

Connecticut Trail Census

A statewide multi-use trail user study and volunteer data collection program

CONDUCTING MANUAL COUNTS TO CALIBRATE YOUR
INFRARED SENSOR
TRAIL COORDINATOR TRAINING WEBINAR
MARCH 30, 2017





2016-2017

CT Trail Census

Pilot funded by DEEP Rec Trails grant
12 trails selected to participate



GOALS

DEVELOP A BETTER UNDERSTANDING OF MULTI-USE TRAIL USE IN THE STATE AND TO MAKE THIS IMPORTANT INFORMATION AVAILABLE TO TRAIL USER GROUPS, ADMINISTRATORS, GOVERNMENT AGENCIES, AND THE GENERAL PUBLIC.

TODAY'S WEBINAR

PROJECT UPDATES

- Where are we in the project?
- New counter locations
- New website

COORDINATOR REMINDERS

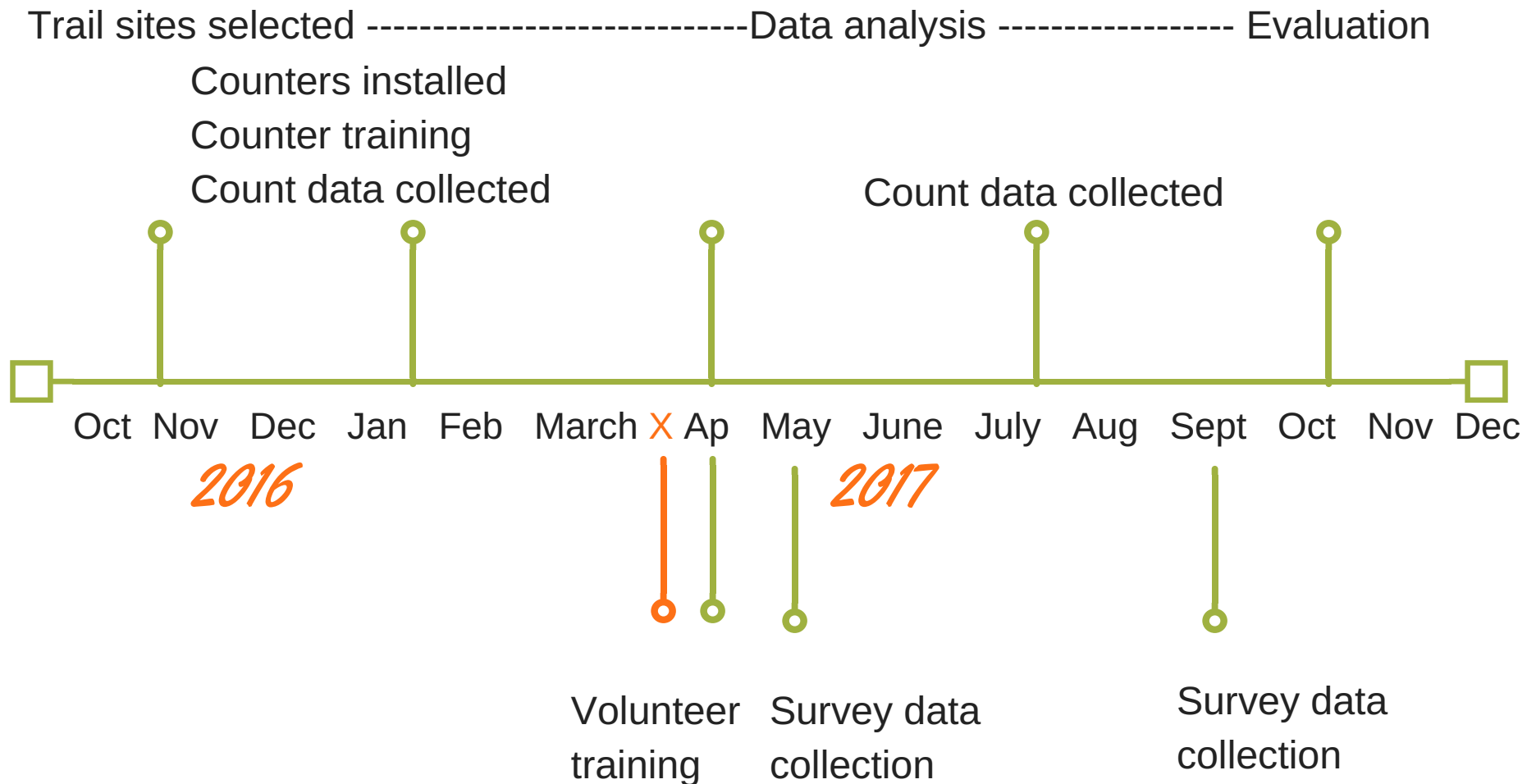
- Start recruiting volunteers now!
- All volunteers must participate in a Data 101 Training
- Keep track of volunteer hours on TrackItForward
- Counters must be monitored for functionality

COUNTER CALIBRATION

- What kind of data is being collected in the Census
- Why do we conduct calibration
- How does calibration affect our data
- When and how to conduct calibration



TIMELINE



CT Trail Census

<http://cttrailcensus.uconn.edu/>

UConn UNIVERSITY OF CONNECTICUT

EXTENSION
Connecticut Trail Census

Home About Webinars & Training Materials - Newsletters

Search this site...

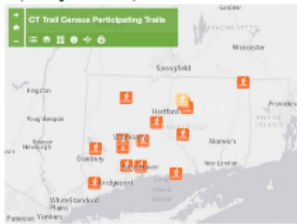
Connecticut Trail Census

A statewide multi-use trail user study and volunteer data collection program

Subscribe to our newsletter

Participating Trails Map

<http://arog.is/15SOWq>



Upcoming Events

- MAR 30** Conducting Manual Counts to Calibrate your Infrared Sensor 4:00pm
- APR 11** Trail Based Survey Data Collection for New Volunteers 4:00pm
- APR 26** Trail Based Survey Data Collection for New Volunteers 8:00pm

[All Events](#)

What is this box?



Perhaps you've noticed a mysterious grey box with a CT Trail Census decal that has been installed along your trail. The grey electrical junction box houses a Trax infrared (IR) pedestrian counter that is recording the number of trail users passing it. The counter can sense the temperature differential between warm bodies and the ambient air temperature. Every time a trail user passes the counter, the counter records it, enabling project staff to gauge trail use.

News from the Census

[Registration open for April 2017 Data Collection 101 Workshops – Trail Based Data Collection for New Volunteers](#)

Data Collection 101 – Trail Based Data Collection for New Volunteers Volunteers collecting data as part of the CT Trail Census will be required to participate in this face to face training prior to data collection times in May and September. Participants will learn how to prepare for and assess the CT Trail Census Intercept [...]

[Watch the Welcome to the CT Trail Census webinar](#)

This 27 minute webinar provides an overview of the Connecticut Trail Census, project origins, data to be collected and general requirements of trail coordinators and volunteers. Note that the training dates suggested in this webinar have changed.

Multi Use Trail Resources



Enter Your Volunteer Hours

Log Hours

Hours:

Date Volunteered:

Notes:

[Need help? Click for PDF instructions on tracking your hours](#)

NEW WEBSITE

CALENDAR

CURRENT EVENTS

VOLUNTEER TRACKING

DATA PORTAL

Trail Coordinator Responsibilities

INTERCEPT SURVEYS

VOLUNTEER RECRUITMENT

- Recruit and confirm volunteers

- Ensuring at least 2- 3 volunteers available for each data collection time

- Notification of parks/ public works

VOLUNTEER MANAGEMENT

- Ensure volunteers participate in methods training

- Track volunteer hours

POINT OF CONTACT

- Make sure volunteers have survey box

- Serve as local point of contact

- Ensure that paper surveys are collected/handled appropriately

VOLUNTEER RECRUITMENT

Survey Data Collection Times

Dates and times for data collection based on National
Bike and Pedestrian Data Collection Project
Scheduled based on volunteer availability

DATA COLLECTION WEEKS

May 13-21, 2017 & September 16-24, 2017

Two hours of data collection on a weekday (Tuesday, Wednesday or Thursday) and
Two hours of data collection on a weekend (Saturday)

RECOMMENDED TIMES:

Weekday, 5-7 PM AND Saturday, 12 noon – 2PM

Secondary times if necessary: Weekday, 7 AM to 7 PM Saturday, 7 AM to 7 PM

VOLUNTEER MANAGEMENT

Training Dates

Tues April 11 4:00 pm- 5:30 pm

Trail Based Survey Data Collection for New Volunteers

Tolland County Extension Center

24 Hyde Avenue Vernon CT

Wed, April 26 – 6:00 pm -7:30 pm

Trail Based Survey Data Collection for New Volunteers

New Haven County Extension Center- 305 Skiff Street North Haven

Sat April 29 - 9:00 am- 10:30 am

Trail Based Survey Data Collection for New Volunteers

New Haven County Extension Center- 305 Skiff Street North Haven

CT Trail Census


VOLUNTEER TRAINING

Agenda

Goals and purpose of the CT Trail Census, about data collection methods, where to find more information about CT trails

- Infrared Counter Management
- Logistics for the day of survey data collection
- Standards for consent, confidentiality and information for participants
- How to complete the observed data section of the survey
- How to approach trail users - on foot, bicycle or horse
- How to aid those who request assistance completing the survey
- Checking surveys for completeness of data and tracking refusals
- What to do with completed surveys
- How the data will be used - how participants can access data
- Tracking your volunteer hours (Track it Forward)

CT Trail Census

The logo for the CT Trail Census features the text "CT Trail Census" in a bold, green, sans-serif font. Below the text is a thick, dark grey horizontal bar with a dashed yellow line running through its center.

VOLUNTEER TRACKING

[CT Trail Census](#)

Connecticut Trail Census

[Log Hours](#)

[Charts](#)

[Event Sign-ups](#)

[Account](#)

Log Hours

Hours:

--Select Hour--

Date Volunteered: 

Nov

17

2016

Activity:

---Select Activity---

Volunteer:

16-

Trail:

Notes:

Submit Time

Timesheet

Date	Activity	Hours
11/13/16	IR Counter Work	3
11/11/16	IR Counter Work	2
Total		5



Trail Coordinator Responsibilities

IR COUNTERS

INSTALLATION ✓

- Municipal Permission
- Notification of Parks/ Public Works
- In Person Training and Install Assistance



Connecticut Trail Census Manual Count Form

Location _____ All times Eastern Daylight Saving (www.time.gov).
 Name _____ Record multiples passing counter simultaneously on the same line.
 Date _____ Record strollers, skateboards, wheelchairs, etc. as "other", list in comments.
 Time Start _____ Record activity in comments - jogging, walking dog, etc.
 Time End _____ Send completed forms to:
 Weather _____ Aaron Budris, NVCOG, 49 Leavenworth St., 3rd Floor Waterbury, CT 06702

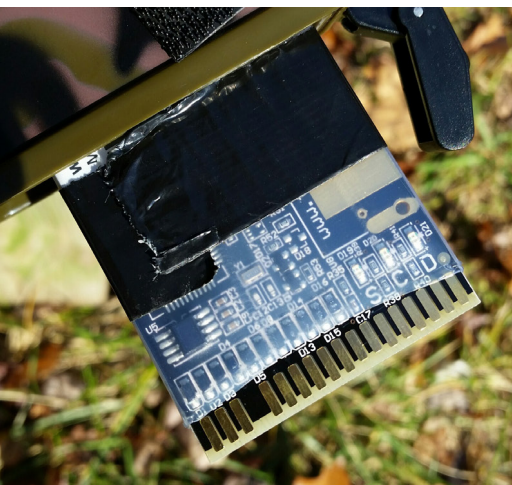
#	Time	Ped	Bike	Other	Comment	#	Time	Ped	Bike	Other	Comment	
1						41						
2						42						
3						43						
4						44						
5						45						
6						46						
7						47						
8						48						
9						49						
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34						74						
35						75						
36						76						
37						77						
38						78						
39						79						
40						80						
SD=Same Direction / OD=Opposite Direction						TOTALS:						=

MONITORING ✓

- Occasional checks (2-weeks)
- Is it Working?
- Any Tampering or Vandalism?

MANUAL COUNTS FOR CALIBRATION

Today's Main Event!



Counter Calibration

WHY?

OVERCOUNTS

- Gathering
- Slow Traffic
- Animals or Wildlife
- Overheating
- Vegetation

UNDERCOUNTS

- Side By Side
 - Groups
 - Passing Traffic
 - Clothing
- } OCCLUSION

ADDITIONAL INFO

- Mode, Activities, Etc.



Counter Calibration

HOW?

MANUAL COUNTS

- Manually count actual trail uses
- Compare to counter results
- The more comparison points...
- Goal of FIVE 2-hour counts in 2017

YOU WILL NEED

- Smartphone with service at counter location
- OR a watch with a second hand
- Clipboard*
- Manual Count Form*
- Pen/Pencil*

* provided

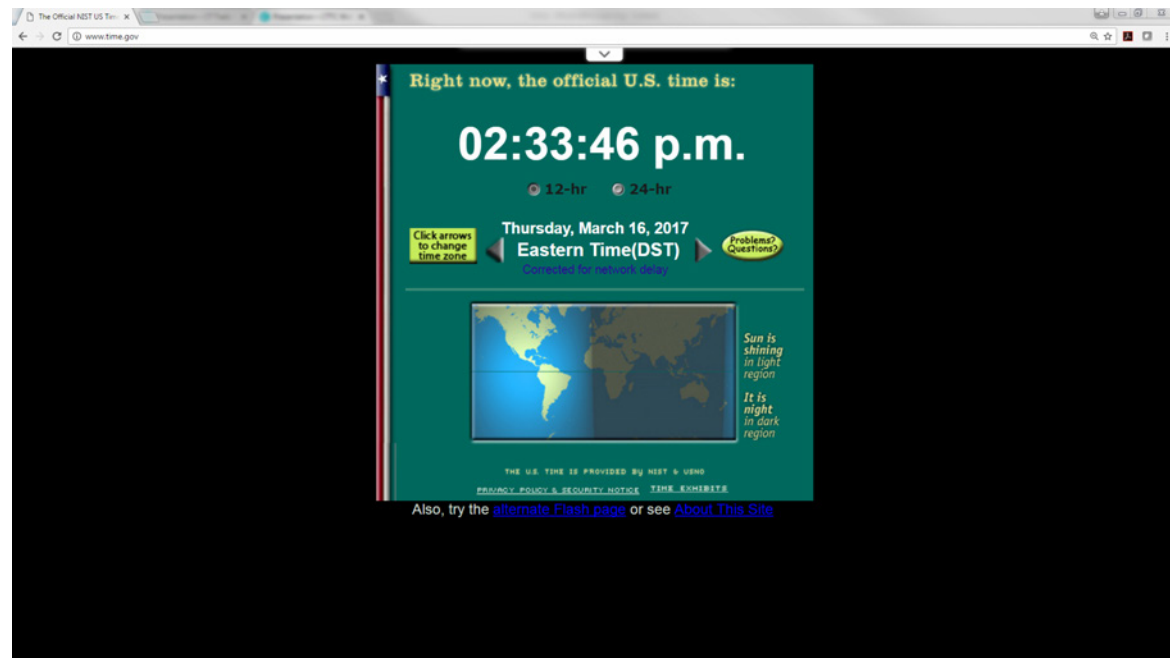


Counter Calibration

HOW?

SYNCHRONIZE TIMEPIECE

- www.time.gov



Counter Calibration

HOW?

SYNCHRONIZE TIMEPIECE

- www.time.gov

CHOOSE A LOCATION

- Line of sight to counter - unobtrusive
- Use your car or bring a chair



Counter Calibration

HOW?

SYNCHRONIZE TIMEPIECE

- www.time.gov

CHOOSE A LOCATION

- Line of sight to counter - unobtrusive
- Use your car or bring a chair

CHECK THE COUNTER

- Is it working?



Counter Calibration

HOW?

SYNCHRONIZE TIMEPIECE

- www.time.gov

CHOOSE A LOCATION

- Line of sight to counter - unobtrusive
- Use your car or bring a chair

CHECK THE COUNTER

- Is it working?

PREPARE THE COUNT FORM

- Record trail, volunteer name, date, time, and weather.

Connecticut Trail Census Manual Count Form

Location _____

Name _____

Date _____

Time Start _____

Time End _____

Weather _____

All times Eastern Daylight Saving (www.time.gov).

Record multiples passing counter simultaneously on the same line.

Record strollers, skateboards, wheelchairs, etc. as "other", list in comments.

Record activity in comments - jogging, walking dog, etc.

Send completed forms to:

Aaron Budris, NVCOG, 49 Leavenworth St., 3rd Floor Waterbury, CT 06702

#	Time	Ped	Bike	Other	Comment	#	Time	Ped	Bike	Other	Comment
1						41					
2						42					
3						43					
4						44					
5						45					
6						46					
7						47					
8						48					
9						49					
10						50					
11						51					
12						52					
13						53					
14						54					
15						55					
16						56					
17						57					
18						58					
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20						60					
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22						62					
23						63					
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25						65					
26						66					
27						67					
28						68					
29						69					
30						70					
31						71					
32						72					
33						73					
34						74					
35						75					
36						76					
37						77					
38						78					
39						79					
40						80					
SD=Same Direction / OD=Opposite Direction						TOTALS:					=

Counter Calibration

HOW?

SYNCHRONIZE TIMEPIECE

- www.time.gov

CHOOSE A LOCATION

- Line of sight to counter - unobtrusive
- Use your car or bring a chair

CHECK THE COUNTER

- Is it working?

PREPARE THE COUNT FORM

- Record trail, volunteer name, date, time, and weather.

Connecticut Trail Census Manual Count Form

Location Airline Trail E. Hampton
Name Aaron Budris
Date March 30, 2017
Time Start 12:00 p.m.
Time End 1:00 p.m.
Weather 55degrees, sunny

All times Eastern Daylight
Record multiples passing
Record strollers, skaters
Record activity in comments
Send completed forms to
Aaron Budris, NVCOG,

#	Time	Ped	Bike	Other	Comment
1					
2					
3					
4					
5					
6					
7					
8					
9					

Counter Calibration

HOW?

COUNT

- Begin at top of hour (exactly)
- Record what the counter is "seeing"
- Multiples passing at the same time recorded on one line.
- Cyclists and pedestrians separately
- Trail users in strollers or wheelchairs, or on skates/ skateboards recorded as "Other"
- Provide details as comments - What type of "other"? Run vs Walk, multiples going same or opposite direction, etc.

Connecticut Trail Census Manual Count

Location Airline Trail E. Hampton
Name Aaron Budris
Date March 30, 2017
Time Start 12:00 p.m.
Time End 1:00 p.m.
Weather 55degrees, sunny

All times Eastern Daylight
Record multiples passing
Record strollers, skates
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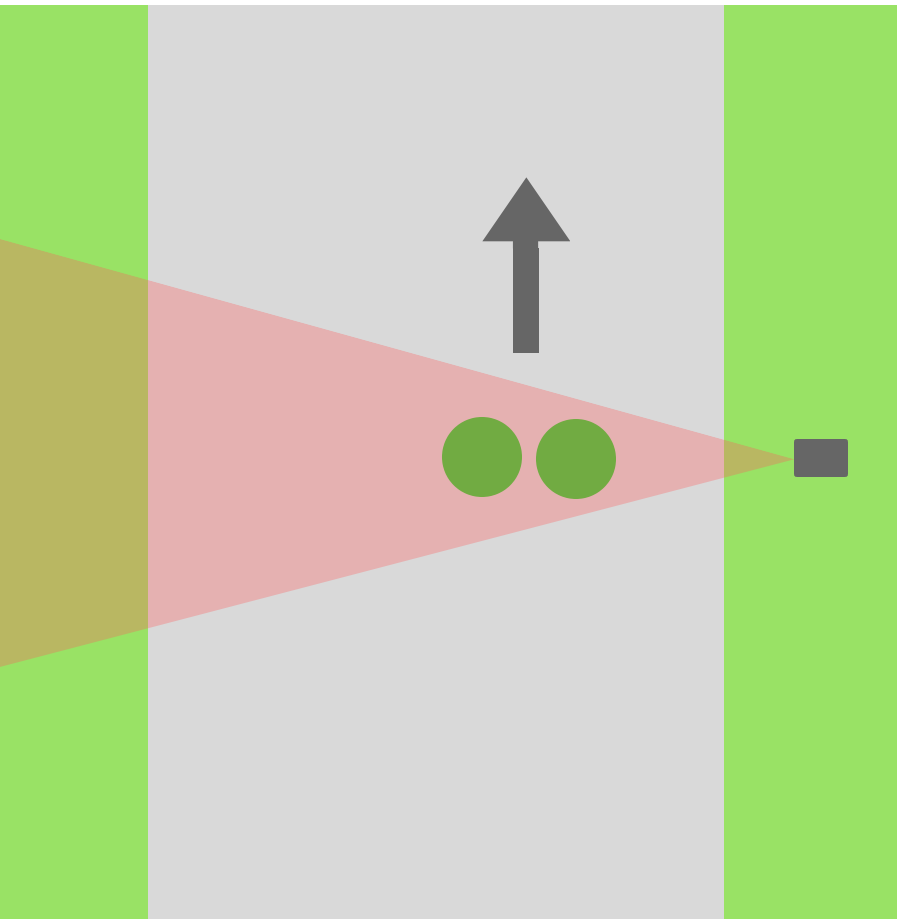
#	Time	Ped	Bike	Other	Comment
1					
2					
3					
4					
5					
6					
7					
8					
9					

Counter Calibration

HOW?

EXAMPLES

- Two people walking side by side



Connecticut Trail Census Manual Count

Location Airline Trail E. Hampton
Name Aaron Budris
Date March 30, 2017
Time Start 12:00 p.m.
Time End 1:00 p.m.
Weather 55degrees, sunny

All times Eastern Daylight
Record multiples passing
Record strollers, skates
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Send completed forms to
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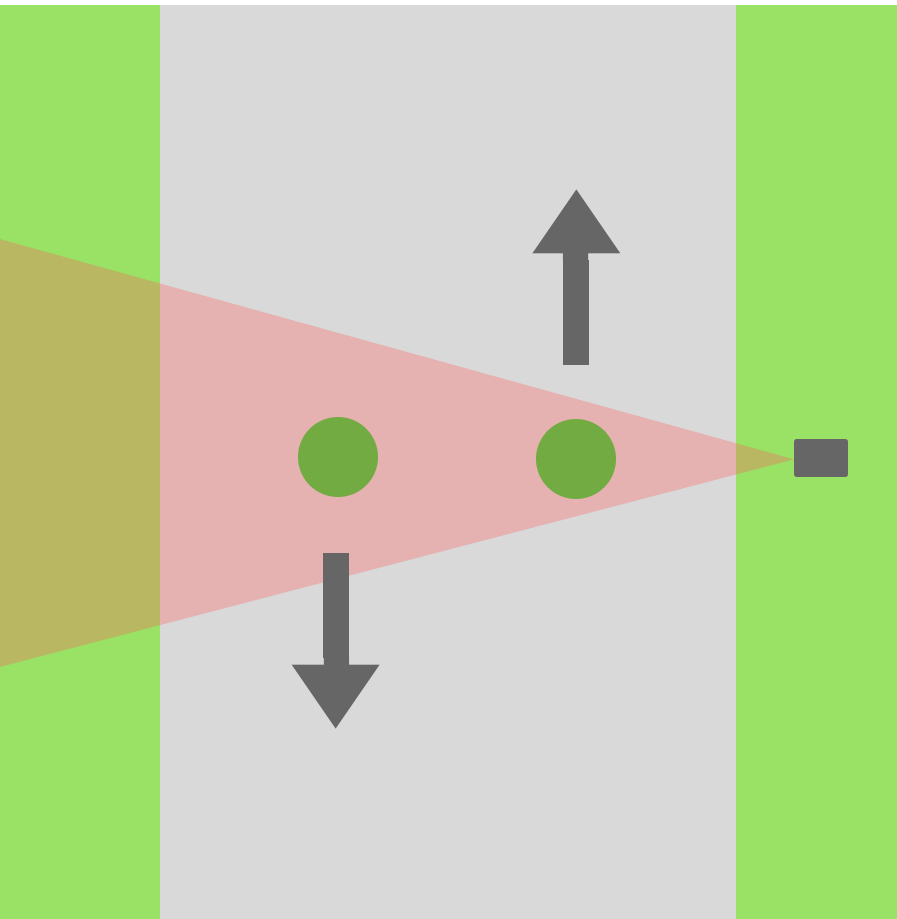
#	Time	Ped	Bike	Other	Comment
1	12:05	2			walking SD
2					
3					
4					
5					
6					
7					
8					
9					

Counter Calibration

HOW?

EXAMPLES

- Two people walking opposite directions



Connecticut Trail Census Manual Count

Location Airline Trail E. Hampton
Name Aaron Budris
Date March 30, 2017
Time Start 12:00 p.m.
Time End 1:00 p.m.
Weather 55degrees, sunny

All times Eastern Daylight
Record multiples passing
Record strollers, skates
Record activity in comments
Send completed forms to
Aaron Budris, NVCOG,

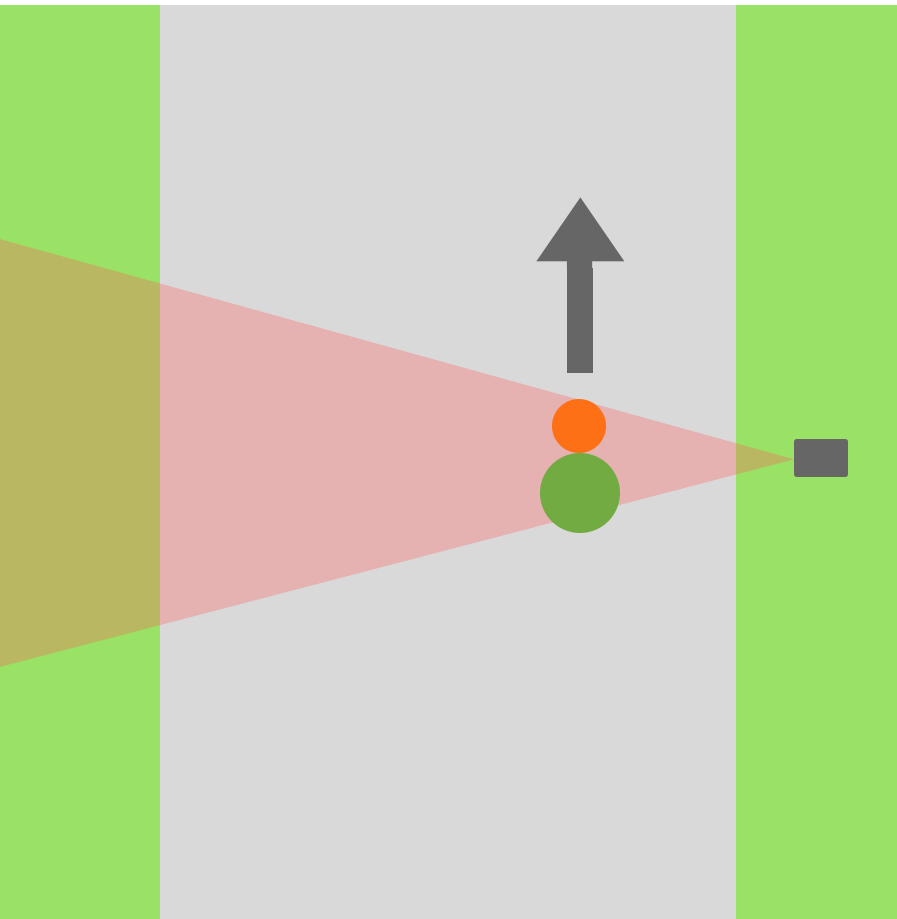
#	Time	Ped	Bike	Other	Comment
1	12:05	2			walking SD
2	12:15	2			walking OD
3					
4					
5					
6					
7					
8					
9					

Counter Calibration

HOW?

EXAMPLES

- Adult pushing a child in a stroller



Connecticut Trail Census Manual Count

Location Airline Trail E. Hampton
Name Aaron Budris
Date March 30, 2017
Time Start 12:00 p.m.
Time End 1:00 p.m.
Weather 55degrees, sunny

All times Eastern Daylight
Record multiples passing
Record strollers, skateboards
Record activity in comments
Send completed forms to
Aaron Budris, NVCOG,

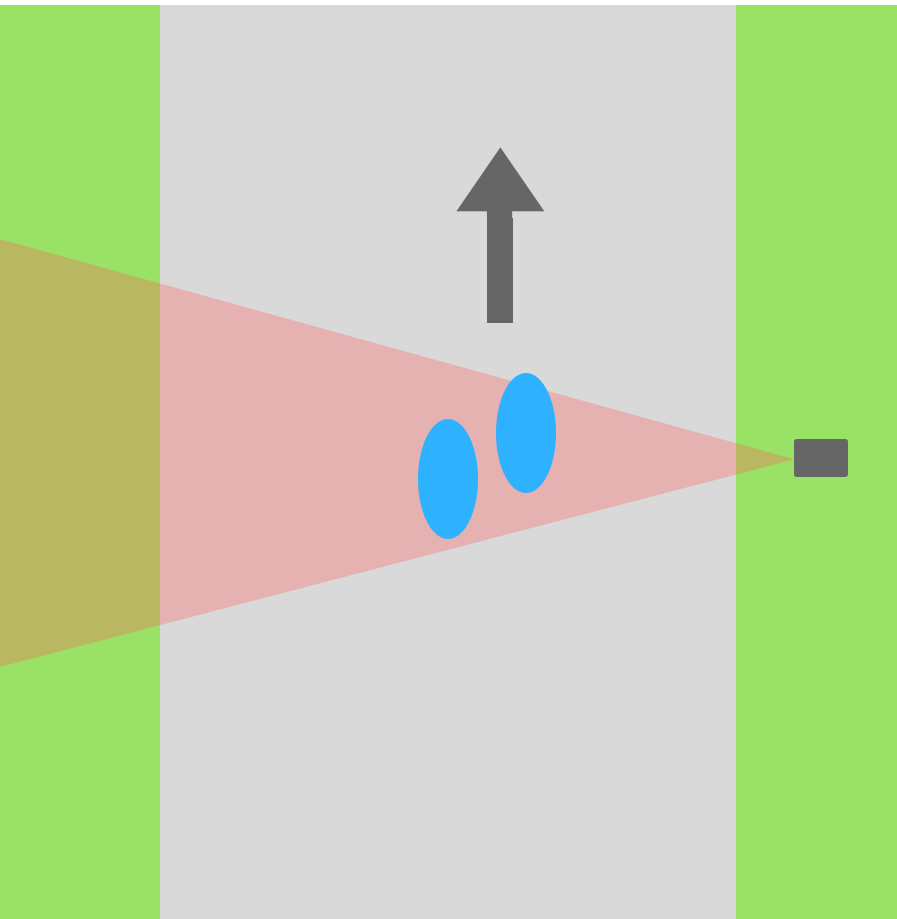
#	Time	Ped	Bike	Other	Comment
1	12:05	2			walking SD
2	12:15	2			walking OD
3	12:18	1		1	walking w/ stroller
4					
5					
6					
7					
8					
9					

Counter Calibration

HOW?

EXAMPLES

- Two cyclists side by side



Connecticut Trail Census Manual Count

Location Airline Trail E. Hampton
Name Aaron Budris
Date March 30, 2017
Time Start 12:00 p.m.
Time End 1:00 p.m.
Weather 55degrees, sunny

All times Eastern Daylight
Record multiples passing
Record strollers, skaters
Record activity in comments
Send completed forms to
Aaron Budris, NVCOG,

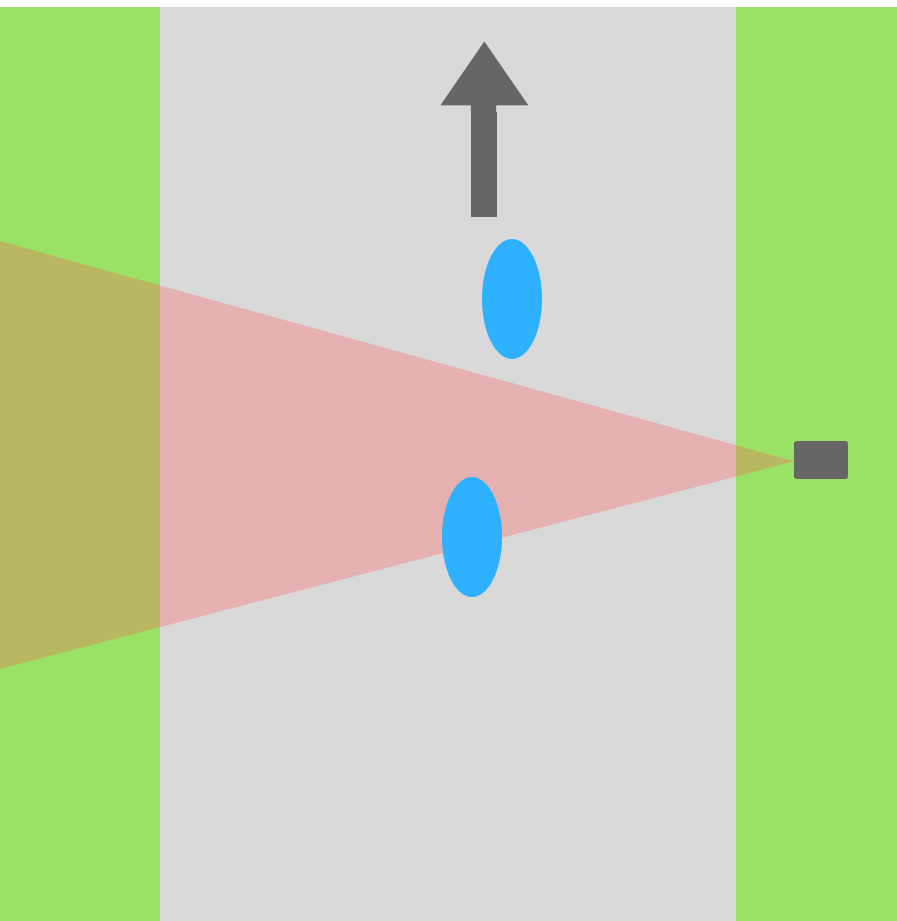
#	Time	Ped	Bike	Other	Comment
1	12:05	2			walking SD
2	12:15	2			walking OD
3	12:18	1		1	walking w/ stroller
4	12:25		2		SD
5					
6					
7					
8					
9					

Counter Calibration

HOW?

EXAMPLES

- Two cyclists close proximity - not side by side



Connecticut Trail Census Manual Count

Location Airline Trail E. Hampton
Name Aaron Budris
Date March 30, 2017
Time Start 12:00 p.m.
Time End 1:00 p.m.
Weather 55degrees, sunny

All times Eastern Daylight
Record multiples passing
Record strollers, skaters
Record activity in comments
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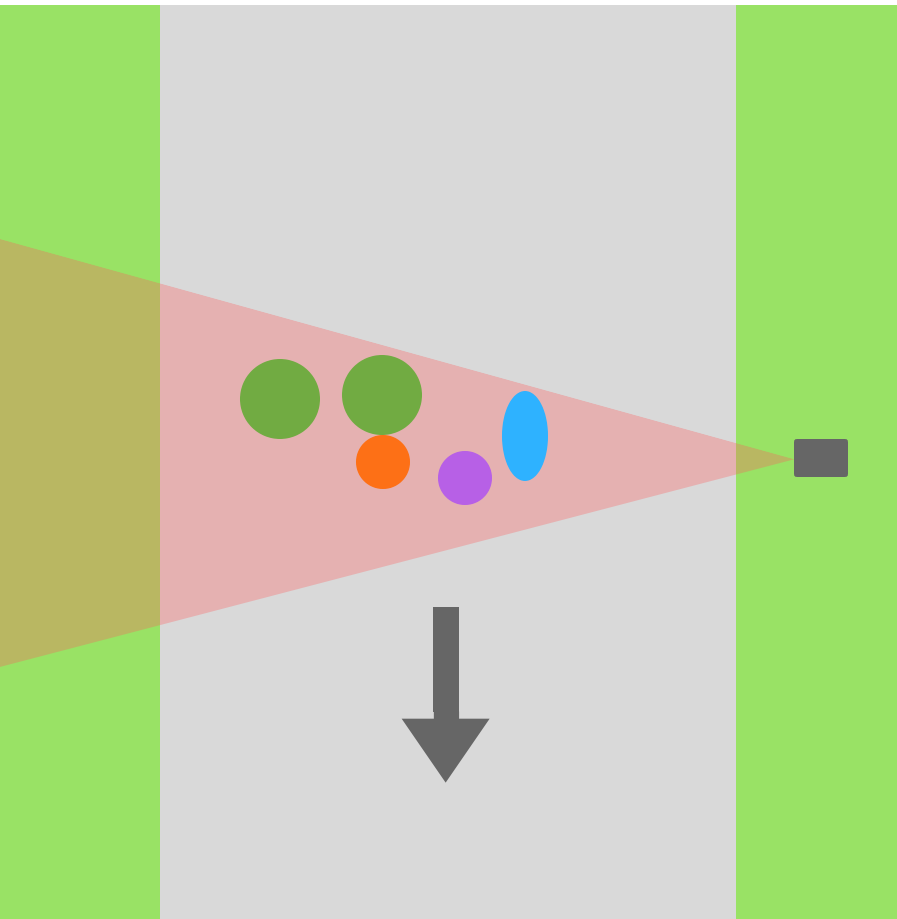
#	Time	Ped	Bike	Other	Comment
1	12:05	2			walking SD
2	12:15	2			walking OD
3	12:18	1		1	walking w/ stroller
4	12:25		2		SD
5	12:32		1		
6	12:32		1		
7					
8					
9					

Counter Calibration

HOW?

EXAMPLES

- Two adults walking, one pushing a child in stroller, one child on bike, one on skates



Connecticut Trail Census Manual Count

Location Airline Trail E. Hampton
Name Aaron Budris
Date March 30, 2017
Time Start 12:00 p.m.
Time End 1:00 p.m.
Weather 55degrees, sunny

All times Eastern Daylight
Record multiples passing
Record strollers, skateboards
Record activity in comments
Send completed forms to
Aaron Budris, NVCOG,

#	Time	Ped	Bike	Other	Comment
1	12:05	2			walking SD
2	12:15	2			walking OD
3	12:18	1		1	walking w/ stroller
4	12:25		2		SD
5	12:32		1		
6	12:32		1		
7	12:48	2	1	2	SD, stroller, skates
8					
9					

Counter Calibration

HOW?

AT HOURS END

- Add them up and enter totals
- Each hour gets a separate sheet
- Can use more than 1 sheet if necessary

E-MAIL TO AARON

- Totals with details (Location, date, etc.)
- Scan or photo of completed form

USPS TO AARON

- Completed form
- We will provide postage paid envelopes

Connecticut Trail Census Manual Count Form

Location Airline Trail E. Hampton
 Name Aaron Budris
 Date March 30, 2017
 Time Start 12:00 pm
 Time End 1:00 pm
 Weather 55degrees, sunny

All times Eastern Daylight Saving (www.time.gov).
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 Aaron Budris, NVCOG, 49 Leavenworth St., 3rd Floor Waterbury, CT 06702

#	Time	Ped	Bike	Other	Comment	#	Time	Ped	Bike	Other	Comment
1	12:05	2			walking SD	41					
2	12:15	2			walking OD	42					
3	12:18	1		1	walking w/ stroller	43					
4	12:25		2		SD	44					
5	12:32		1			45					
6	12:32		1			46					
7	12:48	2	1	2	SD, stroller, skates	47					
8						48					
9						49					
10						50					
11						51					
12						52					
13						53					
14						54					
15						55					
16						56					
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35						75					
36						76					
37						77					
38						78					
39						79					
40						80					

SD=Same Direction / OD=Opposite Direction

TOTALS: 7 5 3 = 15

Counter Calibration

GENERAL INSTRUCTIONS

TIMING

- 2 hour count periods
- 10 total hours of counts per trail (by December)
- Good Weather
- Weekday Morning / Afternoon / Evening
- Weekend Morning or Afternoon/ Evening
- Avoid low traffic times (use prelim counts)

BE UNOBTUSIVE

- Don't alter usage
- Avoid intimidation/ chatting
- Passive observer

GET THERE EARLY

- Be ready to go at top of the hour



Counter Calibration

QUESTIONS?





LONG TERM PROGRAM VISION

Self sufficient volunteer based data collection program

Annual benchmarking to understand how trail use changes over time

Data used for substantial statewide economic impact analysis

Research opportunities for comparison of trail users to the general population

More efficient use of existing resources

Better utilized and integrated trail systems

Improved economic opportunities and public health



CTVISIT.com

EVALUATE THIS PROGRAM

<http://s.uconn.edu/calibrationeval>



BIKE

WALK

SMILE

THANK YOU!

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NAUGATUCK VALLEY
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