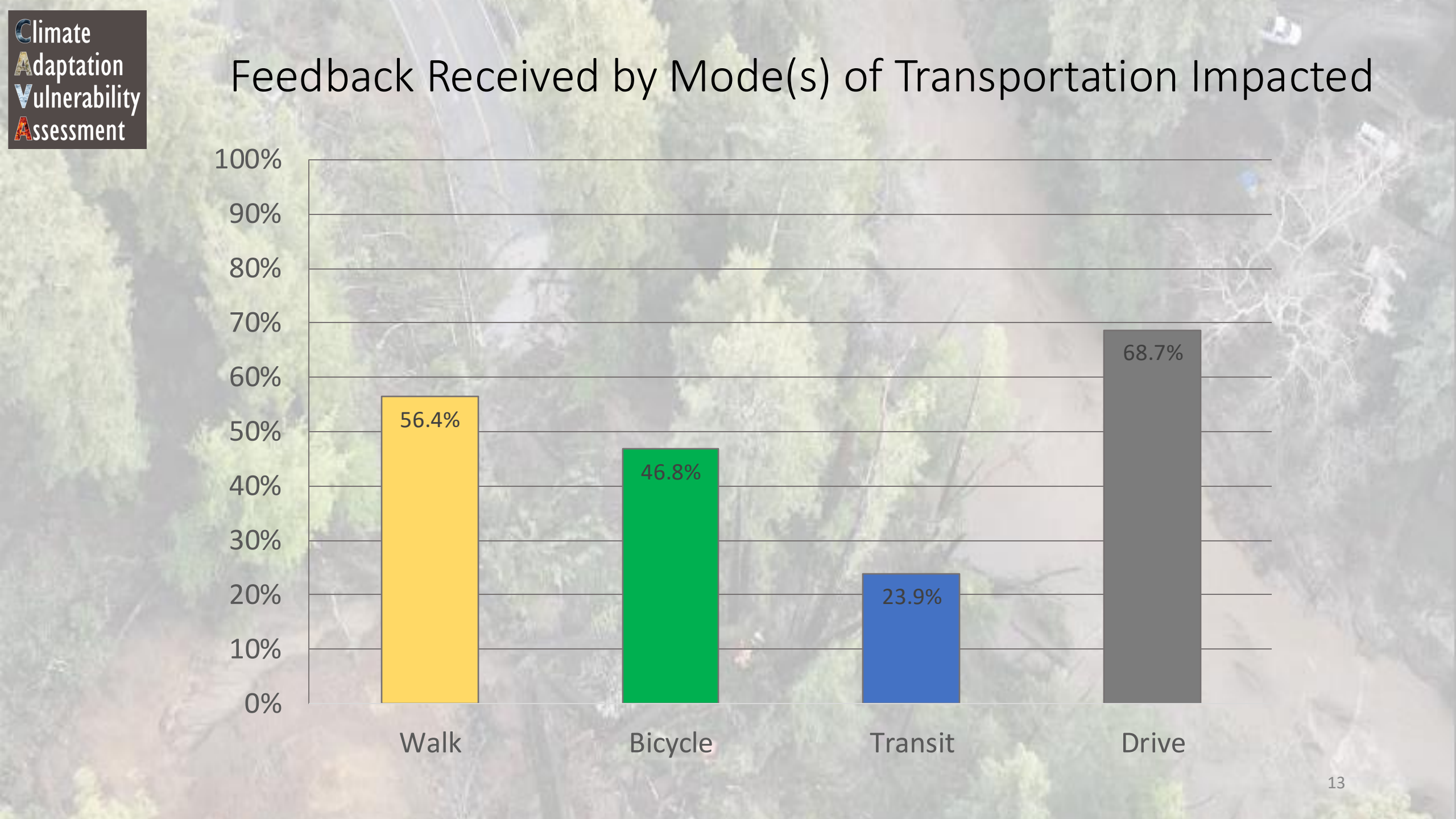
Milestone 2 Outreach

Milestone 2 outreach activities included:

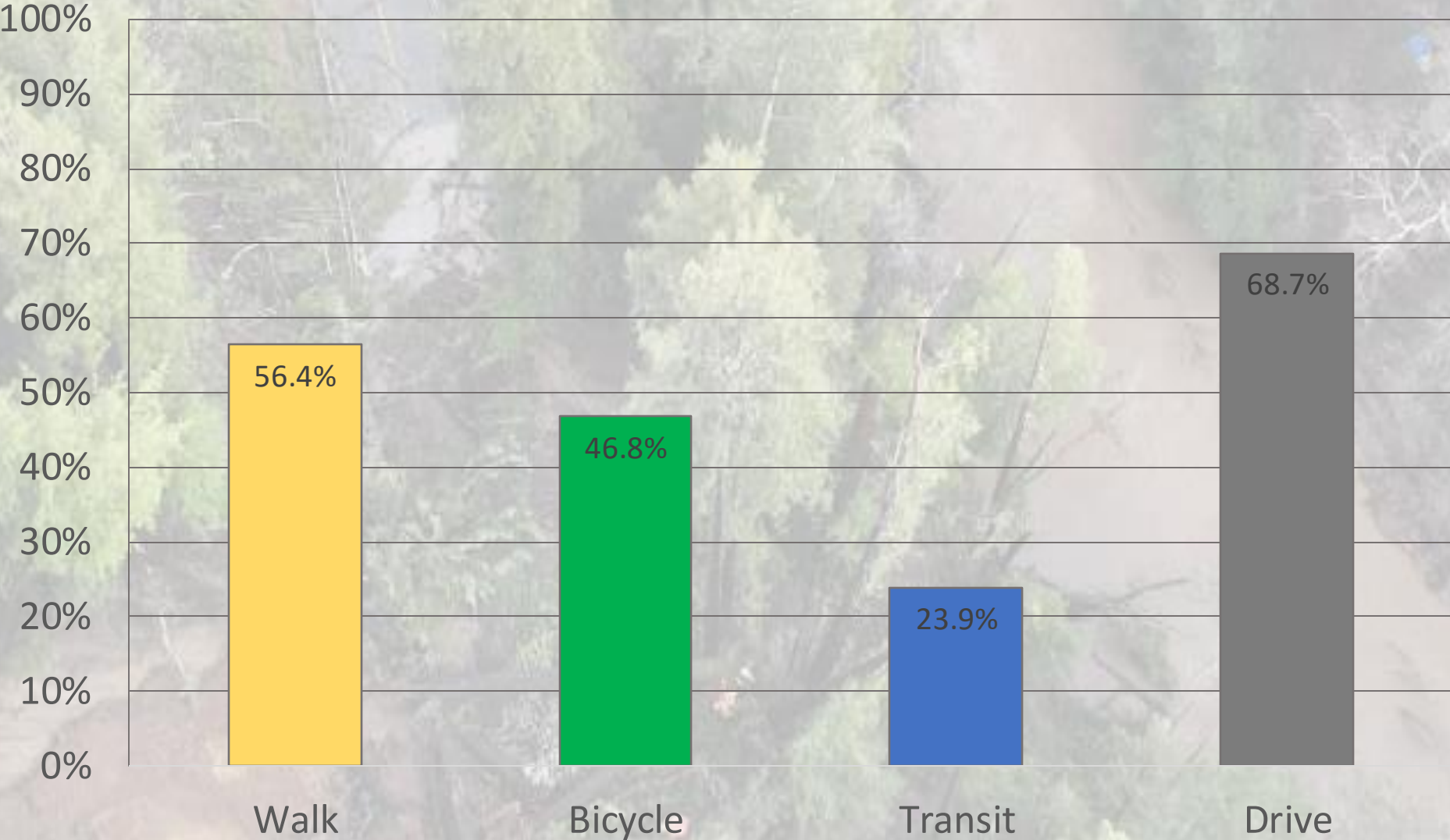
- Presentation to RTC Transportation Advisory Committees (**TACs**)
- Presentations to community equity and south county **advocacy groups**
- **Tabling** at public locations in the community throughout the county
- **Stakeholder focus groups** – north and south
- **Public workshops** – north and south
- An **online survey** - 498 responses

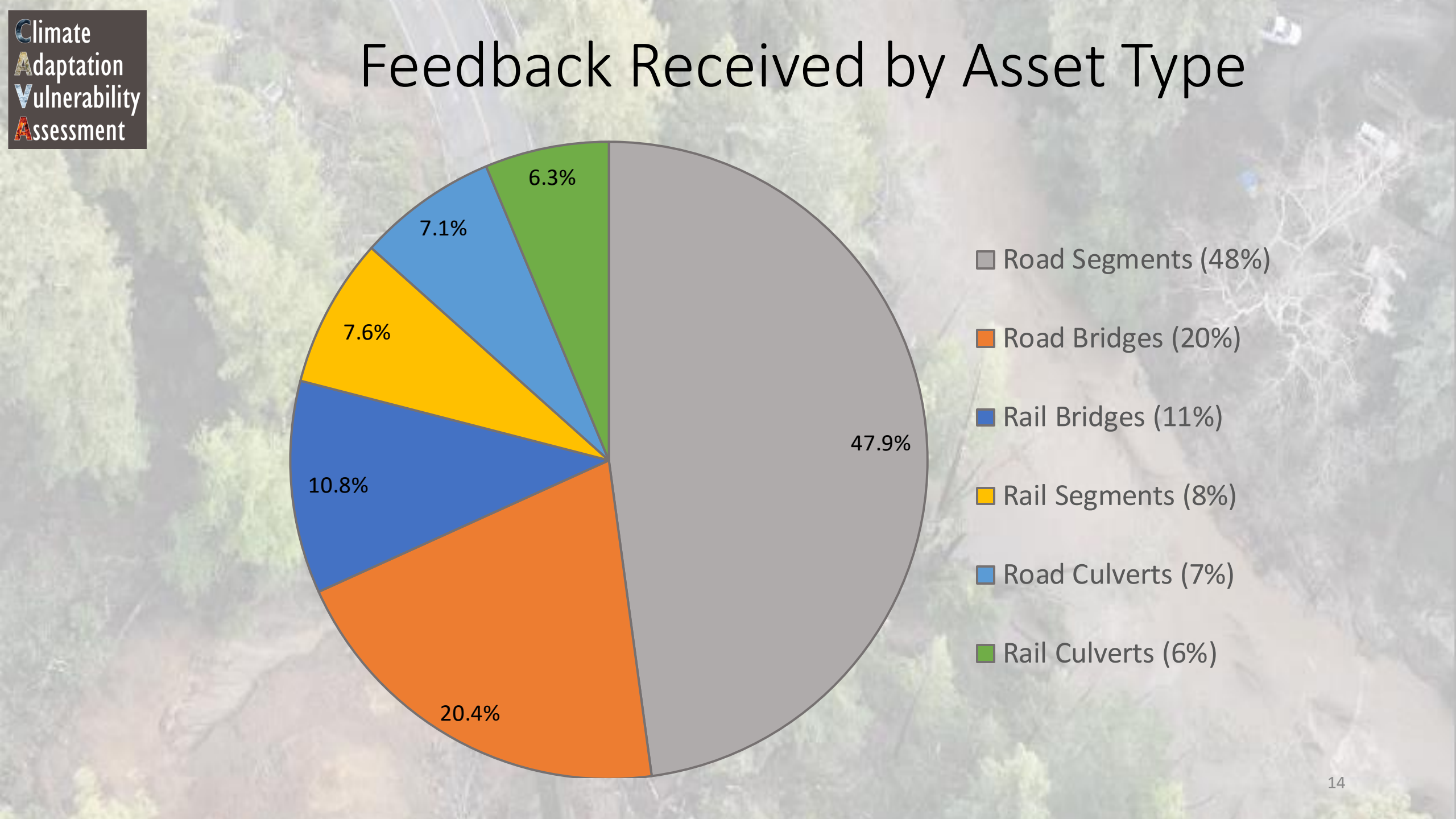




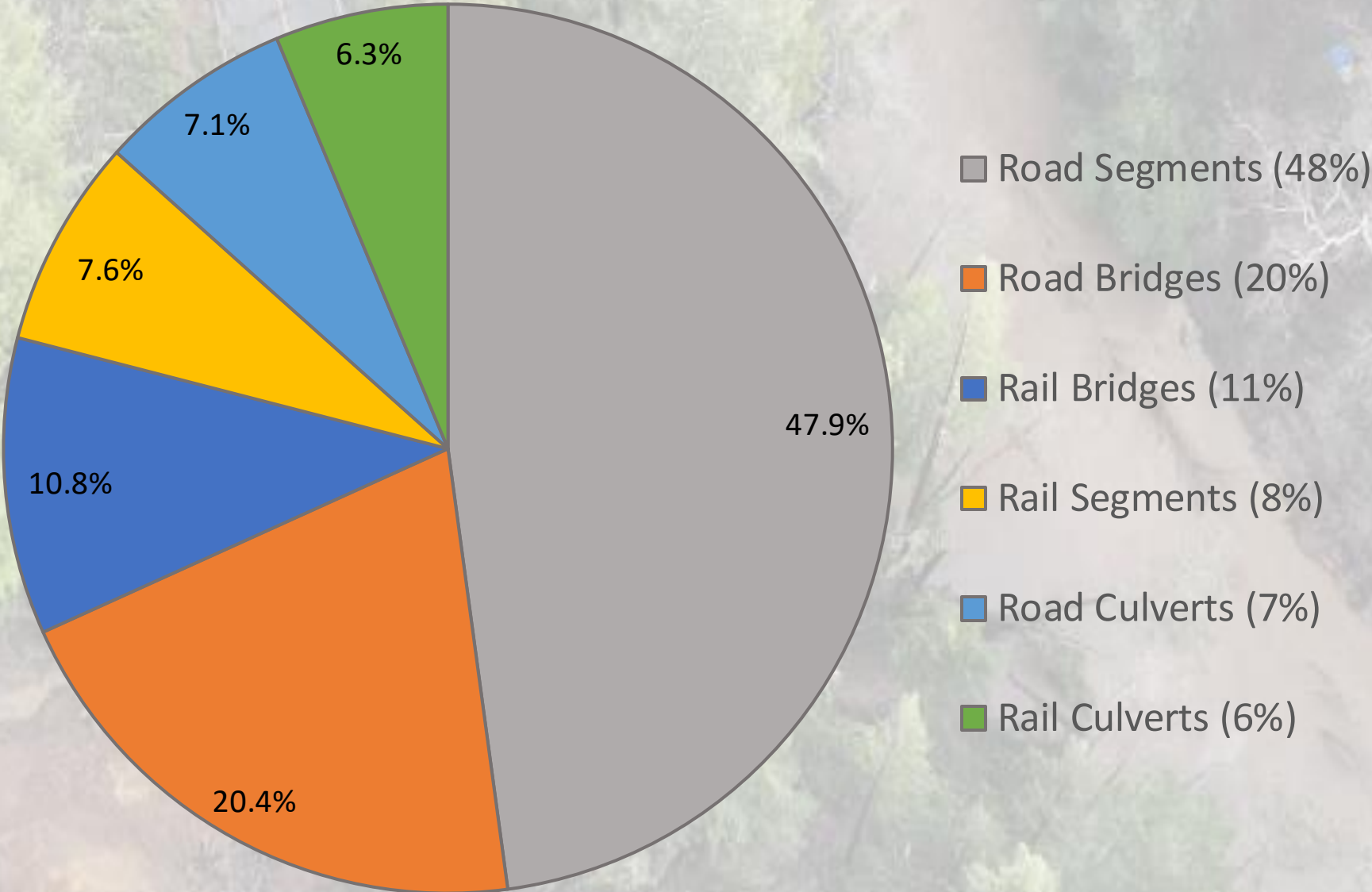


Feedback Received by Mode(s) of Transportation Impacted

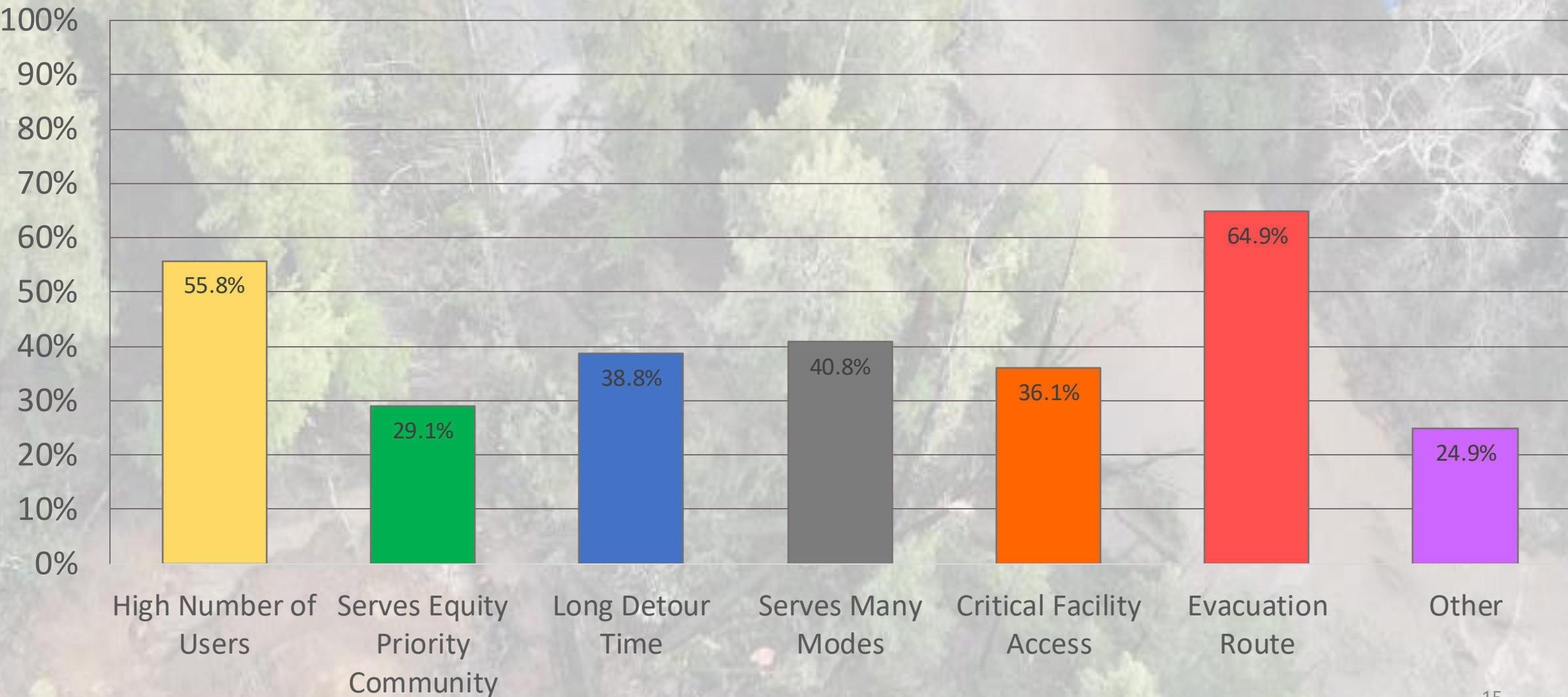




Feedback Received by Asset Type



Feedback Received – Reason(s) to Change Asset Priority



Calibrating the Model Based on M2 Outreach

Relative Travel Volumes



- Average Annual Daily Traffic (AADT) in County travel demand model not predicable at low volumes
- Changed to 0-10 relative travel volume similar to other 0-10 scaled metrics, with roads less than 1,000 AADT scored according to length, dead end, etc.

Evacuation Routes



- Evacuation route network planning is currently underway at the County
- Evac routes change with the nature and location of the hazard
- Proxy metrics used to indicate evac route include arterial/collector road types and roads with long detours in wildfire zones

Equity Priority Communities



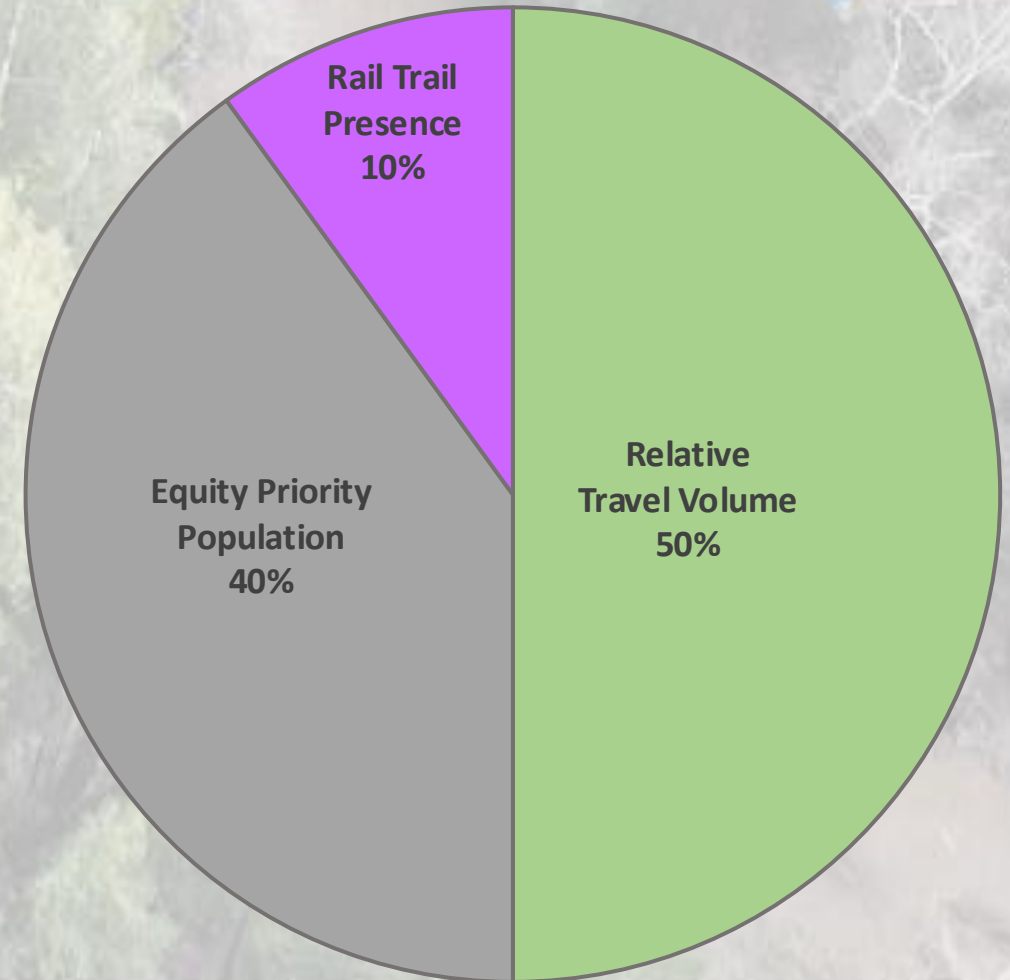
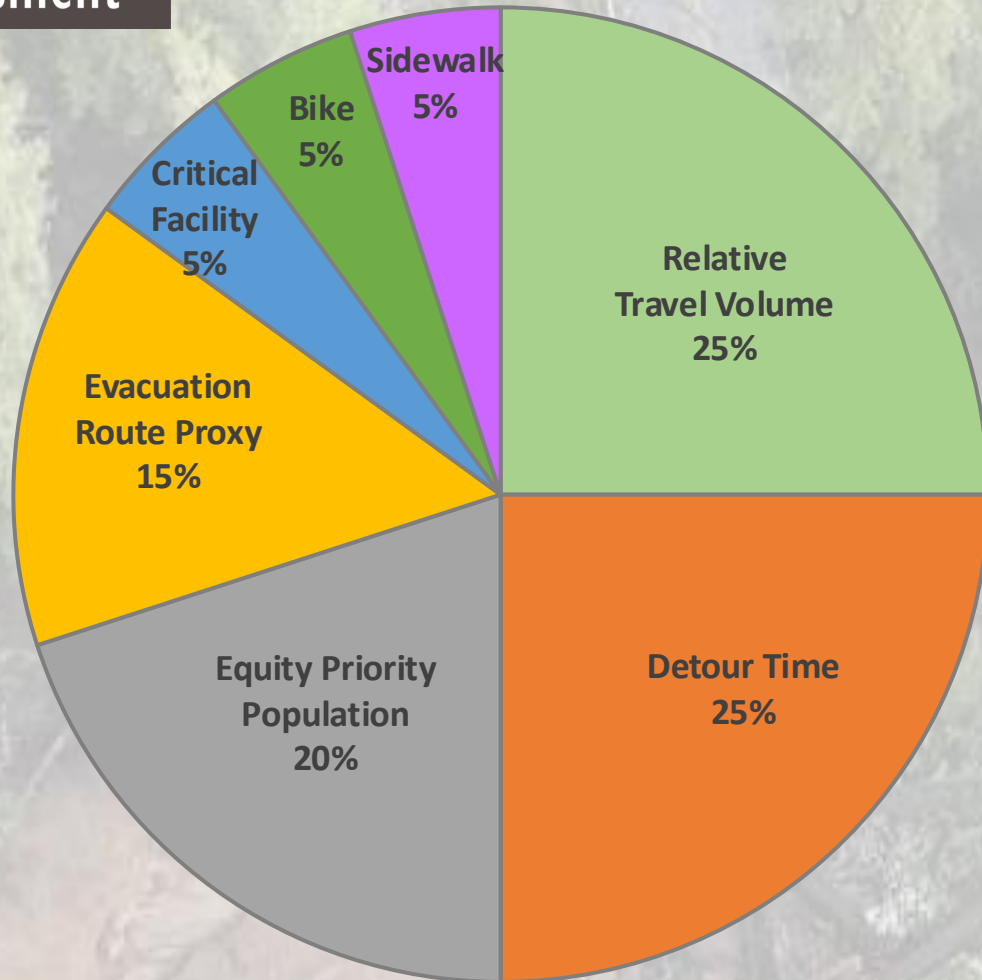
- Workshop attendees expressed that community members with disabilities are particularly vulnerable in rural areas
- Senior and mobility thresholds met outside the rural services boundary received 2 points, while urban areas received 1

Flooding Likelihood



- Routes which currently experience flooding previously not showing as high likelihood
- Updated to single flood risk score that incorporates both river and coastal flooding to capture combined effects
- Removed wildfire-related flood metrics suppressing coastal flooding likelihood scores

Consequence Metric Weighting



Road Asset Consequence Scores

☑ Road Segments

Consequence

- 0 - 2
- 2 - 4
- 4 - 6
- 6 - 8
- 8 - 10

☑ Road Bridges

Consequence

- 0 - 2
- 2 - 4
- 4 - 6
- 6 - 8
- 8 - 10

☑ Road Large Culverts

Consequence

- 0 - 2
- 2 - 4
- 4 - 6
- 6 - 8
- 8 - 10



Rail Asset Consequence Scores

☑ Rail Segments

Consequence

- 0 - 2
- 2 - 4
- 4 - 6
- 6 - 8
- 8 - 10

☑ Rail Bridges

Consequence

- 0 - 2
- 2 - 4
- 4 - 6
- 6 - 8
- 8 - 10

☑ Rail Culverts

Consequence

- 0 - 2
- 2 - 4
- 4 - 6
- 6 - 8
- 8 - 10



Road Asset Prioritization Scores

☑ Road Segments

Priority

- 1
- 2
- 3
- 4
- 5

☑ Road Bridges

Priority

- 1
- 2
- 3
- 4
- 5

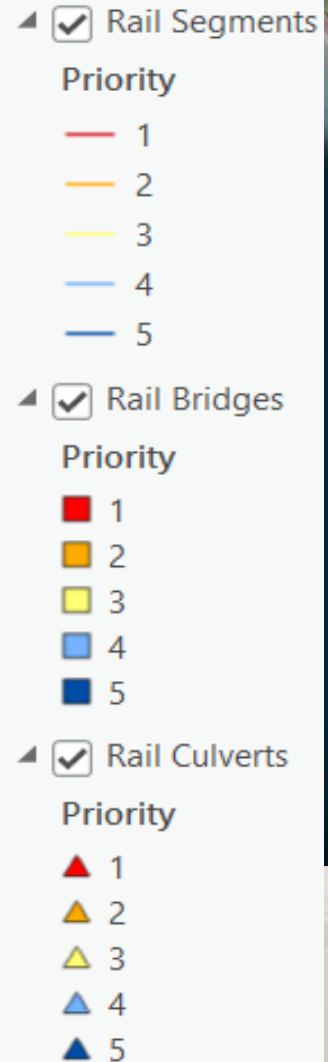
☑ Road Large Culverts

Priority

- 1
- 2
- 3
- 4
- 5



Rail Asset Prioritization Scores



CAVA Next Steps

Today:
RTC provides
input on and
approves
draft final
prioritization

CAVA team
updates the
model based
on RTC input,
if needed

Milestone 3:
Draft CAVA
report
available for
public review
late 2024

RTC approval
of CAVA
report
January 2025



Thank you

SCCRTC CAVA Project Manager:
Brianna Goodman
info@sccrtc.org