Beyond the Details: Considering the Benefits of Active Transportation

Slido Z587

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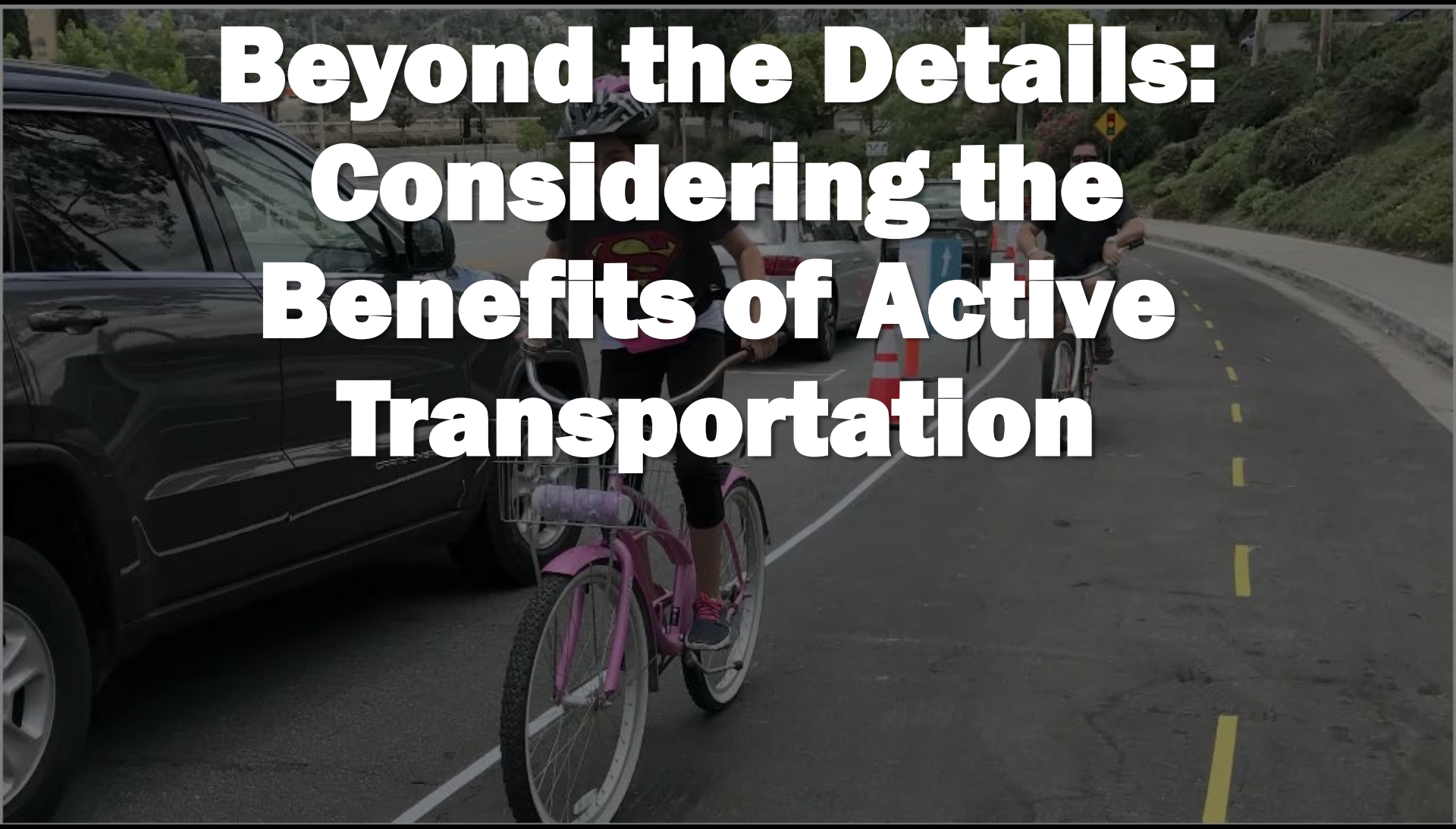
Tanisha Taylor
Director of Sustainability


Beyond the Details:
Considering the
Benefits of Active
Transportation

Why Measure The Benefits?

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Why Measure The Benefits?

"2/3 of merchants said new bike lanes had a positive overall impact on their business."

How Do You Get Info?

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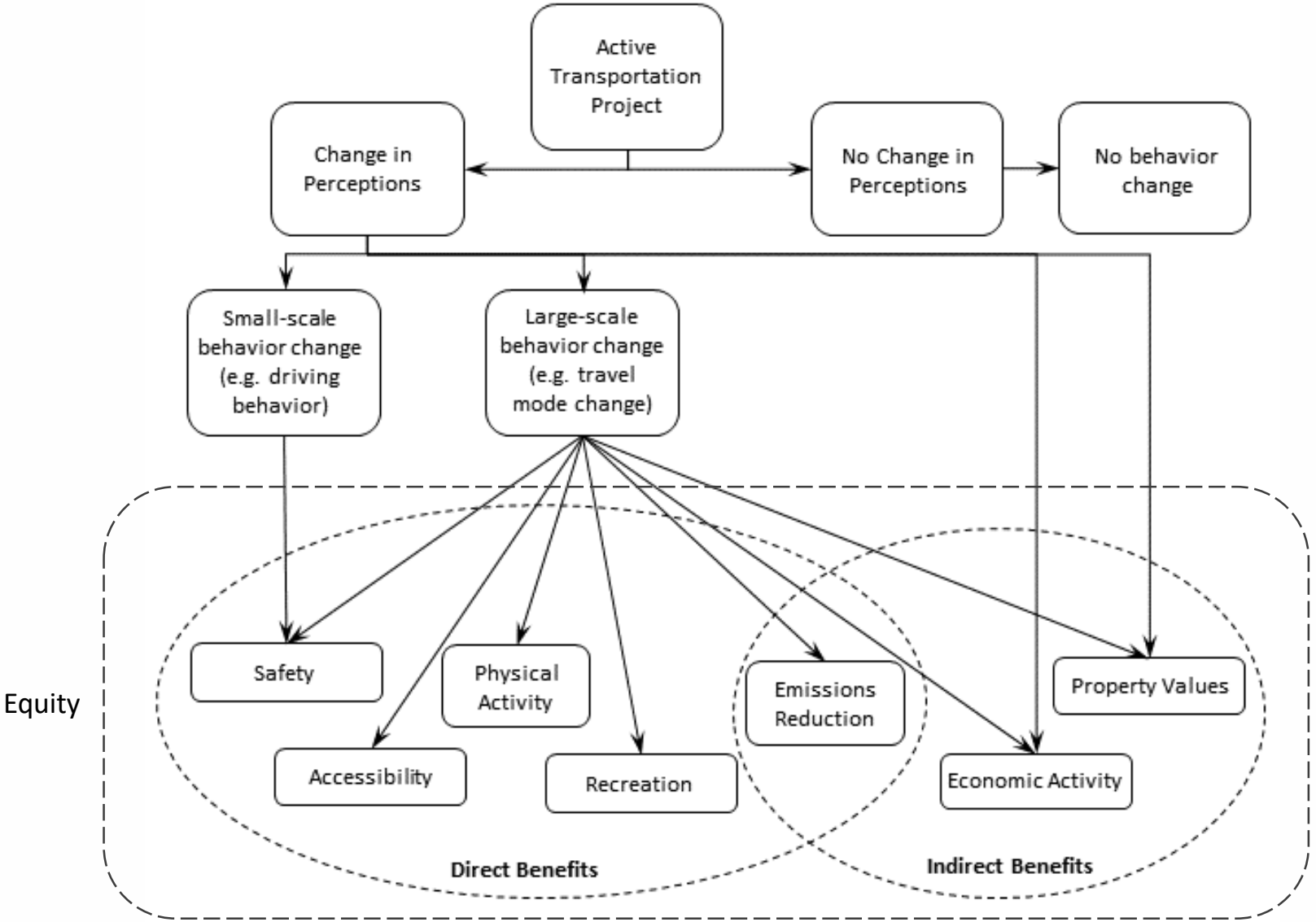
Dillon Fitch

Co-Director Bicycling*Plus* Research Collaborative
UC Davis Institute of Transportation Studies


Active Transportation Project
Change in Perceptions
No Change in Perceptions
No behavior change
Small-scale behavior change (e.g. driving behavior)
Large-scale behavior change (e.g. travel mode change)
Safety
Physical Activity
Accessibility
Recreation
Emissions Reduction
Economic Activity
Property Values
Direct Benefits
Indirect Benefits
Equity

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Visiting Researcher
University of California, Davis

Health Co-Benefits of Active Travel in Reducing California's Transportation Carbon Emissions

Neil Maizlish, PhD, MPH

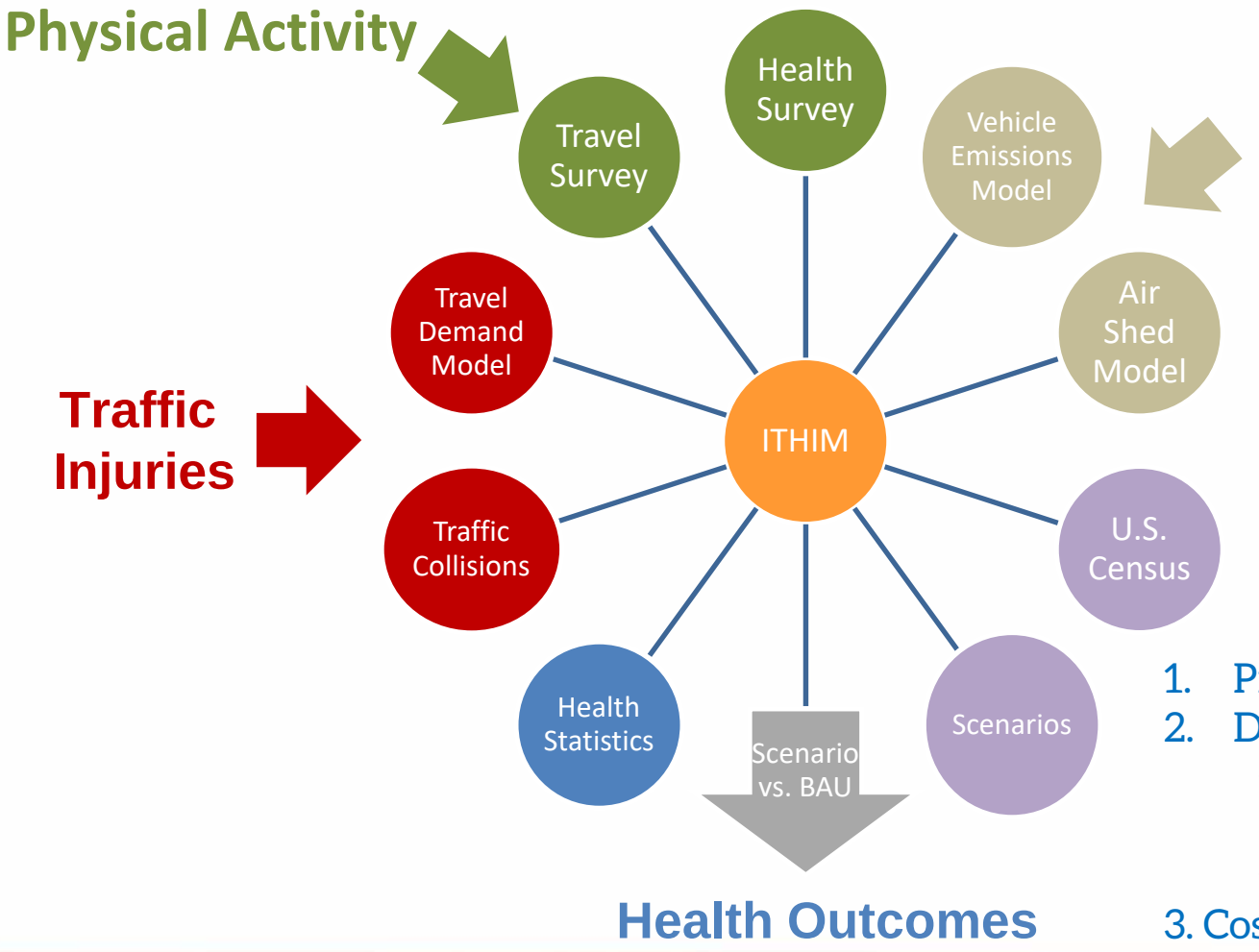
Visiting Researcher

University of California, Davis

https://cal-ithim.org/ithim

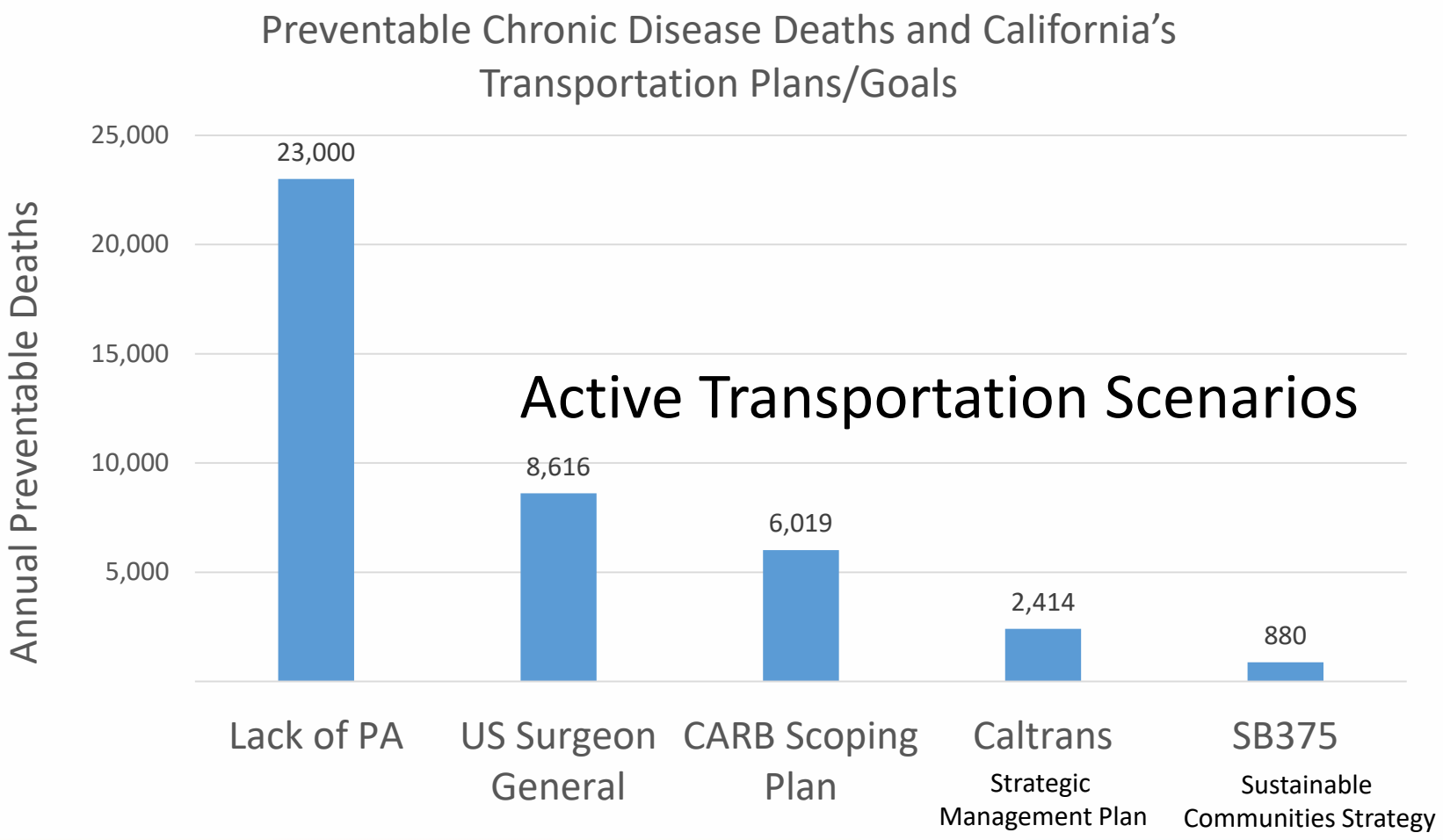
The Integrated Transport and Health Impact Model (ITHIM)

https://cal-ithim.org/ithim

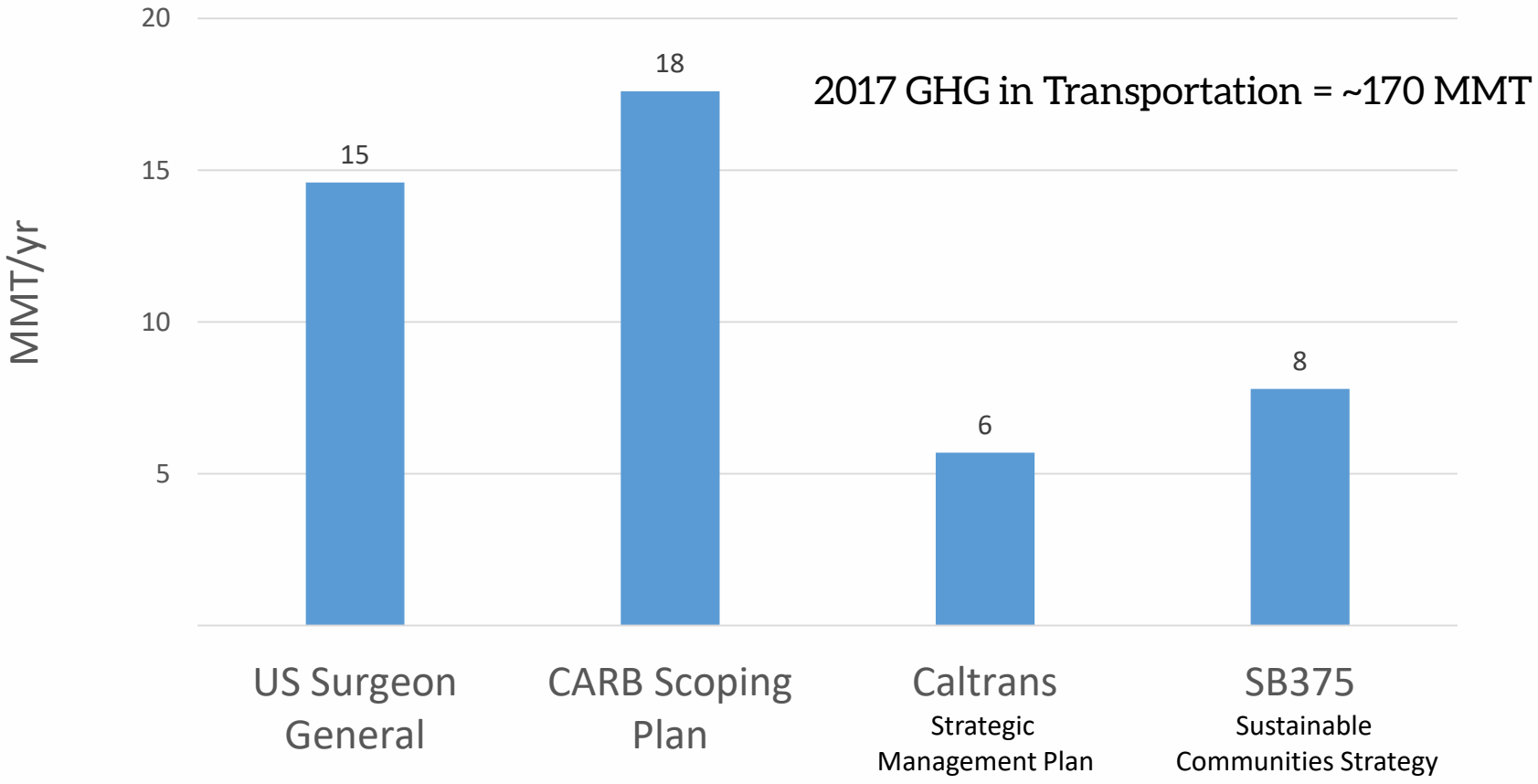


1. Premature Deaths
2. Disability Adjusted Life Years
   - ✓ Years Living with Disability
   - ✓ Years of Life Lost
3. Costs

Health Co-Benefits of Physical Activity by Substituting Walking and Cycling for Short Car Trips



Annual Change in Car Carbon Emissions in California's Transportation Plans and Goals



Pro/Cons of Tools

- ITHIM Use cases
  - Policy Education (PA, Air pollution, Traffic Safety)
  - Health Impacts of transportation plans/MPOs
  - State agency goals for greenhouse gas reduction
  - Equity Analysis
- ITHIM limitations: not sensitive to small geographic scale
  - Depends on other models to predict changes in travel patterns due to policy, systems, or environmental changes
- HEAT (Health Economic Assessment Tool): https://www.heatwalkingcycling.org/#homepage
  - Good for project level analyses:
  - If *x* people regularly walk or cycle an amount of *y*, what is the economic value of the health benefits that occur as a result of the reduction in mortality due to their physical activity?

Conclusions from ITHIM Publications

- California State agency plans and goals fall along a wide range of health benefits from active travel physical activity.
- Monetized annual value range: $1 billion to $67 billion
- SCS plans are the most modest on a spectrum of ambition
- While net health benefit is positive, pedestrian and bicyclist injuries increase in many plans – safety alert!
- Physical activity benefits far exceed those from air pollution reduction
- Plans/goals that emphasize cycling achieve both high health benefits and carbon reductions

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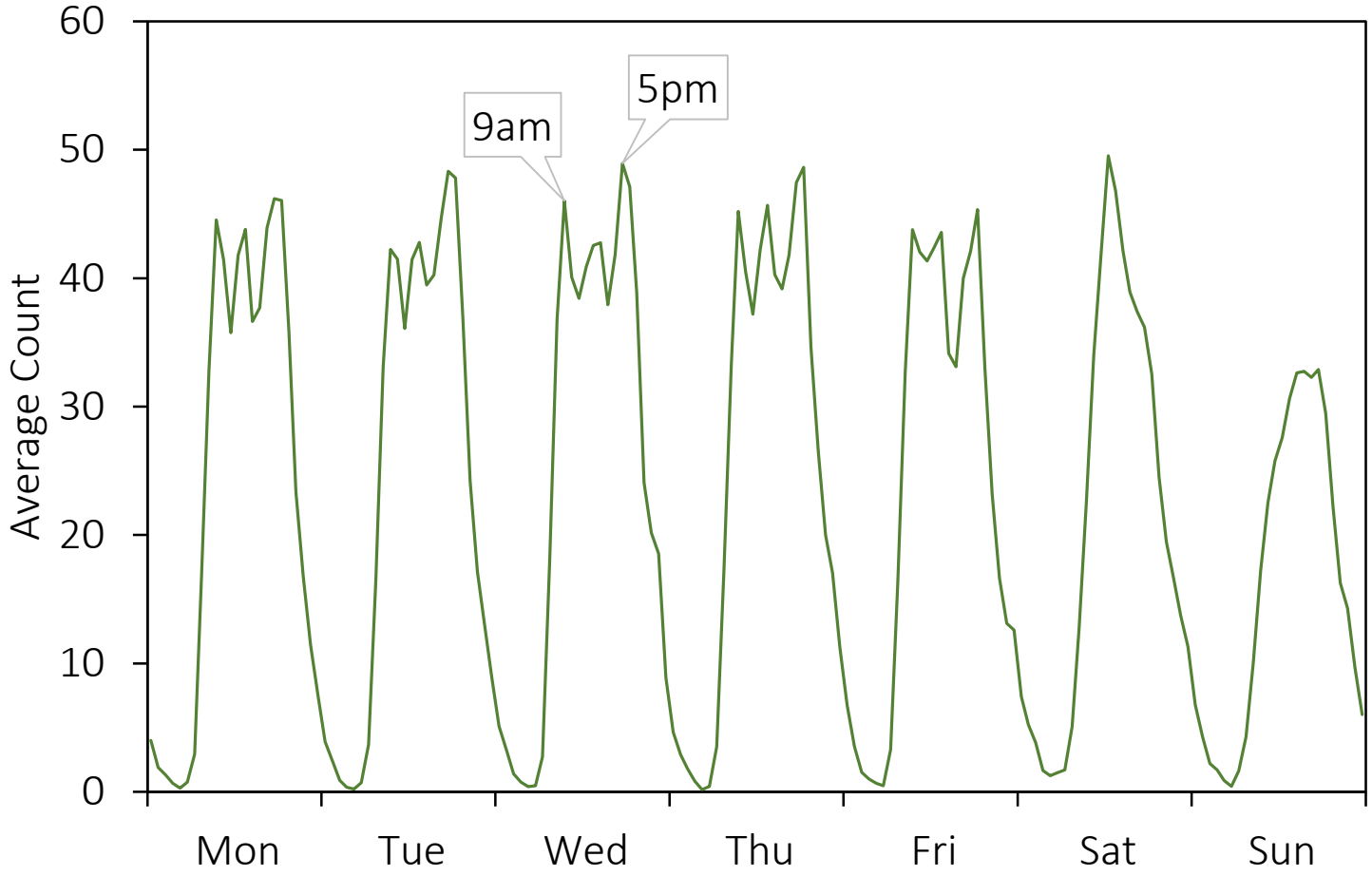
Julia Griswold
Researcher
UC Berkeley SafeTREC

Counting on a Limited Budget

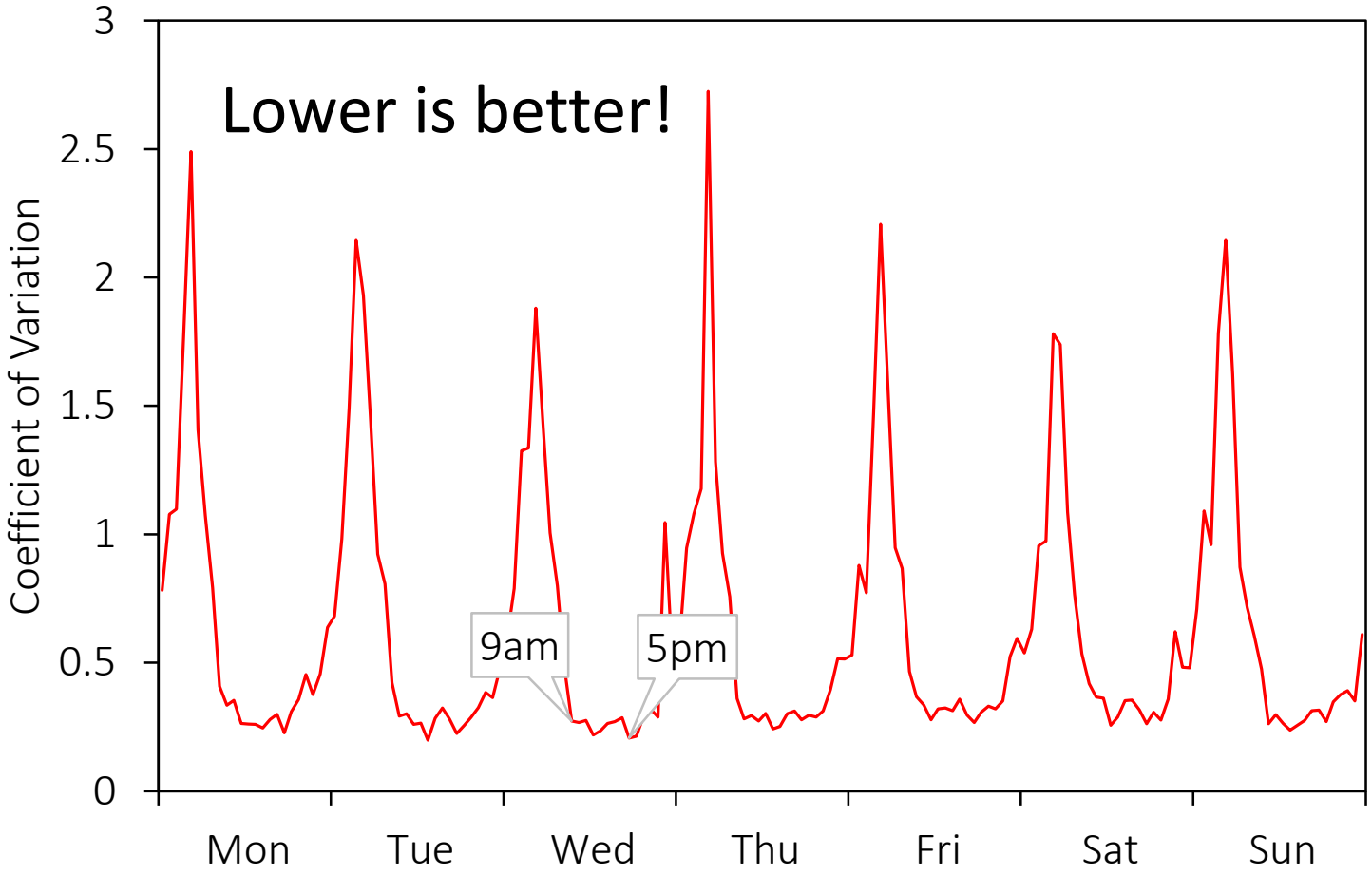
What We Can Learn from Long Term Count Data

ATRC Active Transportation Resource Center
Caltrans

Average automated ped counts



When to count



Interim Count Methodology Guidance

Count Data Collection Methods (Table 1)

ATP Project Types	Recommended Count Type & Method	Duration	Alternative Count Type & Method	Duration
Infrastructure (Including SRTS Infrastructure projects)	Automated 24 Hour Manual Count from Video 24 Hour	One Week	Manual In-field Counts Peak Period	4-total Hours on 3 Weekdays (T, W, TH) at 7 – 9 AM and 4 – 6 PM and 1 Weekend day 11 AM - 1 PM*

How long to count

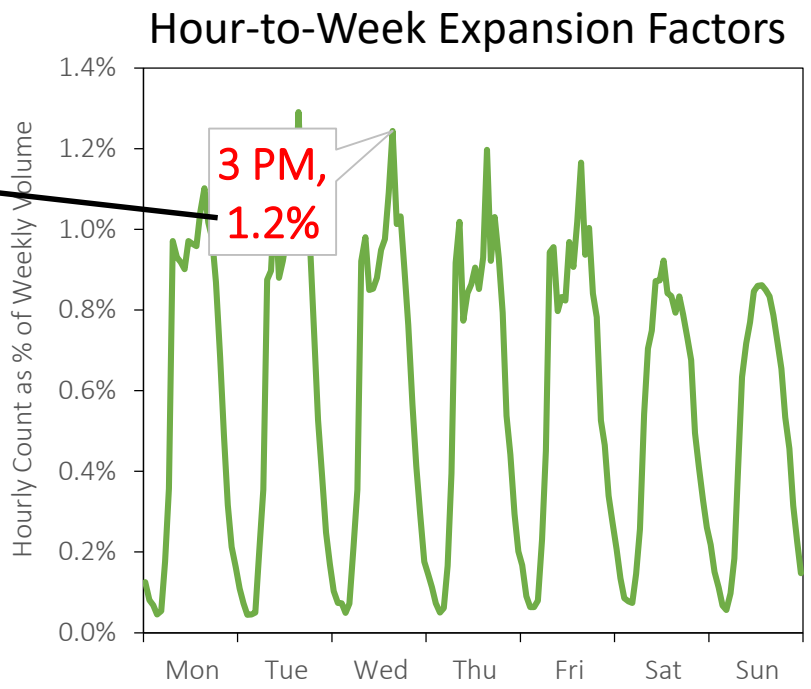
Days	AM Peak	Mid day	PM Peak	12 hrs	24 hrs	Coeff. of Var.
Tue, Wed, OR Thu	x					0.49
		x				0.20
			x			0.20
	x		x			0.17
	x	x	x			0.19
				x		0.13
Tue, Wed, AND Thu	x		x			**0.17**
Sat		x				
Mon - Sun					x	**0.09**
	7-9am	11am-1pm	4-6pm	6am-6pm		

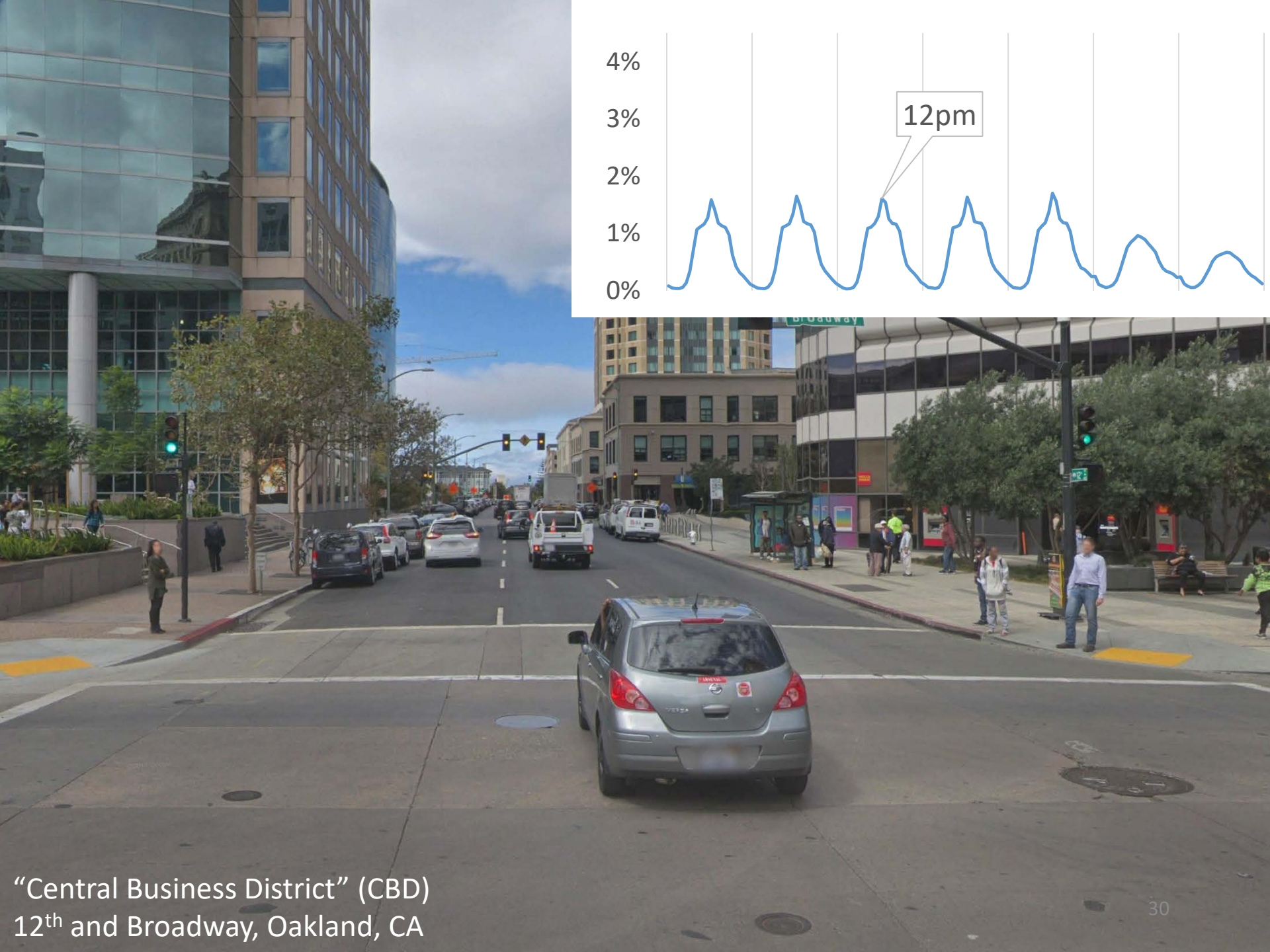
Options in Interim Guidance

Expanding Counts

Manual Count from a Wednesday at 3pm

$$\frac{25}{0.012} = 2{,}083$$





"Central Business District" (CBD)
12th and Broadway, Oakland, CA

School Zone
5th and Central, Alameda, CA

Research Benefits of Counts

Dependent variable for ped/bike exposure models

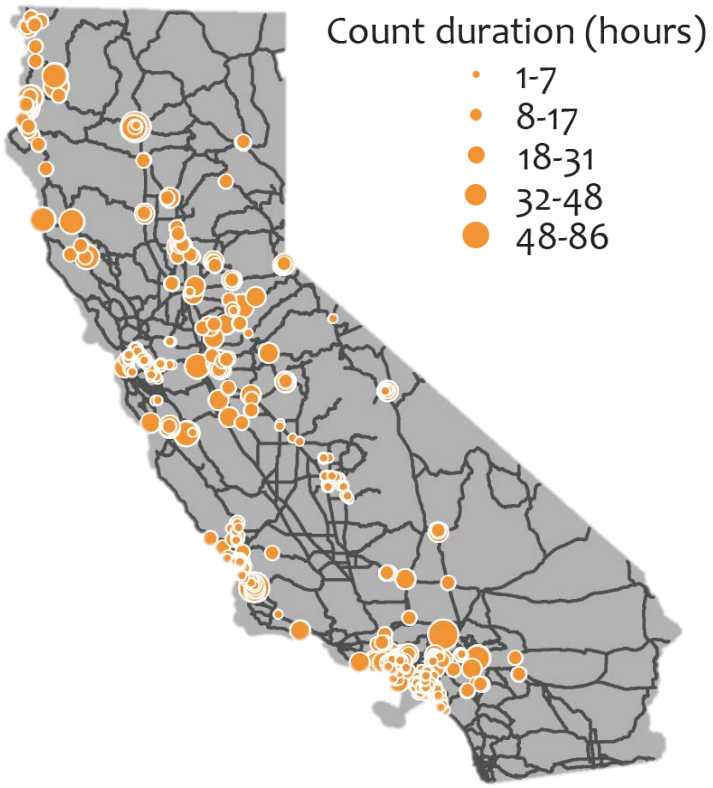
↓

Estimate volumes at locations without counts

Before-and-after safety studies of new types of facilities

↓

Quantify safety benefits of infrastructure investments



Takeaways

When?

- At highest count times
- Context is important

How Long?

- More is better

What else?

- Consistency
- Documentation
- Expansion methods

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Jeanne LePage
Fund Development Manager,
Ecology Action

BIKE Smart

Active Transportation Symposium 2019

ATRC Active Transportation Resource Center

Caltrans

WALK Smart

Active Transportation Symposium 2019

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STATE OF CALIFORNIA CALIFORNIA TRANSPORTATION COMMISSION

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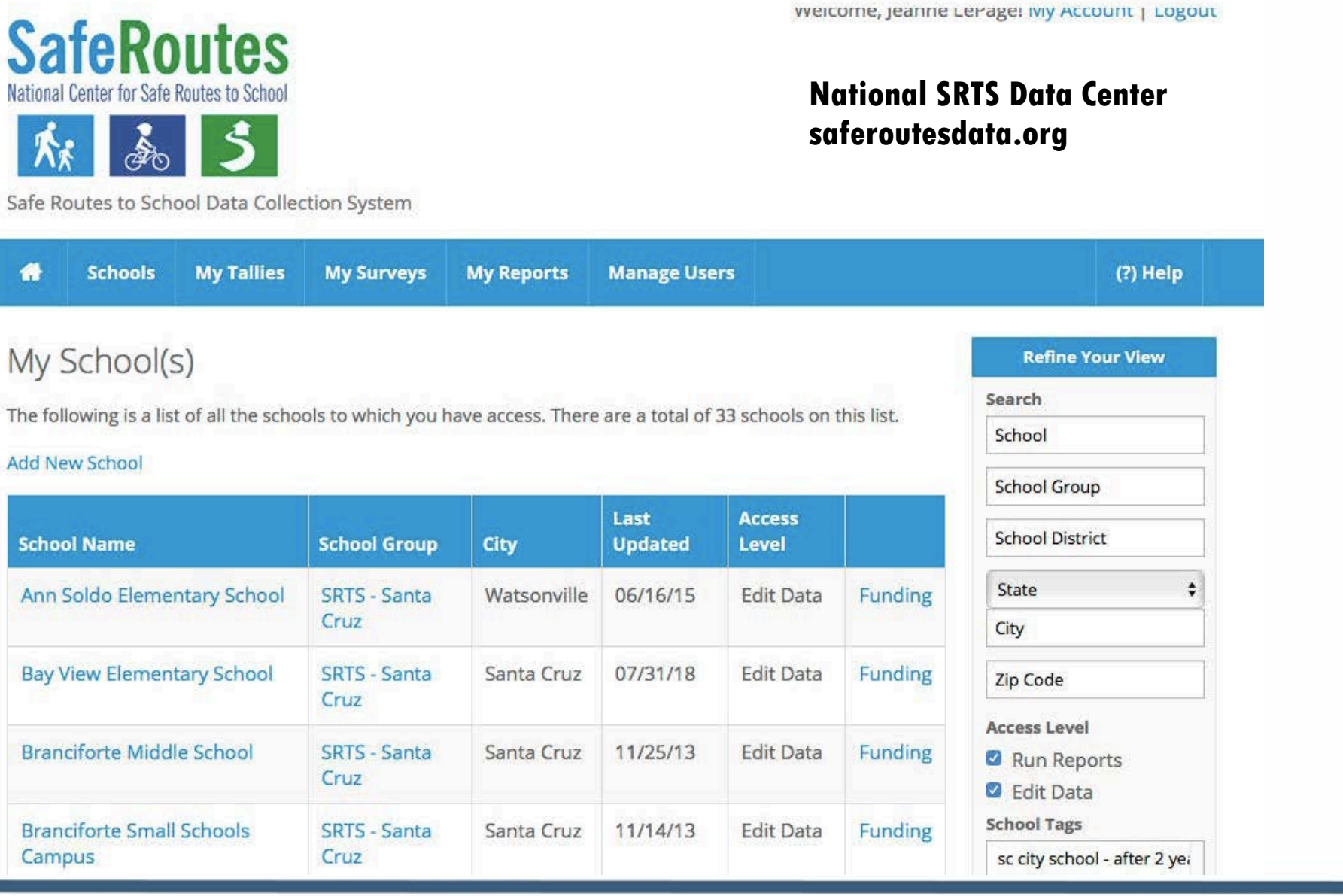

SafeRoutes
National Center for Safe Routes to School
Safe Routes to School Data Collection System
Welcome, Jeanne LePage! My Account | Logout
National SRTS Data Center
saferoutesdata.org
Schools
My Tallies
My Surveys
My Reports
Manage Users
(?) Help
My School(s)
The following is a list of all the schools to which you have access. There are a total of 33 schools on this list.
Add New School
School Name
School Group
City
Last Updated
Access Level
Ann Soldo Elementary School
SRTS - Santa Cruz
Watsonville
06/16/15
Edit Data
Funding
Bay View Elementary School
SRTS - Santa Cruz
Santa Cruz
07/31/18
Edit Data
Funding
Branciforte Middle School
SRTS - Santa Cruz
Santa Cruz
11/25/13
Edit Data
Funding
Branciforte Small Schools Campus
SRTS - Santa Cruz
Santa Cruz
11/14/13
Edit Data
Funding
Refine Your View
Search
School
School Group
School District
State
City
Zip Code
Access Level
Run Reports
Edit Data
School Tags
sc city school - after 2 ye

Parent Survey

Student Mode Survey

Sample Report

Parent Survey About Walking and Biking to School

Dear Parent or Caregiver,
Your child's school wants to learn your thoughts about children walking and biking to school. This survey will take about 5 - 10 minutes to complete. We ask that each family complete only one survey per school your children attend. If more than one child from a school brings a survey home, please fill out the survey for the child with the next birthday from today's date.

After you have completed this survey, send it back to the school with your child or give it to the teacher. Your responses will be kept confidential and neither your name nor your child's name will be associated with any results.
Thank you for participating in this survey!

+ CAPITAL LETTERS ONLY – BLUE OR BLACK INK ONLY +

School Name:

1. What is the grade of the child who brought home this survey? ☐☐ Grade (PK,K,1,2,3...)

2. Is the child who brought home this survey male or female? ☐ Male ☐ Female

3. How many children do you have in Kindergarten through 8th grade? ☐☐

4. What is the street intersection nearest your home? (Provide the names of two intersecting streets)

and

Place a clear 'X' inside box. If you make a mistake, fill the entire box, and then mark the correct box.

5. How far does your child live from school?

☐ Less than ¼ mile ☐ ½ mile up to 1 mile ☐ More than 2 miles
☐ ¼ mile up to ½ mile ☐ 1 mile up to 2 miles ☐ Don't know

Place a clear 'X' inside box. If you make a mistake, fill the entire box, and then mark the correct box.

6. On most days, how does your child arrive and leave for school? (Select one choice per column, mark box with X)

Arrive at school	Leave from school
☐ Walk	☐ Walk
☐ Bike	☐ Bike
☐ School Bus	☐ School Bus
☐ Family vehicle (only children in your family)	☐ Family vehicle (only children in your family)
☐ Carpool (Children from other families)	☐ Carpool (Children from other families)
☐ Transit (city bus, subway, etc.)	☐ Transit (city bus, subway, etc.)
☐ Other (skateboard, scooter, inline skates, etc.)	☐ Other (skateboard, scooter, inline skates, etc.)

+ Place a clear 'X' inside box. If you make a mistake, fill the entire box, and then mark the correct box +

7. How long does it normally take your child to get to/from school? (Select one choice per column, mark box with X)

Travel time to school	Travel time from school
☐ Less than 5 minutes	☐ Less than 5 minutes
☐ 5 – 10 minutes	☐ 5 – 10 minutes
☐ 11 – 20 minutes	☐ 11 – 20 minutes
☐ More than 20 minutes	☐ More than 20 minutes
☐ Don't know / Not sure	☐ Don't know / Not sure

Safe Routes to School Students Arrival and Departure Tally Sheet

+ CAPITAL LETTERS ONLY – BLUE OR BLACK INK ONLY +

School Name: **Teacher's First Name:** **Teacher's Last Name:**

Grade: (PK,K,1,2,3...) 0 2 **Monday's Date** (Week count was conducted) M M D D Y Y Y Y **Number of Students Enrolled in Class:** 1 5

- Please conduct these counts **on two of the following three days Tuesday, Wednesday, or Thursday. (Three days would provide better data if counted)**
- **Please do not conduct these counts on Mondays or Fridays.**
- Before asking your students to raise their hands, please read through all possible answer choices so they will know their choices. Each Student may only answer once.
- Ask your students as a group the question **"How did you arrive at school today?"**
- Then, reread each answer choice and record the number of students that raised their hands for each. **Place just one character or number in each box.**
- Follow the same procedure for the question **"How do you plan to leave for home after school?"**
- You can conduct the counts once per day but during the count please ask students both the school arrival and departure questions.
- Please conduct this count regardless of weather conditions (i.e., ask these questions on rainy days, too).

Step 1. Fill in the weather conditions and number of students in each class

Step 2. **AM** – **"How did you arrive at school today?"** Record the number of hands for each answer. **PM** – **"How do you plan to leave for home after school?"** Record the number of hands for each answer.

Key	Weather S= sunny R= rainy O=overcast SN=snow	Student Tally Number in class when count made	Walk -	Bike -	School Bus -	Family Vehicle Only with Children from your family	Carpool Riding with children from other families	Transit City bus, subway, etc.	Other Skate-board, scooter, etc.
Sample AM	S N	2 0	2	3	8	3		3	1
Sample PM	R	1 9	3	3	8	1	2	2	
Tues. AM									
Tues. PM									
Wed. AM									
Wed. PM									
Thurs. AM									
Thurs. PM									

Please list any disruptions to these counts or any unusual travel conditions to/from the school on the days of the tally.

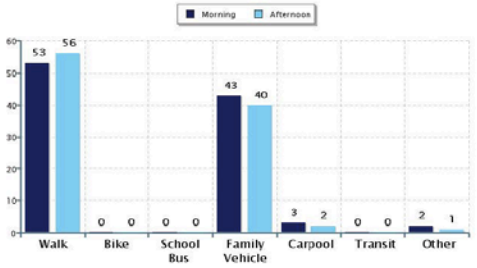
Student Travel Tally Report: One School in One Data Collection Period

School Name: Mintie White Elementary School
School Group: SRTS - Santa Cruz
School Enrollment: 686
% of Students reached by SRTS activities: 76-100%
Number of Classrooms Included in Report: 9

Set ID: 23796
Month and Year Collected: May 2017
Date Report Generated: 10/09/2019
Tags: test1

This report contains information from your school's classrooms about students' trip to and from school. The data used in this report were collected using the in-class Student Travel Tally questionnaire from the National Center for Safe Routes to School.

Morning and Afternoon Travel Mode Comparison



Morning and Afternoon Travel Mode Comparison

	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Morning	466	53%	0%	0%	43%	1%	0%	2%
Afternoon	478	56%	0%	0%	40%	2%	0%	1%

Percentages may not total 100% due to rounding.

Page 1 of 3

ATRC Active Transportation Resource Center
State of California Transportation Commission
Caltrans

National SRTS Guide on Evaluation

http://guide.saferoutesinfo.org/evaluation/index.cfm

SRTS guide
saferoutesinfo.org

- Introduction to Safe Routes to School: the Health, Safety and Transportation Nexus
- Steps to Creating a Safe Routes to School Program
- Engineering
- Enforcement
- Encouragement
- Education
- Student Drop-off and Pick-up
- Evaluation
  - When and How to Evaluate
  - Collecting Safe Routes to School Information
  - Evaluation in Six Steps
  - Appendices
  - Resources

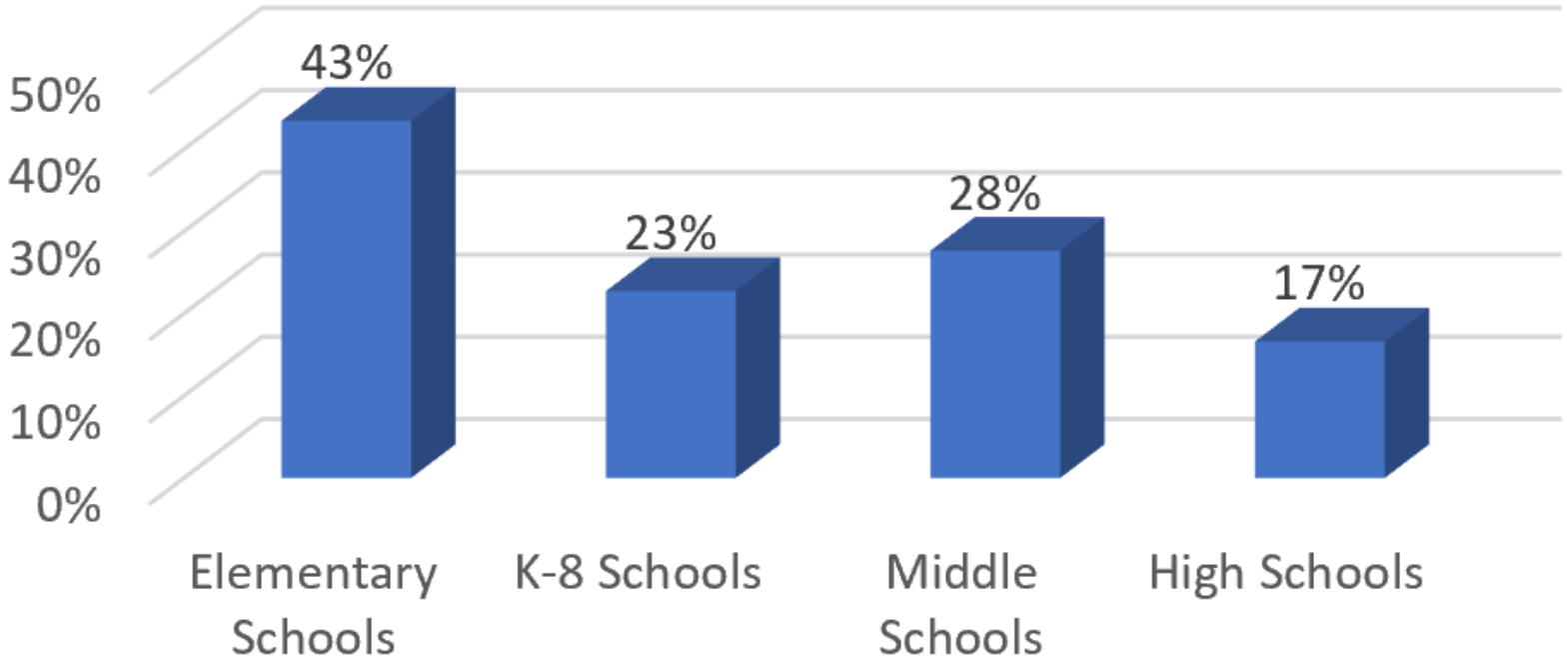
Home >

Evaluation

Identifying issues, improving activities and understanding results

Around the country, communities are conducting Safe Routes to School (SRTS) programs in order to enable and encourage children to walk and bicycle safely to school. Communities tailor a combination of engineering, education, encouragement and enforcement strategies to address the specific needs of their schools. **Evaluation** is an important component of any SRTS program. Evaluation is used to determine if the aims of the strategies are being met and to assure that resources are directed toward efforts that show the greatest likelihood of success. Also, evaluation can identify needed adjustments to the program while it is underway. This information describes how to conduct a SRTS program evaluation that is tailored to that program's objectives and strategies.

PARENT SURVEY RETURN RATES
SANTA CRUZ COUNTY



Student Travel Mode Implementation Recommendations

- Having teaching staff conduct surveys is time/cost effective
- Collecting 2 days of data on one day saves time and makes the task less onerous for teachers
- Ensure weather in two data collection points is similar
- Consider selecting a sampling of the classrooms (one or two grades perhaps)
- Remember mode surveys are children's self-reported behavior and can be influenced by classroom peers
- Sometimes parent survey and student mode survey results differ, we defer to parent surveys in that case

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Bike Smart

Youth Bicycle Safety Education Program

A Safe Routes to School Program of Ecology Action
www.ecoactbike.org

Rodeo Evaluation

Your feedback is very important to us to ensure our program continues to meet the needs of our participants and their teachers. Thank you for completely filling out this form and returning it to program staff.

Teacher Name: Ms Steele
School: Oak Avenue
Email: asteele@greenfield.k12.ca.us
Grade: 5th
Rodeo Date: 5/31/19
# of Students: 25

1. Based on student responses & your observation, please rate the following:

	Agree				Disagree
1. Youth learned important bicycle safety skills.	5	4	3	2	1
2. Students Improved their bicycle safety skills.	5	4	3	2	1
3. Youth enjoyed the activities.	5	4	3	2	1
4. Staff and volunteers were knowledgeable and effective.	5	4	3	2	1

2. Will the Bike Smart training increase safe bicycling behaviors for your students?

☒ Yes ☐ No

Comments: Absolutely! It's always important to be aware of how to be safe, especially on a bike.

3. What impact did the Bike Smart Program have on the youth and school?

I think it was a positive impact and they learned bike safety skills.

Over →

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Walk Smart

Youth Pedestrian Safety Education Program

A Safe Routes to School Program of Ecology Action
www.ecoactbike.org

Walk Around the Block or School Site Training
Teacher Evaluation

Your feedback is very important to us to ensure our program continues to meet the needs of our participants and their teachers. Thank you for completely filling out this form and returning it to program staff.

Teacher Name: Miss Mocettini
School: La Gloria
Email: kmocettini@gonzales.k12.ca.us
Grade: 2
Field Trip Date: 5/17/2019
# of Students: 22

1. Based on student responses & your observation, please rate the following:

	Agree				Disagree
1. Youth learned important pedestrian safety skills.	5	4	3	2	1
2. Students Improved their pedestrian safety skills.	5	4	3	2	1
3. Youth enjoyed the activities.	5	4	3	2	1
4. Staff and volunteers were knowledgeable and effective.	5	4	3	2	1

2. Will the Walk Smart training increase safe walking behaviors for your students?

☒ Yes ☐ No

Comments: Many youth have never had instruction in this important safety area. Thank you.

3. In what ways do you think the Walk Smart program will make an impact on student, family, and school transportation behavior?

Hopefully, these students will be the examples for friends + family. With continuous (year to year) instruction, more communities will be more cautious.

→

www.ecoact.org 831.426.5925

Over

Questions?

Jeanne LePage

Fund Development Manager

Ecology Action

jlepage@ecoact.org

831-515-1344

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Chris Kluth
SANDAG – Active Transportation Program Manager

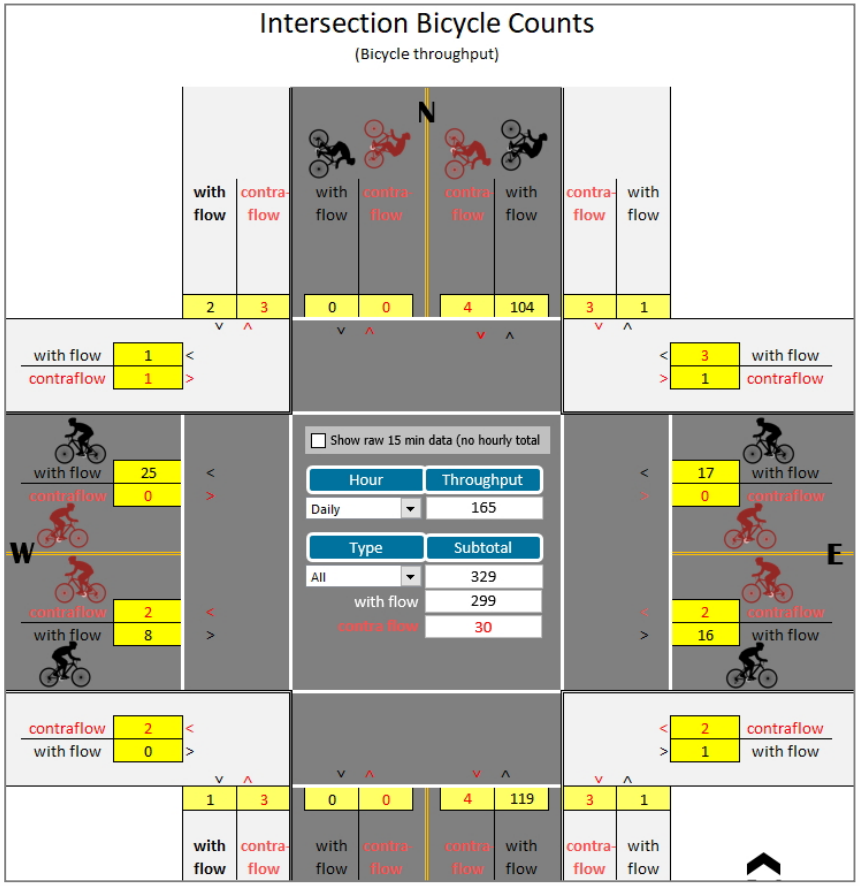
Challenges in Implementation

- Expectations
- Time
- Historical bias
  - Cultural
  - Data
- Modeling

Getting to Performance

- Commitment (Time)
- Funding
- Measuring change in:
  - Ridership
  - Mode split
  - Behavior
- Network

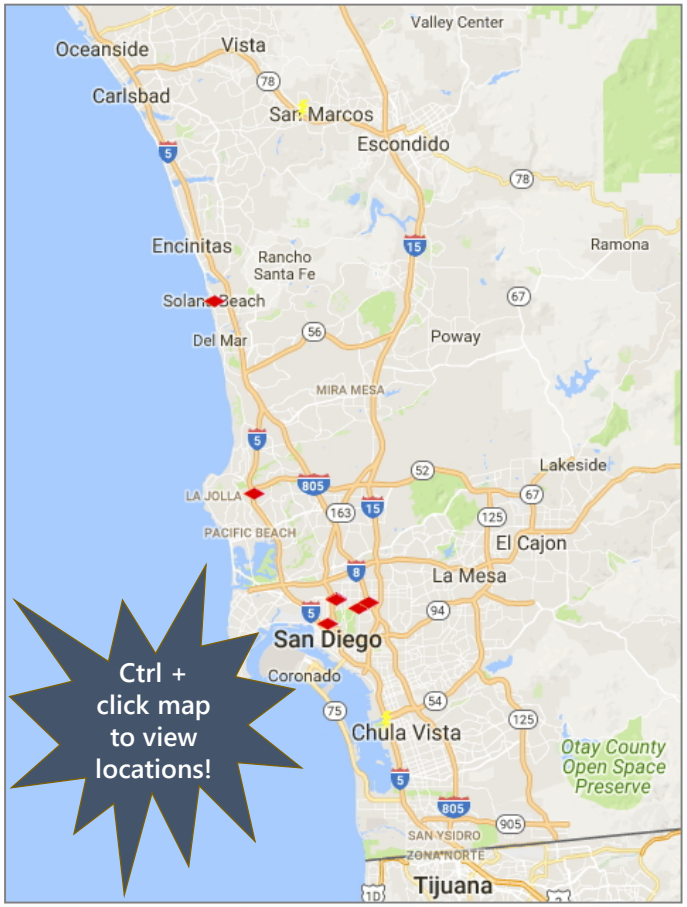
SHORT-DURATION DATA COLLECTION



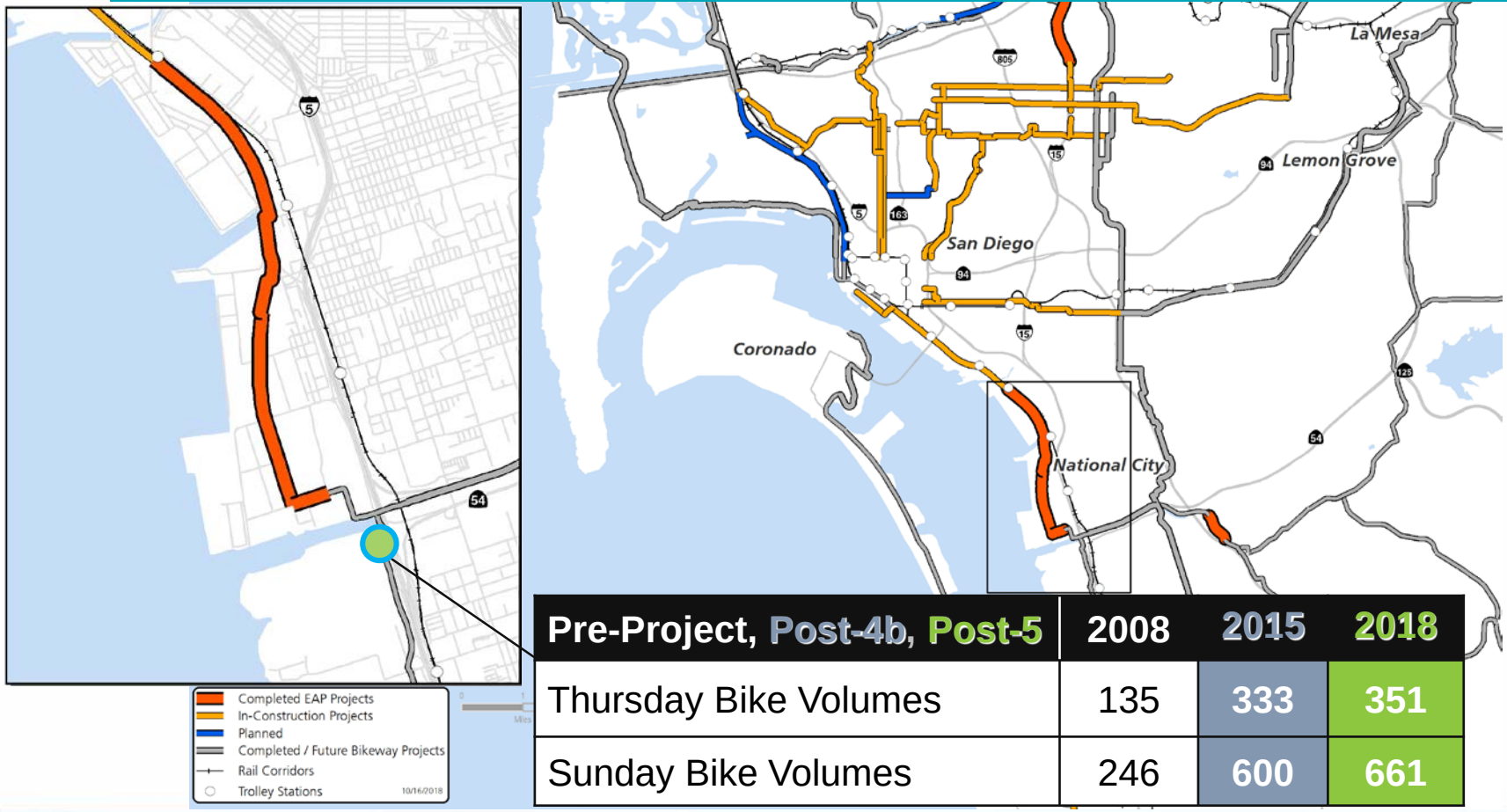
LONG-DURATION DATA COLLECTION

SANDAG Eco-Counters Work Plan:

- Repaired counters
- Validated counters
- Developed Adjustment Factors
- Remove / Replace Outlier Data
- Apply Adjustment Factors
- Estimate Annual Average Daily Bicycle (AADB) Volumes
- Monitor counts closely and conduct field visits as-needed



LONG-DURATION DATA COLLECTION ON BAYSHORE BIKEWAY SEGMENTS 4B AND 5



Pre-Project, Post-4b, Post-5	2008	2015	2018
Thursday Bike Volumes	135	333	351
Sunday Bike Volumes	246	600	661

Contact Information

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