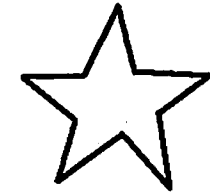
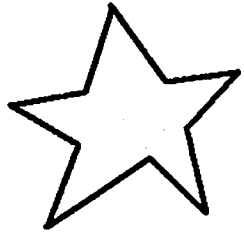




Designing for the Future

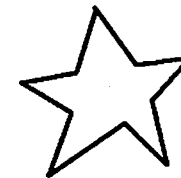


If Trail Use Is Counted, We Count for Something

Friday June 27, 2003

Providence, RI

Steve Church





FY02-PS2 RI DOT 2002 Bicycle Transportation User Survey

Project Team

Funded by URI Transportation Center

Steven Church, RIDOT

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June 27, 2003



Why Conduct Trail User Survey



- **Balanced Transportation System** - bicycling and walking as viable transportation modes
- **Policy** – ISTEA, TEA-21, SAFETEA – *need for data*
- **Trail Management** – user conflicts, trail improvements, etc.
- **User Attitudes** – public support and awareness, motives for trail use (commuting, recreation, health, etc.)
- **Economic Development** – bicycle tourism, impact on local businesses (bike shops, food suppliers, etc.)



Agenda



- **Project Justification** – balanced multi-modal transportation system
- **Project Goals**
- **Project Timeline**
- **Survey and Sampling Plan Details**
- **Summary of Responses**
- **Media**





Project Justification

- 2000 Bureau of Transportation Statistics (BTS) document
 - *Bicycle and Pedestrian Data, Sources, Needs and Gaps*
 - http://www.bts.gov/publications/bicycle_and_pedestrian_data/entire.pdf
- RI DOT's commitment to increasing bike path usage
 - Several new bike paths constructed throughout the state
 - South County, Washington Secondary, and Blackstone Valley
- Last survey conducted in 1996
 - East Bay Bike Path only in this survey
- Transportation planners need current data
 - Needs of users
 - Obstacles to path usage



Project Goals

- Develop and administer a comprehensive user survey
 - User demographics and path use patterns
 - Economic and health benefits of bike paths
 - Path quality analysis
- Determine barriers to bicycle commuting
 - Alternative transportation issues
- Compare results with 1996 results for East Bay Bike Path
- Establish baseline of user data for the three new bike paths
- Note: the population of interest consists of bike path users



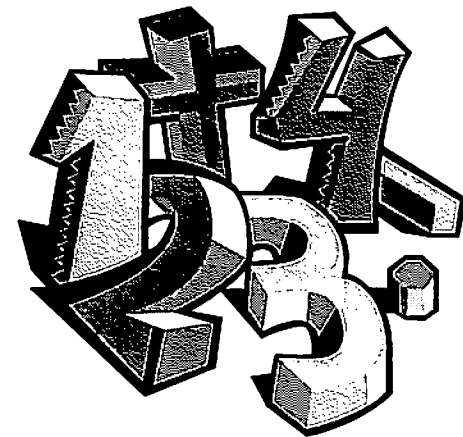
Project Timeline

- Two surveys developed
 - *On-path*: short, basic demographic questions
 - *Off-path*: longer, more detailed feedback
 - Electronic or paper surveys available
- Sampling plan designed
 - All four bike paths included
 - Weekdays, weekends, different times of day, different locations
- Survey administered from August-November
 - Electronic surveys emailed August-November
 - Paper surveys mailed October-November



Sampling Plan

- Days were broken into three four-hour blocks
 - 7 a.m.-11 a.m.; 11 a.m.-3 p.m.; 3 p.m.-7 p.m.
- For each path, specific sampling locations were identified
- Week days, times, and locations were randomly selected
 - August/September: attempted to survey paths two weeks
 - October/November: one week each month
 - Five sampling periods per week
 - Three during the week, two on the weekend

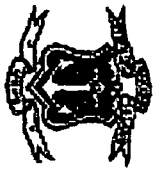




Sampling

- 1,309 surveys were given on the paths.
- One person per group answered the survey.
- 2,510 people total were encountered through the surveying
- Average group size was 2
 - 15 groups of more than 10 people
 - Largest group consisted of 42 people

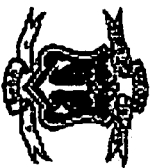




On Path Survey

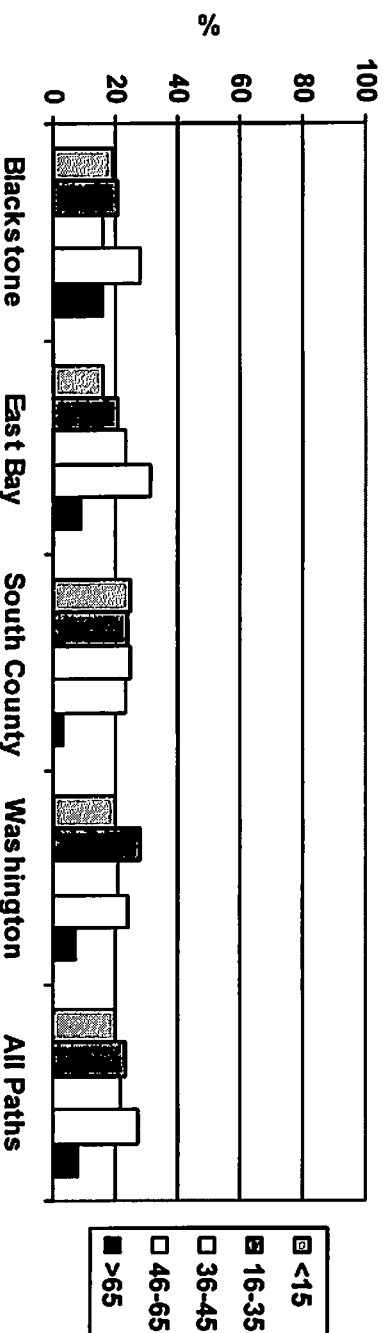


- On Path survey consisted of five multiple choice questions
 - Which path are you using today?
 - How many people from each age group are on the path in your group today?
 - How did you get to the path today?
 - How are you using the path today?
 - Why did you choose to use the path today?

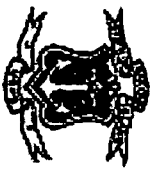


Summary of Responses

Age Distribution (On Path)

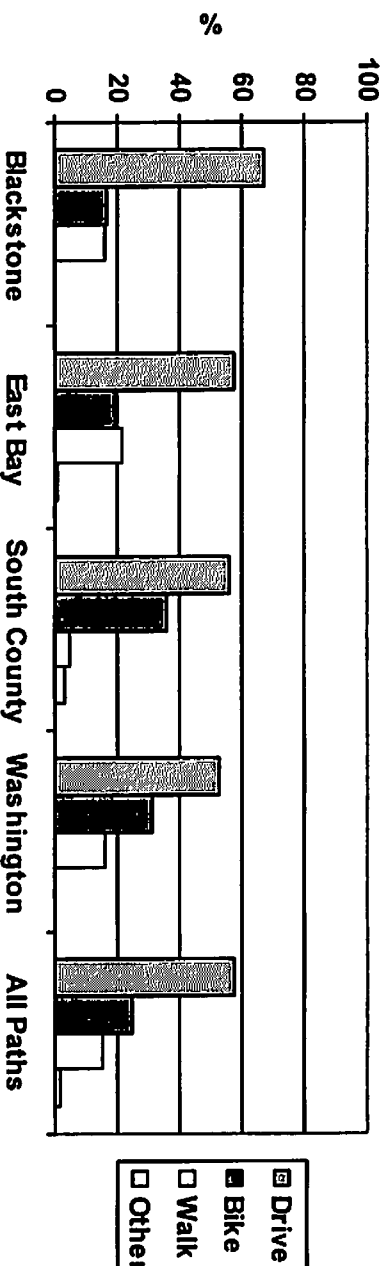


- In general, there was a marked drop off for the over 65 group.
- The 46-65 category was the largest group overall.

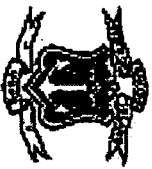


Summary of Responses

Mode of Travel to Path (On Path)

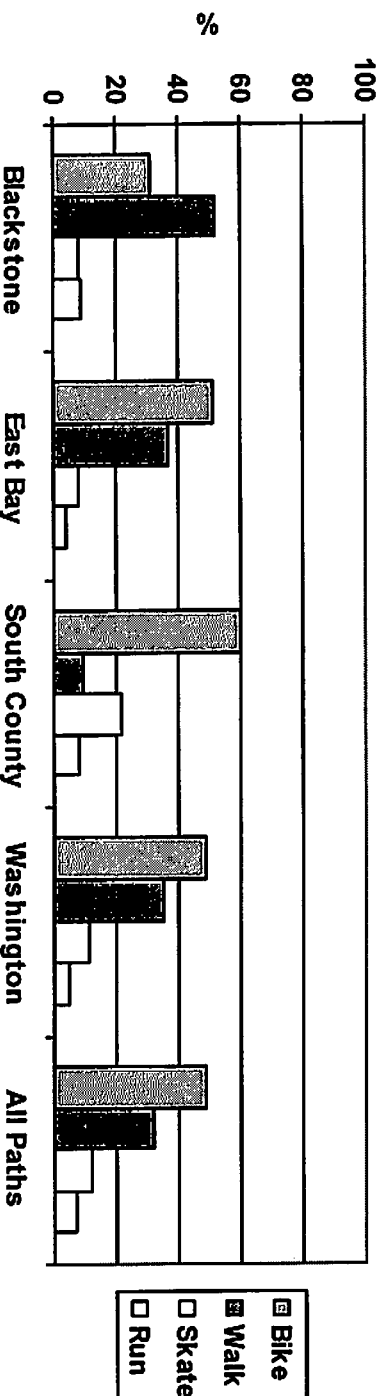


- Driving was the most popular way to get to the bike path for every path.

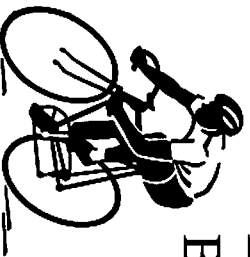


Summary of Responses

Activity on Path (On Path)



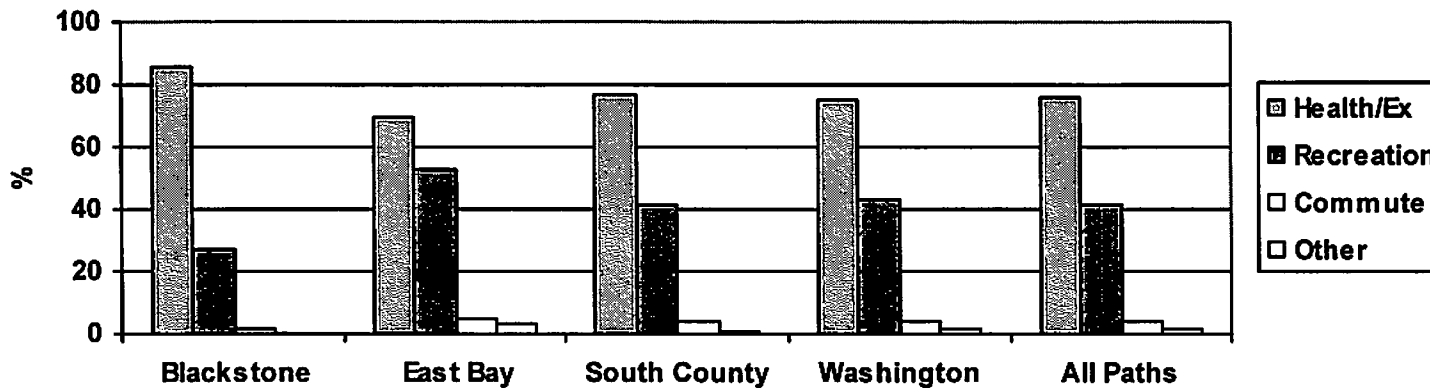
- Bicycling was the most popular activity on all paths, except the Blackstone Valley Path where walking was the top activity.





Summary of Responses

Reason for Path Usage (On Path)



- Health/ exercise was the most popular reason given for use of each and every bike path.





Off Path Survey

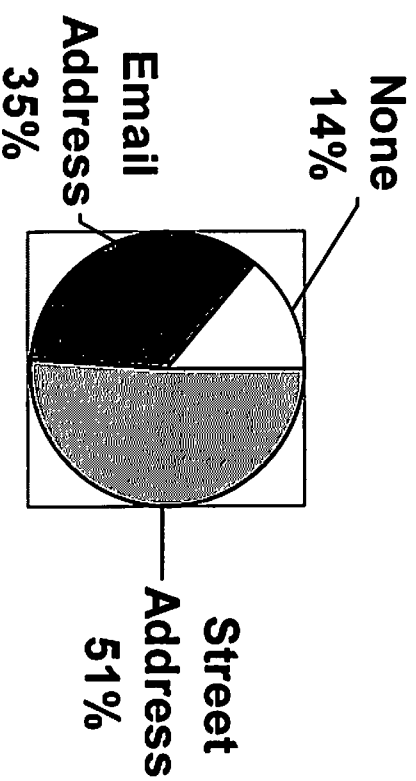
- The Off Path survey consisted of five sections
 - Path usage
 - Commuting
 - Infrastructure/Operations/Maintenance
 - Economic impact
 - Demographics
- Total of 71 questions
 - Primarily multiple choice
- Space provided for additional comments
- Copy of survey on Internet
 - <http://homepage.cs.uri.edu/research/bikepath/survey.htm>





Summary of Responses

Method of Contact for Follow Up

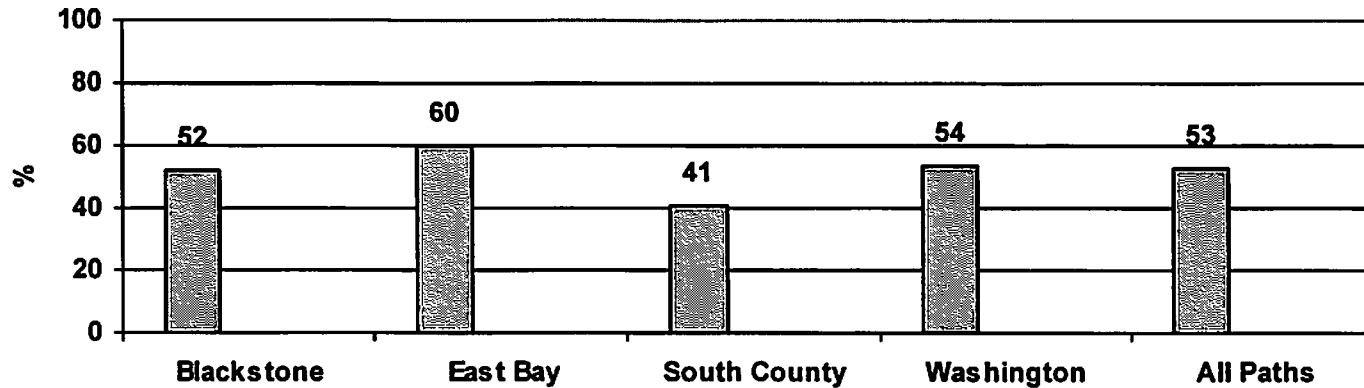


- Slightly more than half of the respondents opted to have a more in-depth survey mailed to their street addresses.



Summary of Responses

Response Rate by Path (Off Path)



- East Bay Bike Path had the highest response rate.
- South County Bike Path had the lowest response rate.
- The overall response rate was 53%--688/1,309.



Summary of Responses

Commuting Responses



- Of the 688 respondents, 583 gave answers on commuting.
- 99 of the 583 (17.31%) commuted by walking or bicycling in the last year.
 - 24 (24.24%) almost always
 - 19 (19.19%) regularly
 - 18 (18.18%) sometimes
 - 38 (38.38%) rarely
- Of the commuters, 51 (51.52%) have used the paths to do part/all of the commute and 48 (48.48%) have not used the paths for commuting at all.





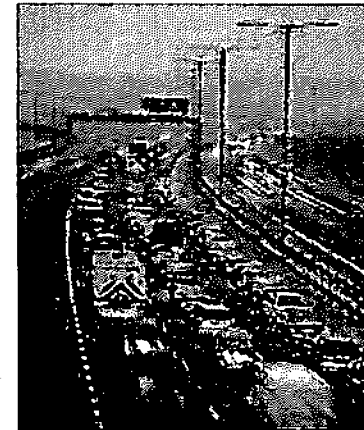
Summary of Responses

Commuting Responses



- *Reasons for commuting* (respondents answered all that applied):

– Health/ Exercise :	81/99	=	81.82%
– Do not own a car:	35/99	=	35.35%
– Saves Time:	29/99	=	29.29%
– Avoids Traffic:	26/ 99	=	26.26%
– Saves Money:	17/99	=	17.17%
– Environmental :	5/99	=	5.05%



- *Would you consider using the Rack & Ride service available on RIPTA buses as part of your commute?*

– Definitely no:	189/567	=	33.33%
– Yes, definitely:	58/567	=	10.23%
– Maybe:	320/567	=	56.44%



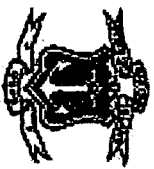


Summary of Responses

Commuting Responses

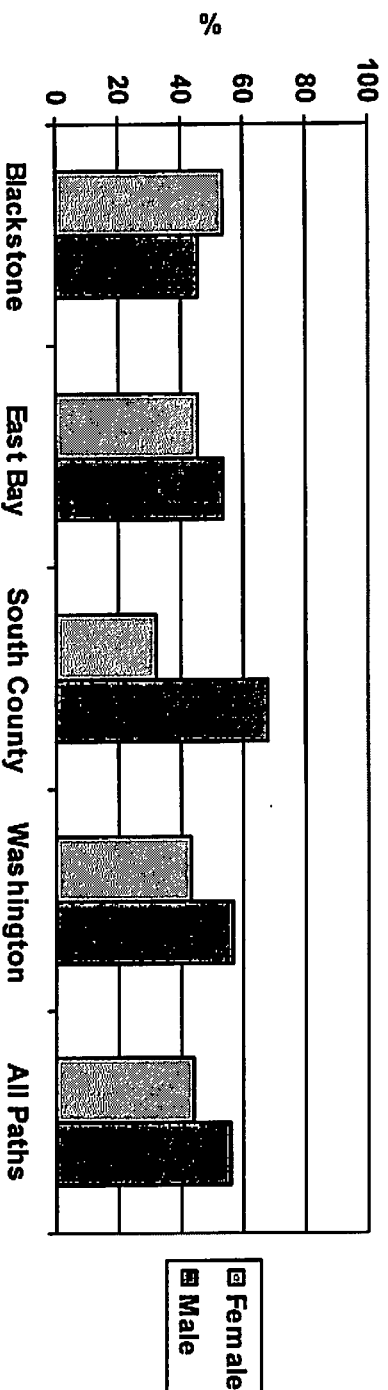


- *What prevents you from commuting by bicycle or foot?*
- 565 respondents in this section (respondents answered all that applied)
 - Distance: 231/565 = 40.88%
 - Not Enough Time: 126/565 = 22.30%
 - Narrow Shoulders/
High Volume Traffic: 112/565 = 19.82%
 - No facilities at Work: 95/565 = 16.81%
 - Bad Weather: 79/ 565 = 13.98%
 - Crime/Dangerous Neigh.: 39/565 = 6.90%
 - Health Problems: 11/565 = 1.95%

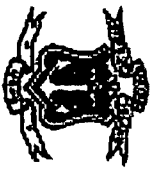


Summary of Responses

Path Response by Gender (Off Path)

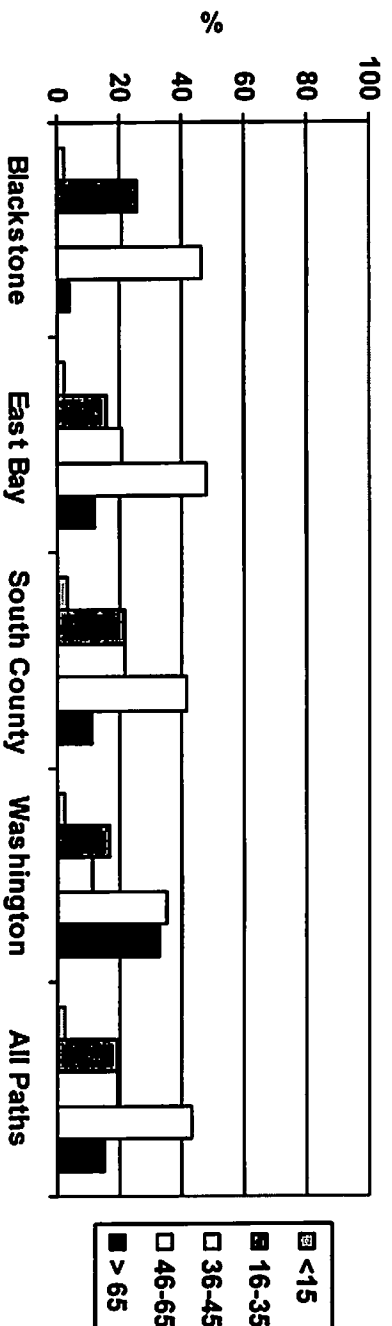


- Overall, more males than females responded to the off path survey.



Summary of Responses

Responses by Age Group (Off Path)



- The 46-65 group was the largest for each and every path.

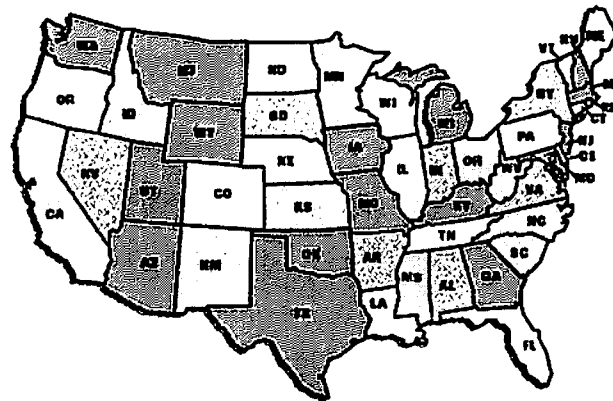


Summary of Responses

Origin of Respondents (Off Path)



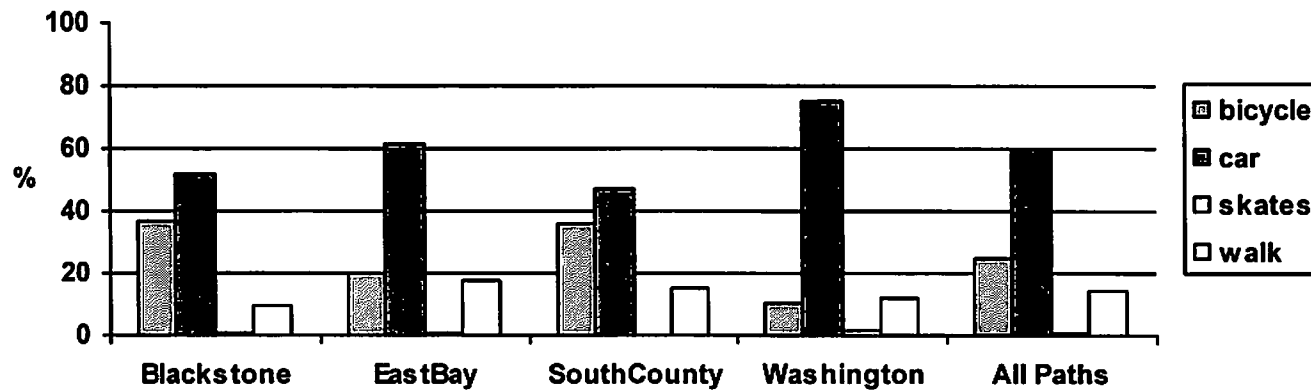
- 87% of the respondents were from Rhode Island.
- 9% were from Massachusetts.
- Responses were also gathered from residents of Connecticut, Indiana, Maryland, New Jersey, New York, and Vermont.
- Tourists and visitors, in addition to Rhode Island residents use the bike paths.



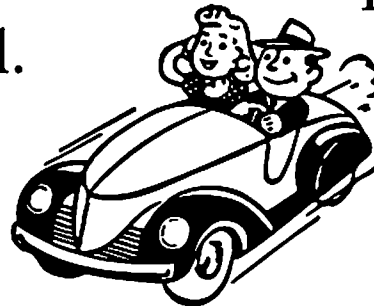


Summary of Responses

Mode of Travel to Path (Off Path)



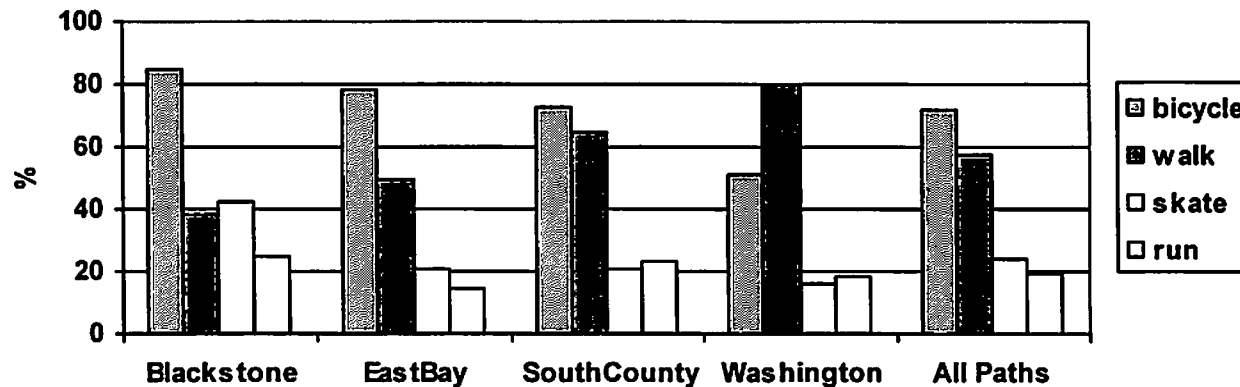
- For every path, users drove to the path more often than any other mode of travel.





Summary of Responses

Activities on the Paths (Off Path)



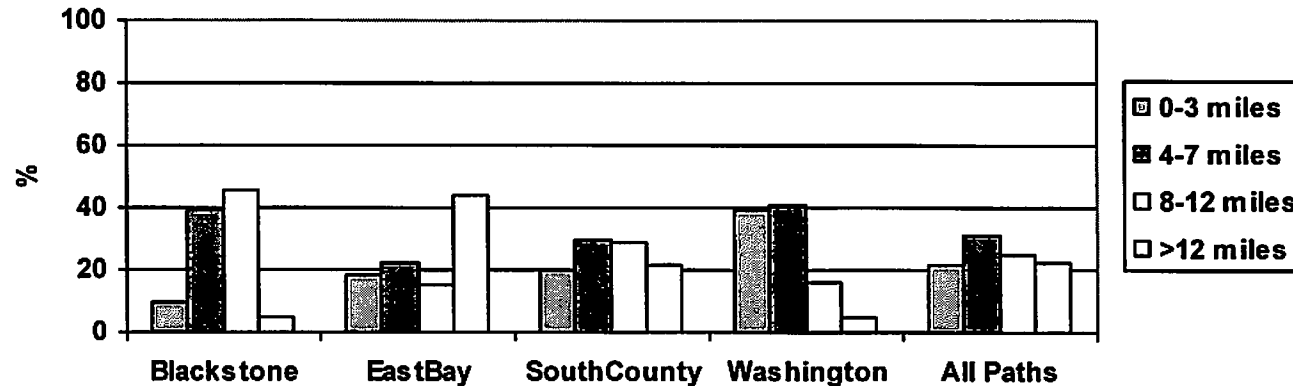
- Respondents indicated all activities that they participated in.
- Overall, bicycling was the most popular activity.



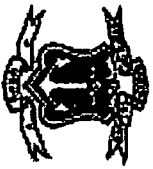


Summary of Responses

Distance Traveled on Path (Off Path)

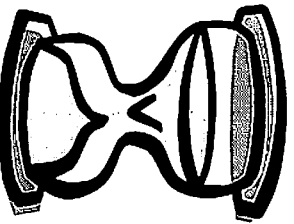
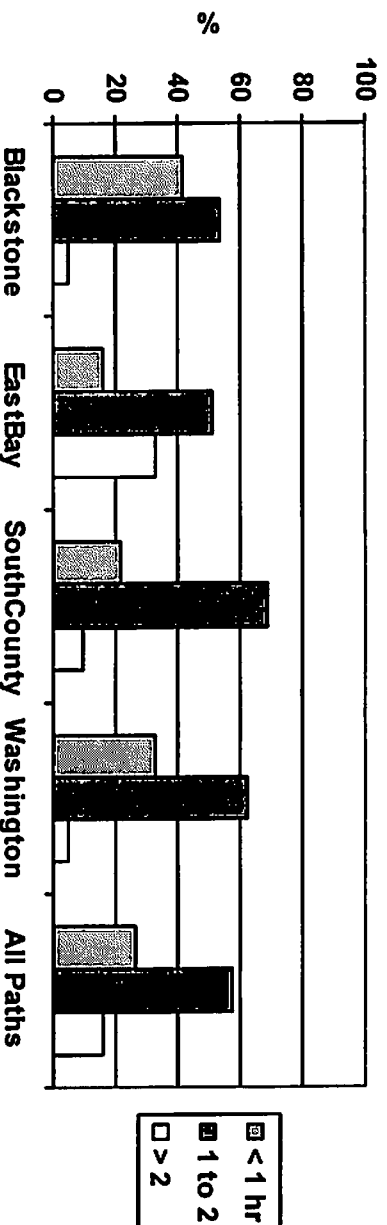


- Responses varied depending on path and corresponding length.
- Overall, 4-7 miles of travel on the path was the most popular.



Summary of Responses

Average Time Spent on Path (Off Path)



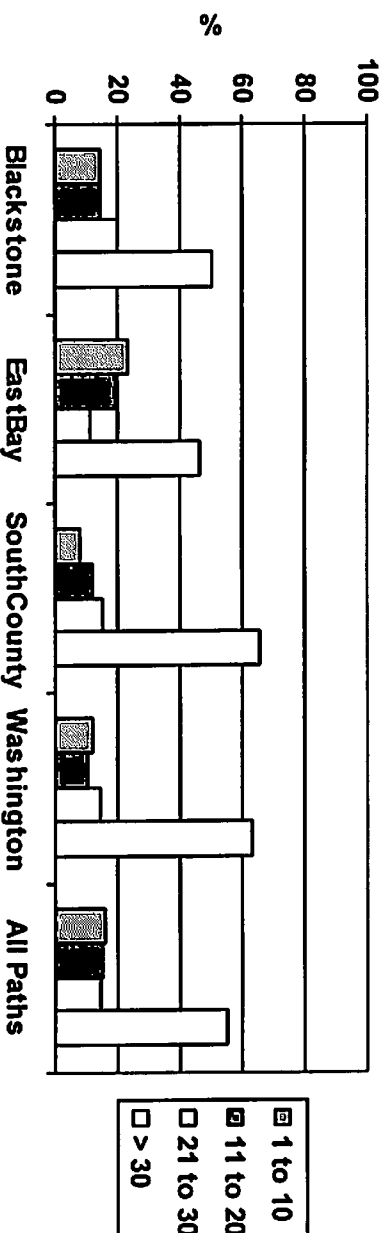
- On average, people spend 1-2 hours on the bike path.



Summary of Responses



Number of Visits to Path Per Year (Off Path)

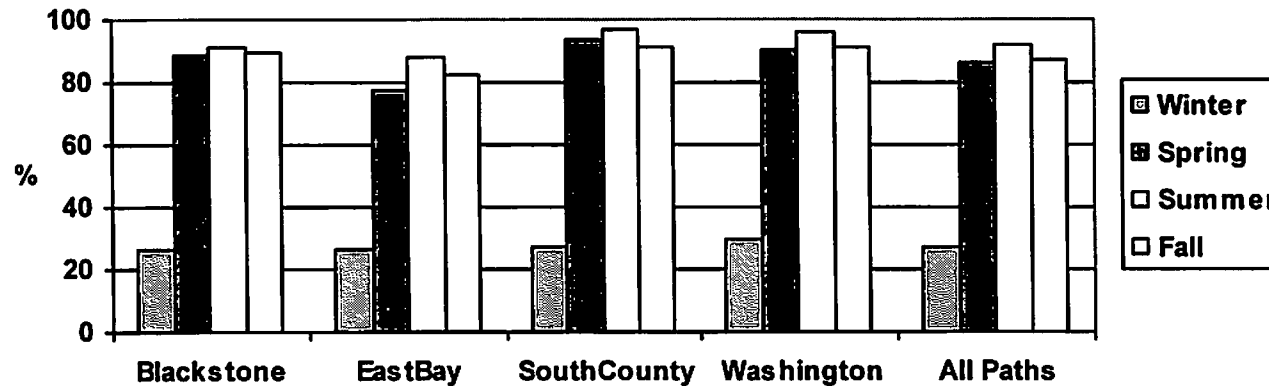


- Most users that responded used the bike path more than 30 times per year.



Summary of Responses

Usage by Season (Off Path)



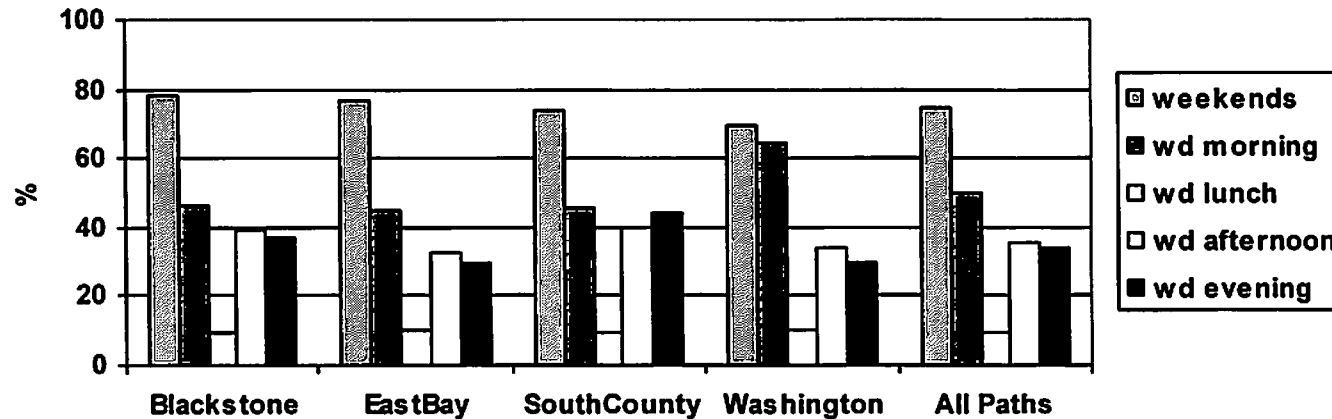
- During winter, path usage drops off from 90% experienced during the “warm” months down to approximately 25% during the winter months.





Summary of Responses

Path Usage by Time of Day (Off Path)



- Respondents selected all times that applied, rather than just one.
- Weekends were the most popular time of use.



Summary of Responses



(Off Path)

- 94% of users responded that “health/exercise” was their reason for using the path
- 99.42% of the users agreed that the bike paths are a means to promote healthy lifestyle choices
- Only 7% of the users reported using a helmet when their activity warranted it



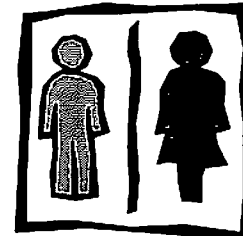


Summary of Responses



Infrastructure/Operations/Maintenance (Off Path)

- An ordinal scale of “1-Strongly Disagree” up to “5-Strongly Agree” was used to measure the perceived severity of potential problems with the infrastructure, operation, and maintenance of the paths.
- More than half of respondents answered between 3 and 5 (moderate agreement to strong agreement) for two problems on all four paths.
 - **Availability of restrooms – 65%**
 - **Availability of drinking water – 62%**



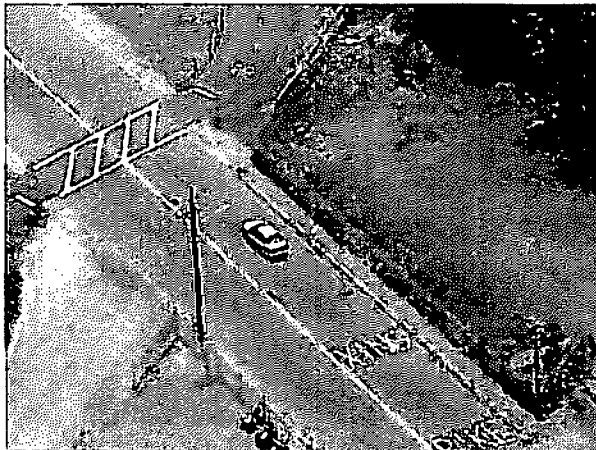


Summary of Responses



Infrastructure/Operations/Maintenance (Off Path)

- Paths had different problems in varying orders of severity.
- The following slides show a breakdown, by path, of the top problems.
 - Percentage provided is the percentage of responses in the moderate to strong agreement categories (i.e., 3-5 on the ordinal scale).



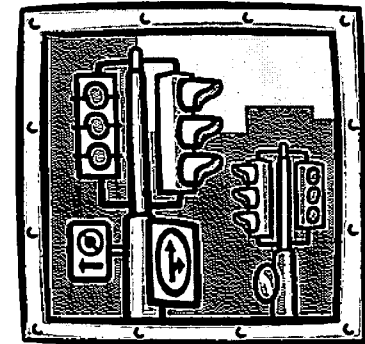


Summary of Responses



Infrastructure/Operations/Maintenance (Off Path)

- *Blackstone Valley*
 - Intersections with motor vehicles – 40%
 - Users not following walk on left protocol – 34%
 - Availability of parking at access points – 33%
- *East Bay*
 - Intersections with motor vehicles – 60%
 - Users not following walk on left protocol – 53%
 - Trail width – 43%
 - Availability of places to rest (benches, etc.) – 40%
 - Reckless behavior of users – 41%





Summary of Responses



Infrastructure/Operations/Maintenance (Off Path)

- *South County*

- Intersections with motor vehicles – 63%
- Users not following walk on left protocol – 60%
- Trail vandalism – 55%
- Availability of places to rest (benches, etc.) – 53%
- Availability of information (maps, etc.) – 52%
- Litter and glass – 49%



- *Washington Secondary*

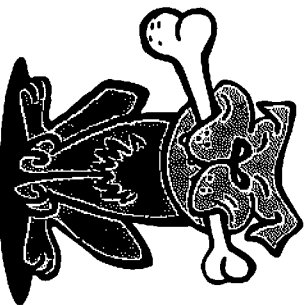
- Users not following walk on left protocol – 58%
- Availability of information (maps, etc.) – 47%
- Availability of places to rest (benches, etc.) – 42%



Summary of Responses

Infrastructure/Operations/Maintenance (Off Path)

- *Walk on left protocol*
 - Confusion about policy
 - Walkers don't realize that bikers have the right of way.
- *Dogs*
 - Some respondents complained dogs were not being picked up after and dogs were also not on leashes less than 6 feet in length.



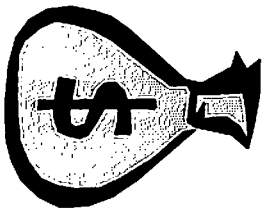
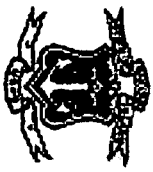


Summary of Responses

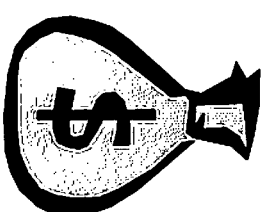


Infrastructure/Operations/Maintenance (Off Path)

- When asked if bike path construction constituted a good use of tax dollars **99.12%** of those surveyed responded “yes”.
 - However, this is from a strata of the population that uses the bike paths—may not be representative of the “average” Rhode Islander.



Economic Impact



Path	% Visitors Spending Money
Blackstone Valley	35%
East Bay	83%
South County	69%
Washington Secondary	45%

- The most commonly purchased item was food/drink.
- When spending money, most respondents spent \$1-5.



Economic Impact

- *Influence on Purchases*
 - Overall, 59% of the path users indicated that the existence of bike paths influenced the purchase of recreational equipment for themselves and/or their families.
- *Importance of Tourism*
 - Out of 68 tourists, 47/68 or 69% stated that the existence of the paths influenced their decision to visit the state.



–Bicycle Tourism

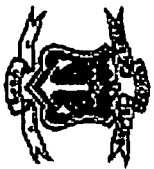
- 20 – 30 thousand copies of the RIDOT Bike Map were given to EDC Tourism Division.



Media

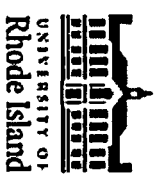


- Providence Journal article by John Hill
 - “DOT questionnaire seeks to profile bike path users” 9/19/02
 - RIDOT and URI responded on the purpose and benefits of conducting a bike path survey
- Blackstone Valley volunteers played pivotal role
 - John H. Chafee Blackstone River Valley National Heritage Corridor
 - Special thanks to Suzanne Buchanan and Mark Jewell and the Volunteers in the Parks program



Media

Volunteers in the Parks





Why Conduct Trail User Survey



- **Balanced Transportation System** - bicycling and walking as viable transportation modes
- **Policy** – ISTEA, TEA 2, SAFETEA – *need for data*
- **Trail Management** – user conflicts, trail improvements, etc.
- **User Attitudes** – public support and awareness, motives for trail use (commuting, recreation, health, etc.)
- **Economic Development** – bicycle tourism, impact on local businesses (bike shops, food suppliers, etc.)



Conclusion

- The project is a *Work in Progress*
- Final report is expected on August 1, 2003
- Please leave your business card if you are interested in receiving a copy of the report
- Report will be made available online
 - RIDOT *Bike RI* (<http://www.dot.state.ri.us/WebTran/bikeri.html>)
 - New comment form on website