




Lands Monitoring Program

Automated Counting Equipment

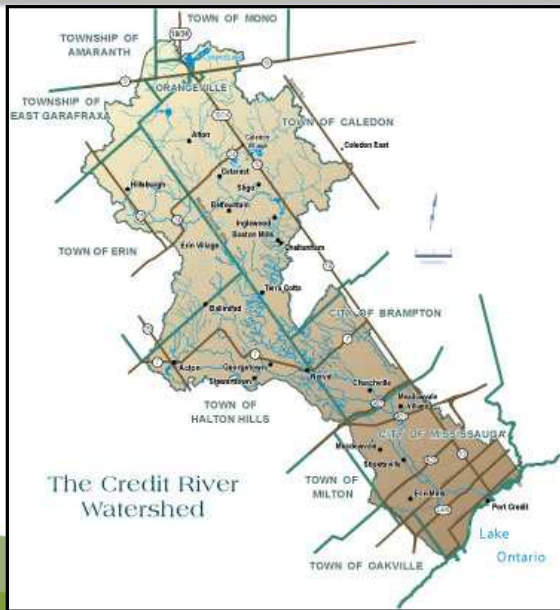
HCIA – Trails Working Group Meeting
November 23, 2011

Presentation Outline

- **Credit Valley Conservation**
 - Conservation Areas System
 - Lands Monitoring Program
 - Importance of Visitor Information
- **Automated Counter Program**
 - Equipment
 - Installation
 - Data
- **Results**
 - Findings
 - Calibration
 - Testing



Credit Valley Conservation



- 60 Conservation Areas across Watershed
- Manage lands under a Systems Approach
- 10 Core Properties for Visitor Experience
- Conservation Areas Strategy Guides Lands Management Policies, Programs and Procedures
- Lands Monitoring Program Developed as Tool for Adaptive Land Management



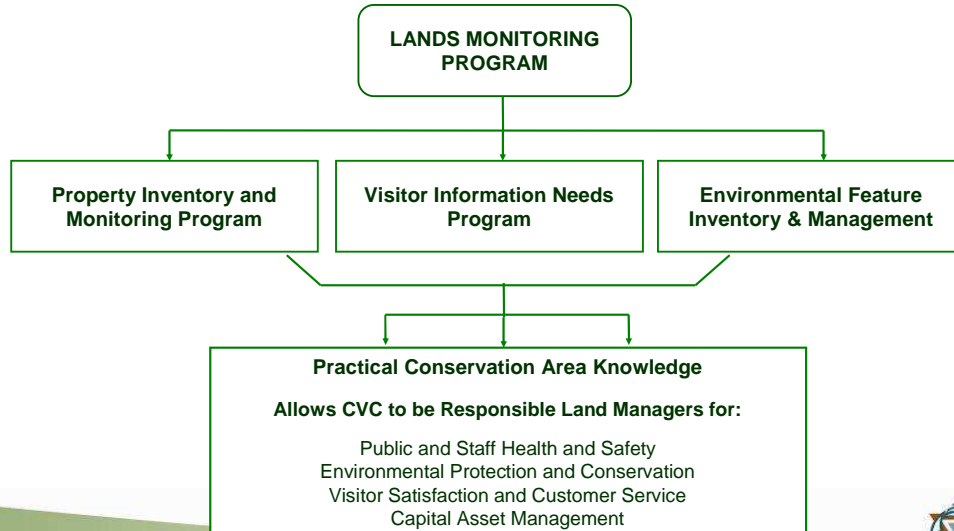
What is the Lands Monitoring Program?



- Adaptive Land Management Tool
 - Derived from the Conservation Areas Strategy
- Implemented under CVC's Land Management Policies
- Used to Collect Baseline Property and Visitor Information



Lands Monitoring Program Framework

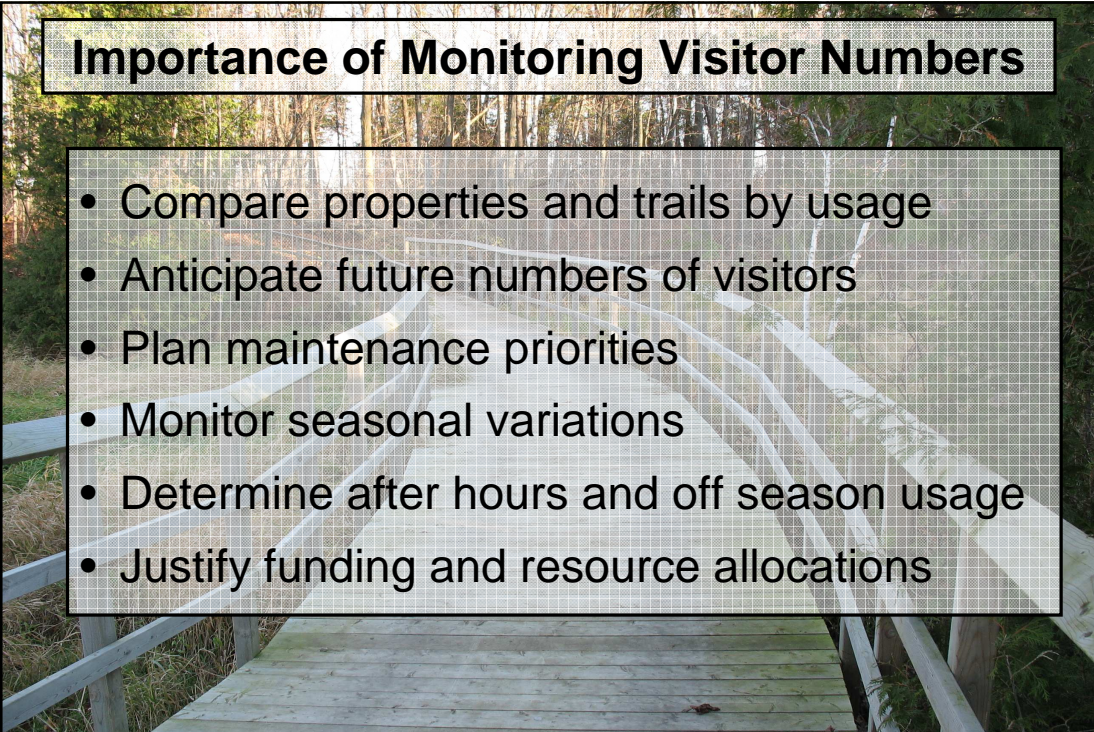


Importance of Collecting Visitor Data

Any phenomenon that is not measured and reported on, does not exist politically.

~ Paul F. Eagles





Importance of Monitoring Visitor Numbers

- Compare properties and trails by usage
- Anticipate future numbers of visitors
- Plan maintenance priorities
- Monitor seasonal variations
- Determine after hours and off season usage
- Justify funding and resource allocations

Trail Counting Equipment				
Type	Components	How it Works	Pros	Cons
Seismic	- Pressure pad buried beneath trail	- Counts every time an individual steps on the pad	- Highly accurate in ideal conditions	- Not suitable for winter use; high traffic areas; wide paths
Video Monitoring	- Video Camera and case	- Can run continuously or triggered by an event	- Records visitor behaviour	- expensive; vandalism; time consuming to analyze
Active	- Transmitter and receiver	- Transmitter emits a beam to the receiver; a count is recorded when the beam is broken	- High level of accuracy	- Expensive; problematic to install on some topographies
Passive	- Single unit	- A count is recorded every time the infrared beam is broken	- consistent; easy to install and move; inexpensive	- Slightly less accurate

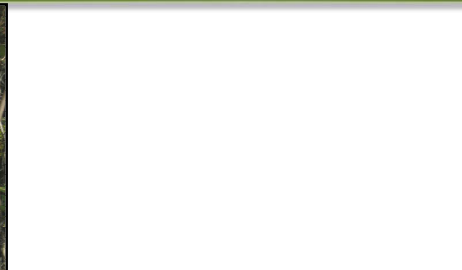
Trafx Trail Counter

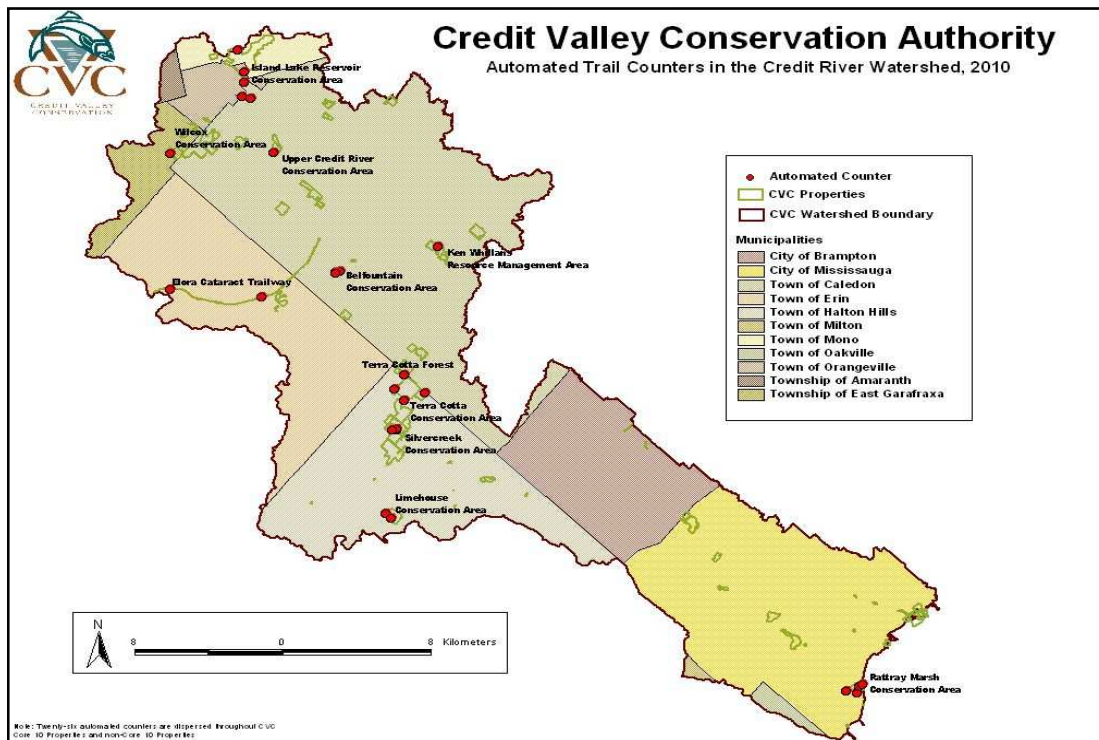
Computer records counts



Scope emits infrared beam

Installation





Shuttle Files

June 08_2011_Priority_Counters - Notepad

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File Edit Format View Help
p
>>>>>
Factory:_B3_53_C2.80_F8127_EY_ME_D1
=DOCK TIME (yy-mm-dd hh:mm):11-06-03 15:03:17
Counter log start

System check...
*****v9.0b S/N90304 (c) 2001-2009*****
TRAFx Research Ltd. www.trafx.net
FX:F6E0R1M3T2T_C26F26L33LN4P0A0E2_m064I2_d

Sets:N:H:001:030:E:060:000:F:Y:F:016:000:Y:000

*Serial Number :00036V
*Counter name :KW - Caledon Trailwa
*Mode :Infrared (IR)
*Batt. voltage :4.0
*Stored records :00362

=TIME (yy-mm-dd hh:mm):11-06-03,15:02:12
=START(yy-mm-dd hh:mm):11-05-19,15:00
PERIOD (1/24/0=Timestamps) :001
DELAY (see manual) :030

11-05-19,15:00,00002,00000
11-05-19,16:00,00002,00000
11-05-19,17:00,00000,00000
11-05-19,18:00,00002,00000
11-05-19,19:00,00004,00000
11-05-19,20:00,00003,00000
11-05-19,21:00,00001,00000
11-05-19,22:00,00000,00000
11-05-19,23:00,00000,00000

```

Trafx Website

Welcome to DataNet!
A smarter way to analyze, manage, store and share your TRAFx data.

Your counter sites ... click below to explore

#	Site name	Last 12 months	Report	Photo	Image 2
1	Belfountain - Main Gate				No Image Uploaded
2	Belfountain - Pinnacle St				No Image Uploaded
3	Belfountain - Trimble Trail				No Image Uploaded
4	CLF - Boardwalk				No Image Uploaded
5	Elora Cataract Trailway - Erin				No Image Uploaded

Counter map (beta)

Additional mapping options
 • To link to a Google satellite image showing a counter's location, click a marker above.
 • To download all counter locations as a KML file viewable with Google Earth, [click here](#). [Learn more](#)

Hint: Go to 'Manage' to set a counter's location.

CVC
CREDIT VALLEY CONSERVATION

Access Database

Trail Counter Data

Station Data

Unique Id: 1980
 Serial Number: 0903DG
 Name: UC - Main Gate
 Dock (date / time): 2011-08-26 9:28:16 AM
 Start (date / time): 2011-08-26 9:28:04 AM
 Finish (date / time): 2011-08-04 2:00:00 PM
 Records: 525
 Shuttle File: Aug_16_N_Watershed.txt

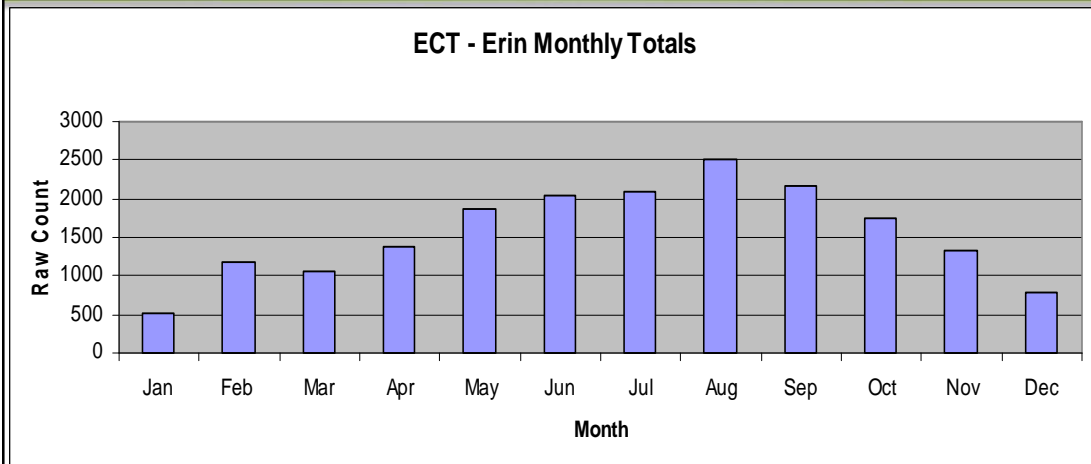
Trail Count Data

Date	Time	Count	Estimate	Est (Y/N)	Note
2011-08-04	12:00	7			
2011-08-04	13:00	7			
2011-08-04	14:00	1			
2011-08-04	15:00	3			
2011-08-04	16:00	4			
2011-08-04	17:00	1			
2011-08-04	18:00	8			
2011-08-04	19:00	6			
2011-08-04	20:00	0			
2011-08-04	21:00	0			
2011-08-04	22:00	0			
2011-08-04	23:00	0			
2011-08-05	0:00	0			
2011-08-05	1:00	0			
2011-08-05	2:00	0			
2011-08-05	3:00	0			
2011-08-05	4:00	0			
2011-08-05	5:00	0			

Chart - Count by Day and Hour

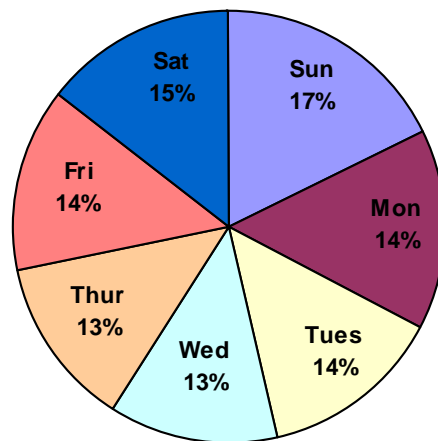
Record: 946 of 954

Examples of the Data



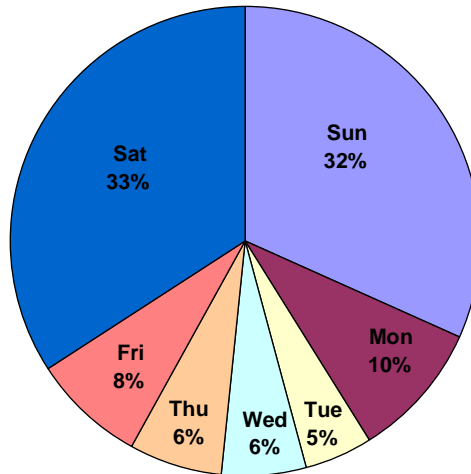
Day of the Week

**ECT - Erin
Usage by Day of the Week**



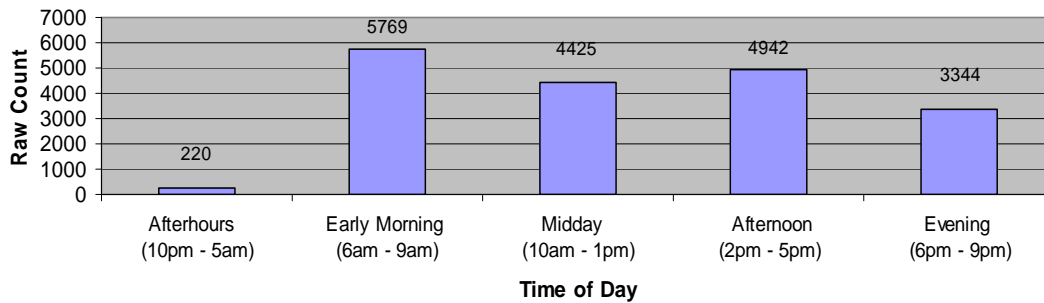
Day of the Week

TCCA - Jack Smythe Usage by Day of Week

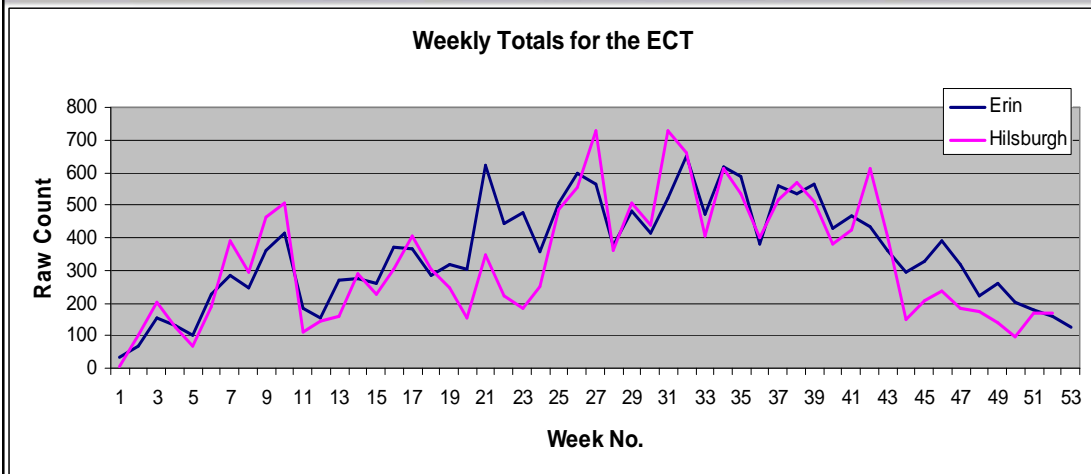


Time of Day

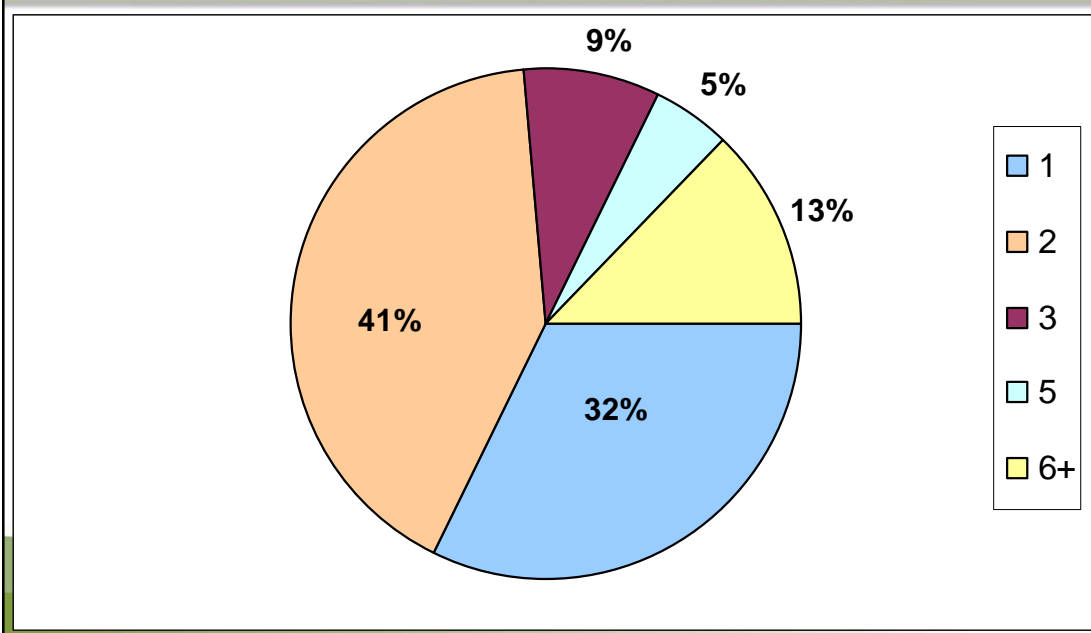
ECT - Erin
Visitation by Time of Day



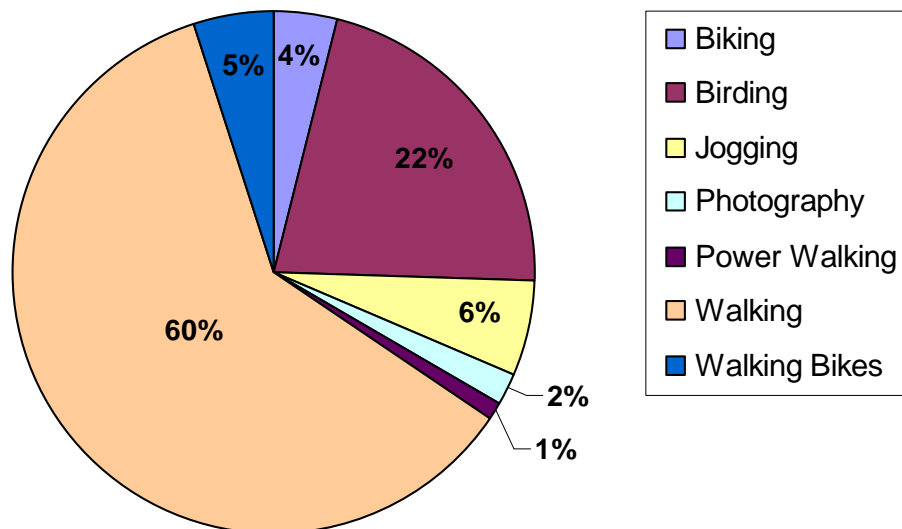
Site Comparisons



RMCA – Bexhill Rd. Group Size



RMCA – Bexhill Rd. Visitor Activities



Calibration

- 23,400 hikers per year
- 3,400 people walk or ride their bikes
- 68% of people come in groups of 2 or more (32% of people visit alone)
- Percentage of groups with dogs (19%)
- Percentage of dogs off leash (18%)



Conclusion

Trail counter data can be a valuable tool

- Can be analyzed in a multitude of ways
- Provides answers to specific research questions
- Justifies projects and dollars spent
- Plan the best time and locations to take on specific projects (visitor surveys, enforcement)



Questions?

