



USER SURVEYS

Bike Plan
Hawaii

Results of the Telephone Survey

To broaden the population base from which bicycle user data was obtained, a telephone survey was conducted in February 2002. The telephone survey reached a cross-section of 402 residents on the islands of Oahu, Kauai, Maui and the Big Island. On Oahu, the survey was limited to households in the Leeward, Central, Windward, and East Honolulu regions—and excluded Urban Honolulu. The survey’s geographic coverage corresponded to the scope for updating *Bike Plan Hawaii*.

The final results can be generalized *only* to the surveyed areas as a whole. For the total sample of 402, the maximum sampling error is +/- 4.9% at a 95% confidence level.

Sampling was proportionate to each area’s representation in the identified population, as follows:

	% Target Population	Final Number of Interviews
Kauai	6%	25
Oahu (selected areas)	59%	237
Maui	15%	59
Hawaii (Big Island)	20%	81

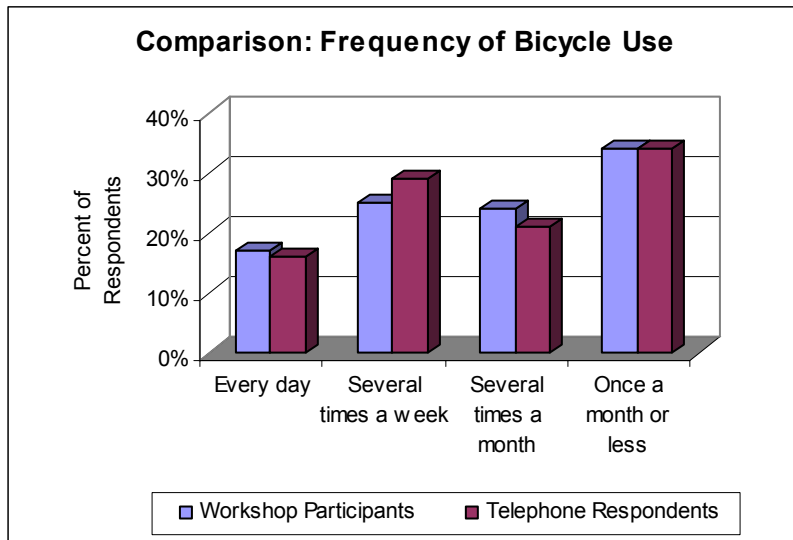
Field dates for the telephone survey were February 10 to 13, 2002. Interviews were based on a questionnaire with interviews averaging 10 minutes. (The questionnaire is reproduced in Appendix A.) The sampling frame was generated at random by the survey research firm using a random digit dialing program. This random-digit dialing method includes unlisted, as well as listed telephone numbers, helping to promote an unbiased sample. All interviewing was conducted from the Ward Research Calling Center. Interviews were conducted between the hours of 5:00 p.m. and 9:00 p.m. on week nights and 9:00 a.m. to 9:00 p.m. on weekends.

The questionnaire used in the telephone survey contained several questions that were identical to the survey administered to workshop participants. This enables a comparison between workshop participants (presumably those with a higher intrinsic interest in bicycling) to a broader sample of the state’s population. Thus several charts below show responses from the two surveys side by side.

Frequency of Bicycle Use

There is a high degree of similarity in the frequency of bicycle use between workshop participants and telephone survey respondents (Figure 1). In both groups, the same percentage of people (66%) reported that they ride their bicycles regularly—at least several times a month. Telephone respondents were slightly less likely to ride every day; however, they were slightly more likely to ride several times a week.

Figure 1

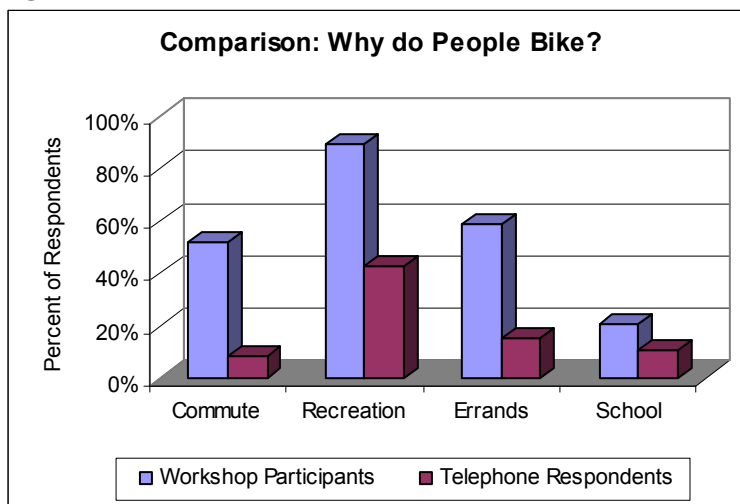


Source: Kimura International, Inc., 2002

Purpose of Bicycle Use

The survey asked respondents to indicate the importance of bicycling for four different purposes: commuting to work, recreation, running errands, and commuting to school. Telephone respondents were most likely to say that bicycling is *important* or *somewhat important* for recreational purposes, and least likely to say that bicycling is *important* or *somewhat important* for commuting to work, as seen in Figure 2. Across all four categories, bicycling is less important for telephone respondents than for workshop participants. For example, in the recreation category, approximately 43% of telephone respondents said that bicycling is *very important* or *somewhat important*, compared to 89% of workshop participants.

Figure 2

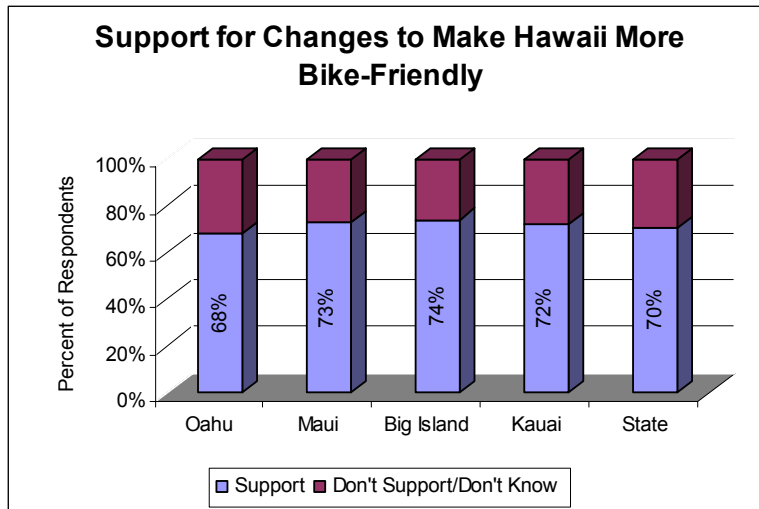


Source: Kimura International, Inc., 2002

Support for Improvements to the Bicycling Environment

Telephone respondents were asked whether they would support changes to make Hawaii more “bicycle friendly.” Seventy percent of all respondents replied affirmatively. In Figure 3, only the bar farthest to the right (representing the total sample) is statistically significant—in other words, there is a 95% probability that the result is non-random and the finding can be generalized to the study area as a whole. The same claim cannot be made for the island-specific results, nevertheless it is interesting to note that the island-by-island breakdown shows a consistently high degree of support for bicycle improvements among the survey respondents. A follow-up question asked if the respondent would support the *use of government funds* to improve the bicycling environment. Overall, 73% of respondents supported public funding.

Figure 3



Source: Kimura International, Inc., 2002

When asked what type of changes are desired, and presented with a list of 10 possible ideas, the top 5 ideas that generated the strong support among telephone respondents were:

- Maintenance
- Bike education
- Bike paths
- Bike parking
- Enforcement

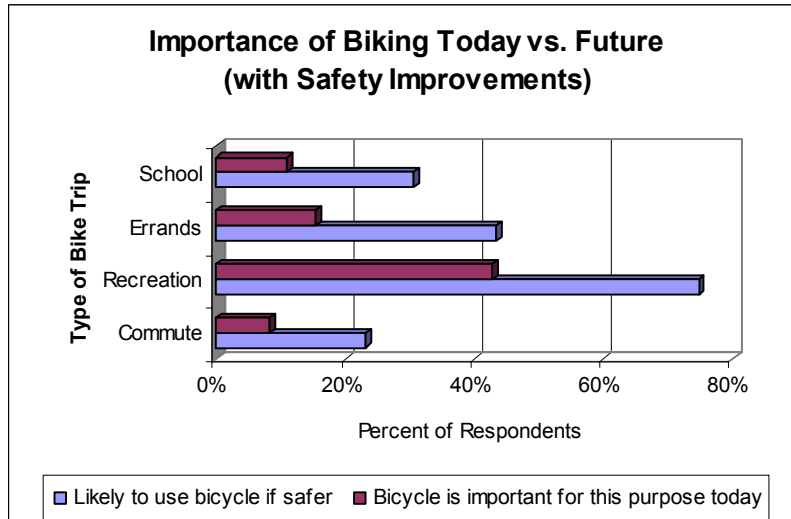
The island-specific tallies are not statistically significant and, therefore, the results only represent the views of the respondents. Nevertheless, they show interesting patterns with maintenance, bike paths, and bike parking mentioned regularly. On the other hand, there were differences in the priorities expressed. Kauai respondents tended to favor stronger enforcement of traffic laws and improved signage, while Maui and Big Island respondents tended to rank bicycle education more highly.

Kauai	Oahu	Maui	Hawaii
• Maintenance	• Maintenance	• Maintenance	• Maintenance
• Enforcement	• Bike Paths	• Bike Education	• Bike Education
• Bike Paths/Signage	• Bike Parking	• Bike Paths/Parking	• Bike Paths/Parking

Potential Effects of Bicycling Improvements

Would improvements to the bicycling environment make any difference? Respondents were asked: If bicycling were a safer mode of transportation, how likely would you be to use a bicycle more frequently? In Figure 4, the responses to this question (an indicator of possible, future behavior) were juxtaposed against the responses shown previously in Figure 2 (an indicator of current behavior). With improved conditions for bicyclists, the likelihood of future bicycle use in each of the four categories is significantly higher than current use. Twice as many respondents expressed an inclination toward bicycling for commuting and running errands in the future, than they do today. In the area of recreational trips, 75% stated that they are *very likely* or *somewhat likely* to use the bicycle in the future compared to 43% today.

Figure 4



Source: Kimura International, Inc., 2002

Demographic Analysis of Telephone Survey Respondents

A major component of the public outreach effort to comply with Title VI/Environmental Justice was a random telephone survey in the project area. A demographic analysis of respondents in the sample group indicates that lower income households and ethnic minority groups were well represented.

Methodology

The survey plan called for consultant Ward Research to complete telephone interviews with 402 respondents, contacted through a random digit dialing protocol. The sample size was determined to be sufficient to obtain a maximum sampling error of $\leq 5\%$ at a 95% confidence level. The random digit dialing program includes unlisted as well as listed telephone numbers, thereby helping to promote an unbiased sample.

To focus available resources on the geographic areas covered by the current planning study, namely suburban and rural Oahu, Kauai, Maui, and the Big Island, the sample pool included all households with telephone prefixes corresponding to those general areas. Telephone prefixes for urban Honolulu, as well as Molokai and Lanai were excluded from the sample pool. Therefore, the results can be generalized only to the areas surveyed, and not to the State of Hawaii as a whole.

Sampling was proportionate to the population size of each of the selected areas. Table 1 shows the number of completed interview by area.

Table 1: Geographic Breakdown of Interviews

Region	Final Number of Interviews	Percent of Target Population
Kauai	25	6%
Oahu	237	59%
Central Oahu	94	
East Oahu	85	
Leeward Oahu	31	
Windward Oahu	27	
Maui	59	15%
Big Island	81	20%
Total	402	100%

Ethnic Breakdown

Figure 1 shows the distribution of respondents by ethnicity.

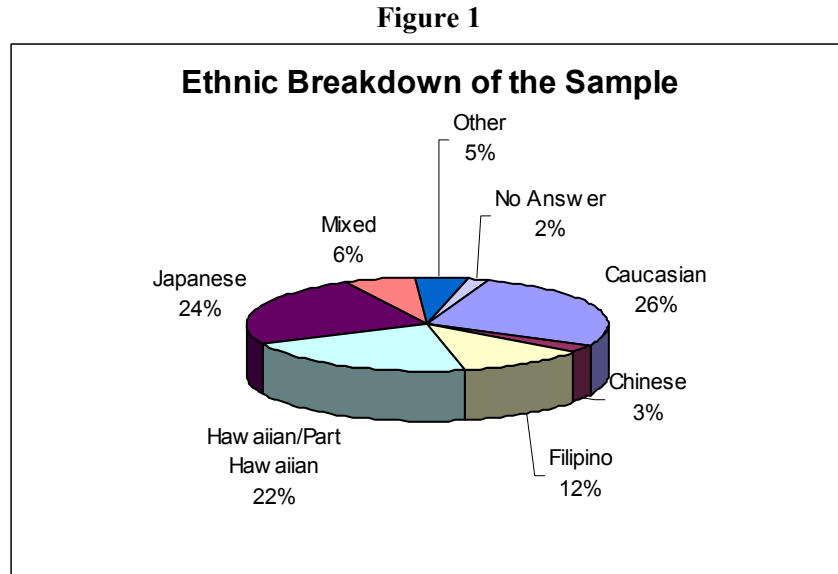


Table 2 compares the ethnicities of survey respondents compared to the statewide population as reported in the 2000 Census.

Table 2: Ethnic Breakdown of Sample vs. Census Population

Ethnicity	Survey Respondents	Statewide Population (2000 Census)
Caucasian	26%	24%
Chinese	3%	5%
Filipino	12%	14%
Hawaiian (Part Hawaiian)	22% Hawaiian/Part Hawaiian	7% Native Hawaiian only
Japanese	24%	17%
Mixed (or More than One Race)	6%	21% Including Persons who may be Part Hawaiian
Other	5%	12%
No Answer	2%	N.A.
Total	100%	100%

One of the most significant disparities between the two is the disproportionately large percentage of Japanese in the survey (24%) compared to the general population (17%). Another disparity is the disproportionately small percentage of survey respondents who identified themselves as “Other” compared to the size of this group in the general population.

Because the Hawaiian/Part Hawaiian category used in the survey is different from the Census’s method of accounting for single race and multi-racial persons, it is not possible to determine the extent to which the sample may not be proportional to the general population. On the other hand, with as much as 22% of the sample composed of Hawaiian and Part Hawaiian persons, it appears that the survey has successfully captured the views of individuals from groups that traditionally have not participated in mainstream planning processes.

Income Breakdown

Respondents were asked to indicate which income range they fell into based on total household income in 2001 before taxes.

Table 3: Household Income of Survey Respondents in 2001

Income Range	All Respondents	Kauai	Oahu	Maui	Big Island
Under \$25,000	<i>13%</i>	<i>20%</i>	<i>10%</i>	<i>15%</i>	<i>19%</i>
\$25,000- but under \$35,000	<i>15%</i>	<i>36%</i>	<i>11%</i>	<i>20%</i>	<i>20%</i>
\$35,000- but under \$50,000	<i>16%</i>	4%	<i>14%</i>	<i>25%</i>	21%
\$50,000- but under \$75,000	16%	16%	19%	15%	11%
\$75,000 and above	24%	12%	32%	14%	10%
No Answer	15%	12%	15%	10%	20%

Percentages shown in bold, italicized font were summed to determine proportion of the sample with household incomes below the respective area’s median.

Table 4 shows median household income as reported by the 2000 Census (based on income in 1999). The median is a statistic demarcating a mid-point with 50% of the units higher than or above the point and 50% of the units lower than or below the point.

Because the Census-reported median is two years older than the survey data, we can assume that the actual median in 2001 would have been somewhat higher than the amounts shown below, due to inflation and wage adjustments.

Table 4: Median Household Income for the State of Hawaii and Counties

Geographic Area	Median Household Income (1999)
Kauai County	\$45,020
Honolulu County (Oahu)	\$51,914
Maui County	\$49,489
Hawaii County	\$39,805
State of Hawaii	\$49,820

Source: 2000 Census

Excluding respondents who did not answer, 44% of all respondents belong to households with incomes below the state’s median. Therefore, the overall sample appears to be skewed slightly toward respondents with higher than average incomes. Relative to island-specific median income levels, the samples on Kauai and Maui over-represent households with incomes below their county’s median; while Oahu and the Big Island samples over-represent households with incomes higher than their county’s median.

WARD RESEARCH, INC.

BIKE SURVEY WR2861

Record Number _____ (v01)

Interviewer Name _____ Time Ended _____

Date _____ I.D.# _____ (v02) Time Started _____

Respondent Name _____ Total Minutes _____ (v03)

Respondent Phone Number - (v04)

O'ahu Only (area of island):

Area 1	Oahu..... 01	
Area 2	Maui..... 02	
Area 3	Big Isle..... 03	
	Kauai 04	(v05)

Hello, my name is ____ from Ward Research, a professional market research firm here in Honolulu. We are conducting a short survey today to help the State of Hawaii plan for bicycle transportation in local communities. I would like to ask you a few questions if I may. This survey will take no more than 10 minutes and let me assure you that all your answers will remain completely confidential.

First, let me begin by asking you ...

Q1a. How many automobiles are there at your home address? automobiles

Q1b. Does anyone in your household ride The Bus on a regular basis?

yes 01
no 02

Q1c. And how many bicycles are there at your home address? bicycles

(INTERVIEWER: IF ONE OR MORE IN Q1C, CONTINUE. ELSE SKIP TO TO Q5.)

Q2. And in order to get a better understanding of bicycle riders, please tell me the age and gender of each person in your household who rides a bicycle.

Q2.	AGE	GENDER	
Bicycle Rider #1		M	F
Bicycle Rider #2		M	F
Bicycle Rider #3		M	F
Bicycle Rider #4		M	F
Bicycle Rider #5		M	F
Bicycle Rider #6		M	F
Bicycle Rider #7		M	F
Bicycle Rider #8		M	F
Bicycle Rider #9		M	F
Bicycle Rider #10		M	F

Q3. **(ASK FOR EACH BIKE RIDER IN Q2)** How often does the **(READ AGE & GENDER OF EACH PERSON GIVEN IN Q2)** in your household ride his/her bicycle? Would you say almost everyday, a few days a week, a few days a month, or once a month or less?

	<u>Almost Everyday</u>	<u>A few days a week</u>	<u>A few days a month</u>	<u>Once a month or less</u>	<u>Don't know</u>
Bicycle Rider #1	1	2	3	4	9
Bicycle Rider #2	1	2	3	4	9
Bicycle Rider #3	1	2	3	4	9
Bicycle Rider #4	1	2	3	4	9
Bicycle Rider #5	1	2	3	4	9
Bicycle Rider #6	1	2	3	4	9
Bicycle Rider #7	1	2	3	4	9
Bicycle Rider #8	1	2	3	4	9
Bicycle Rider #9	1	2	3	4	9
Bicycle Rider #10	1	2	3	4	9

For the next series of questions, I would like for you to answer thinking from the perspective of the “bikers in your household”.

Q4. Please tell me how important is bicycling for the following types of trips? For each type of trip I read, please tell me if it is very important, somewhat important, not very important, or not important at all to your household as a whole. First **(READ LIST. ROTATE)**...

	<u>Very important</u>	<u>Somewhat Important</u>	<u>Not Very Important</u>	<u>Not Important At All</u>	<u>Don't know</u>
Commuting (to work)	4	3	2	1	9
Recreation/exercise	4	3	2	1	9
Errands in your neighborhood	4	3	2	1	9
School	4	3	2	1	9

(ASK EVERYONE)

Q5. And in general, how strongly do you support changes in bicycle facilities and policies to enable Hawaii to become more bicycle-friendly? Would you say...**(READ LIST)**:

Very strongly	4
Somewhat strongly	3
Not very Strongly	2
Or, Not Strongly At All.....	1
Don't know (DO NOT READ)	9

Q6. I would now like to read you a list of ideas for improving bicycle transportation in the state of Hawaii. Please tell me how strongly you support each idea, very strongly, somewhat strongly, not very strongly, or not strongly at all. First... **(READ LIST. ROTATE.)**

		<u>Very Strongly</u>	<u>S/W Strongly</u>	<u>Not Very Strongly.</u>	<u>Not Strongly At All</u>	<u>Don't know</u>
1	Create separate, on-road bicycle lanes with striping on the pavement	4	3	2	1	9
2	Add paved shoulders or widen narrow roads, but don't provide separate bike lanes	4	3	2	1	9
3	Build more off-road bicycle paths that are totally separate from the street.	4	3	2	1	9
4	Clear debris and other obstructions from shoulders	4	3	2	1	9
5	Conduct safe bicycle riding classes in the public schools	4	3	2	1	9
6	Improve bicycle-oriented signage ("Share the Road" signs, bike route markers)	4	3	2	1	9
7	Enforce motor vehicle laws regarding bicycles	4	3	2	1	9
8	Provide secure places to park or store bicycles	4	3	2	1	9
9	Support orientation rides (weekend rides with experienced bike leaders)	4	3	2	1	9
10	Add bicycling items to the state driving exam (such as how to interact with bicyclists on the road)	4	3	2	1	9

Q6a: **(IF MORE THAN ONE IDEA GIVEN A "4" RATING IN Q6, ASK:)** You said that you strongly support **(READ IDEAS GIVEN A 4 RATING)** Of these, which one SINGLE idea would you say you support the most? **(INTERVIEWER: PROBE FOR ONE RESPONSE ONLY)**

Q7. If bicycling were a safer mode of transportation, how likely would you personally be to use a bicycle more frequently for **(READ LIST)**. Would you say very likely, somewhat likely, not very likely, or not likely at all?

	<u>Very Likely</u>	<u>S/W Likely</u>	<u>Not Very Likely</u>	<u>Not Likely At All</u>	<u>Don't know</u>
Recreation or exercise	4	3	2	1	9
Shopping trips or errands around your neighborhood	4	3	2	1	9
Commuting to work	4	3	2	1	9
Going to and from school by children in your household	4	3	2	1	9

Q8. And how willing would you be to support the use of government funding, namely the allocation of funds from the State Department of Transportation's budget, to address biking issues? Would you be strongly in favor, somewhat in favor, somewhat opposed, or strongly opposed to the use of government funding to address biking issues?

- Strongly in favor.....4
- Somewhat in favor3
- Somewhat opposed2
- Or, Strongly opposed.....1
- Don't know **(DO NOT READ)**9

And thinking about biking conditions in your neighborhood community...

Q9. A good bicycle plan considers the condition of the routes where people ride frequently or would like to ride more frequently. Where, specifically, would you like to see improved bicycle facilities? **(INTERVIEWER: PROBE FOR SPECIFIC CURRENT LOCATION)**

Q10. What else, if anything, would you like to say about bike transportation in your area?

These final few questions are for classification purposes only...

Q11. Are you a registered voter in the State of Hawaii?

- Yes.....1
- No2

Q12. How many years have you lived in Hawaii?

- less than 2 years.....1
- 2 - less than 5 years2
- 5 - less than 10 years3
- 10 or more years.....4
- born and raised in Hawaii5
- don't know/refused (**DO NOT READ**)9

Q13. And how many people are there, in total, in your household?

people in household

Q14. How many of these are under 18 years?

people in household

Q15. What is your ethnic identification? (**IF MIXED, ASK**) Would that include Hawaiian?

- Caucasian1
- Chinese.....2
- Filipino.....3
- Hawaiian/part-Hawaiian.....4
- Japanese5
- mixed6
- other (specify)8
- refused (**DO NOT READ**)9

(v)

Q16. What was your age on your last birthday? (99 = refused)

years

Q17. And what was your household's total income for 2001 before taxes? Please stop me when I get to the correct category.

- under \$25,000.....1
- \$25,000 - but under \$35,0002
- \$35,000 - but under \$50,0003
- \$50,000 - but under \$75,0004
- \$75,000 - but under \$100,0005
- \$100,000 or more6
- refused (**DO NOT READ**)9

That was my final question. Let me assure you once again that your responses will remain completely confidential. If you would like to be notified of the results of this survey, as well as upcoming events such as community workshops on the Bike Plan, we can email or mail updates to you if you would like. IF YES, GET EMAIL OR MAILING ADDRESS.

Email Address: _____

OR Mailing Address: _____
Street Address

_____ City

_____ Zip

Thank you very much for participating in this survey.

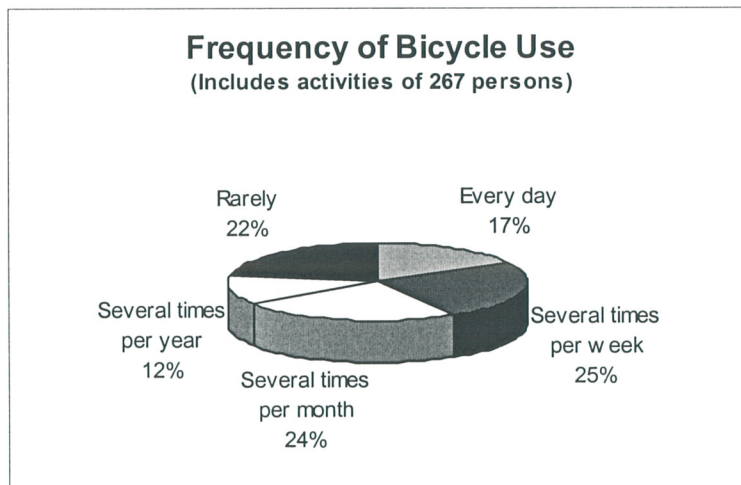
Results of the Community Workshop Survey

During the first round of community workshops, held in November 2001, participants were asked to complete a one-page questionnaire. 118 completed questionnaires were collected after nine of the workshops and two more were mailed back to consultants Kimura International, Inc. for a total of 120 usable questionnaires and a response rate of 82%*. The findings of this survey represent the views and opinions of those who filled out the questionnaire and cannot be generalized to the larger community. Nevertheless, the results help us to better understand the concerns and preferences of one segment of the bicycle-riding public.

The 120 respondents who completed questionnaires reported ownership of 368 bicycles. The pool of respondents included 6 households with zero bicycles. The remaining 114 households average 3.2 bicycles per household.

Frequency of Bicycle Use

Respondents were asked to describe how frequently members of their household ride their bicycles—including themselves and three other members. Using this querying technique, we were able to expand the survey's reach and obtain information on 267 household members. Of these, 107 persons or 40% ride their bicycles several times a week, if not every day. Another 62 persons (24%) use their bicycles several times a month. Overall, then, more than 3 out of 5 household members are out bicycling at least once a month. At the same time, 1 out of 5 rarely rides a bike.



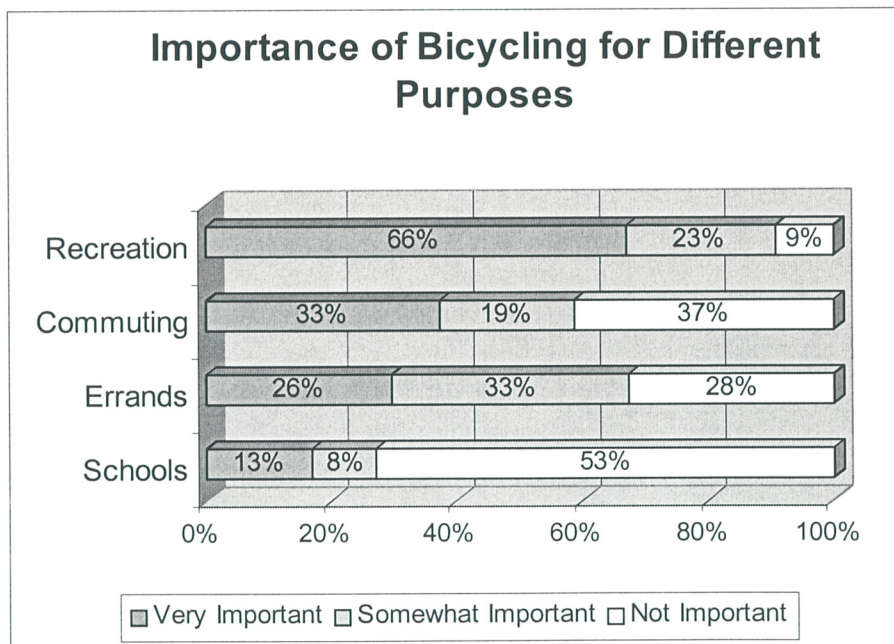
* Participants were asked to complete one questionnaire per household. To the extent that more than one household member was present at the workshop, the response rate will inevitably be less than 100%. Because the Puna workshop was cancelled, no questionnaires are available from this venue. Also excluded from the analysis are four sets of responses collected at the Molokai workshop, held in February 2002. These responses are not expected to have a significant effect on the findings or conclusions of this report.

Purpose of Bike Use

Why are people on their bikes? By far, recreation is cited as the reason why people use their bicycles. Fully 90% of respondents said that bicycling is an important recreational activity within their household. A third of all respondents reported that bicycling is *very important* for purposes of commuting to work. Another 19% of respondents said that bicycling is *somewhat important* for commuting purposes. Adding these two categories, more than half of the respondents indicated that household members use bicycles for commuting to some extent.

Although only one-quarter of the respondents reported that bicycling is *very important* for shopping and other errands, when we add respondents who said that bicycling is *somewhat important* for this purpose, almost 60% of the represented households use bicycles for errands at least occasionally.

The lowest category of bicycle use is for commuting to school. 21% of respondents indicated that bicycling is either *very important* or *somewhat important* in traveling to schools. In part, the low percentages of use in this category may reflect the fact that, for the most part, adults completed the questionnaire. Alternatively, the low percentages may reflect the low density of development in many workshop regions (including the neighbor islands and suburban Oahu). On the other hand, we would expect low-density development to have an equally dampening effect on commuting and errands, and since this is not the case, it suggests that children are not bicycling to the extent that adults are, or face different constraints than adults.



Inter-island Differences

Are there different patterns of bicycling use across the four major islands? There are slight variations, as seen in Table 1 below. Bicycling on Oahu is slightly less important across the board. Respondents on Kauai and Maui, on the other hand, expressed relatively strong bike usage—notably for running errands on Kauai and for going to school on Maui. For recreational purpose, the island breakdown shows consistently high reporting levels of bicycling’s importance.

Table 1: Percentage of Respondents who feel that Bicycling is "Very Important" or "Somewhat Important" for Various Purposes

	Hawaii	Kauai	Maui	Oahu
Schools	19%	17%	31%	18%
Errands	58%	75%	69%	48%
Commuting	51%	67%	69%	42%
Recreation	90%	92%	100%	82%
n	59	12	16	33

What do People Like about Bicycling in their Community?

Respondents were asked to write in responses to this open-ended question. We post-coded the responses, grouping similar comments, then ranked them by order of frequency as shown in Table 2. The largest number of respondents—25 or 21%—stated that bicycling is beneficial as an alternative form of transportation, with the subsidiary points that bicycles are cheaper to operate than cars, better for the environment, and sometimes a faster means of getting to desired destinations. Exercise and fitness were identified by 20 respondents (17%). Also prominent, were responses related to Hawaii’s favorable environment, including the opportunity to be outdoors, the scenic beauty found in many communities, and good weather. Several people mentioned that their neighborhoods are particularly conducive to bicycling because there is little conflict with cars and they enjoy plenty of road space.

Table 2: What Respondents Like about Bicycling (n=120)

	Number	Percent
Alternative transportation	25	21%
Exercise	20	17%
Being outdoors	14	12%
Scenic areas	14	12%
Low conflict with cars	11	9%
Plenty of road space	9	8%
Good weather	8	7%

What Problems do Bicyclists Face in their Community?

Another open-ended question asked respondents to identify problems or barriers for bicyclists. In general, this question elicited a greater number of comments than the previous question, and a higher rate of repeats among the comments. Topping the list of problems (Table 3) is the lack of road space, including narrow roads and inadequate shoulders, mentioned by 45 persons (38%). Heavy traffic volumes and high speeds, leading to perceived danger and even “fear of death,” were expressed by 23 persons (19%). A related issue was lack of off-road facilities or bike paths, that respondents felt would provide a safer bicycling environment. 15 persons reported poor road maintenance as a hazard for bicyclists, and 12 persons each mentioned hostile or aggressive drivers and obstructions in the bikeway, such as signs and parked cars.

Table 3: What Problems Respondents Face when Bicycling (n=120)

	Number	Percent
Lack of road space	45	38%
High traffic volume/speed	23	19%
No off-road facilities ("paths")	19	16%
Poor road maintenance	15	13%
Hostile drivers	12	10%
Obstructions	12	10%

Other Concerns

Finally, respondents were asked to write down concerns that might be related to any of the 5 “E”s—engineering, education, enforcement, economics, and encouragement. The comments in this section tended to be more prescriptive in nature. Accordingly, the categories in Table 4 are written in the form of recommended changes. 25 people want better education of motorists and bicyclists about the rules of the road. 16 people would like to see design guidelines that provide adequate bike facilities (of sufficient width) and would like these guidelines attached to new urban development. 13 people raised the need for increased political commitment and funding to implement bike proposals. Ten people focused specifically on the desirability of more bike paths.

Table 4: Other Concerns (n=120)

	Number	Percent
Educate motorists and bicyclists about traffic laws	25	9%
Develop design guidelines for bike facilities	16	6%
Other	14	6%
Increase political commitment for bike improvements	13	5%
Build more bike paths	10	4%
Enforce traffic laws	4	1%
Raise standards for road maintenance	2	1%

Bike Plan Hawaii

Workshop Participant Survey

1. How many bicycles are at your home address? _____
2. Where is your residence located (name of town or subdivision) _____
3. How often do you and other members of your household ride bikes?

	Almost everyday	Several days a week	Several days a month	Several days a year	Rarely
Self	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Household member #2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Household member #3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Household member #4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. For your household as a whole, how important is bicycling for the following types of trips?

	Very Important	Somewhat Important	Not Important
Commuting (to work)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recreation/fitness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Errands	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
School	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. What do you like about bicycling in your community?

6. What problems do bicyclists face in your community?

7. Where would you like to see improved bicycle facilities?
 From _____ To _____

8. Other concerns regarding engineering, education, enforcement, economy and/or encouragement

9. How did you hear about this workshop? _____

Results of the Online Survey

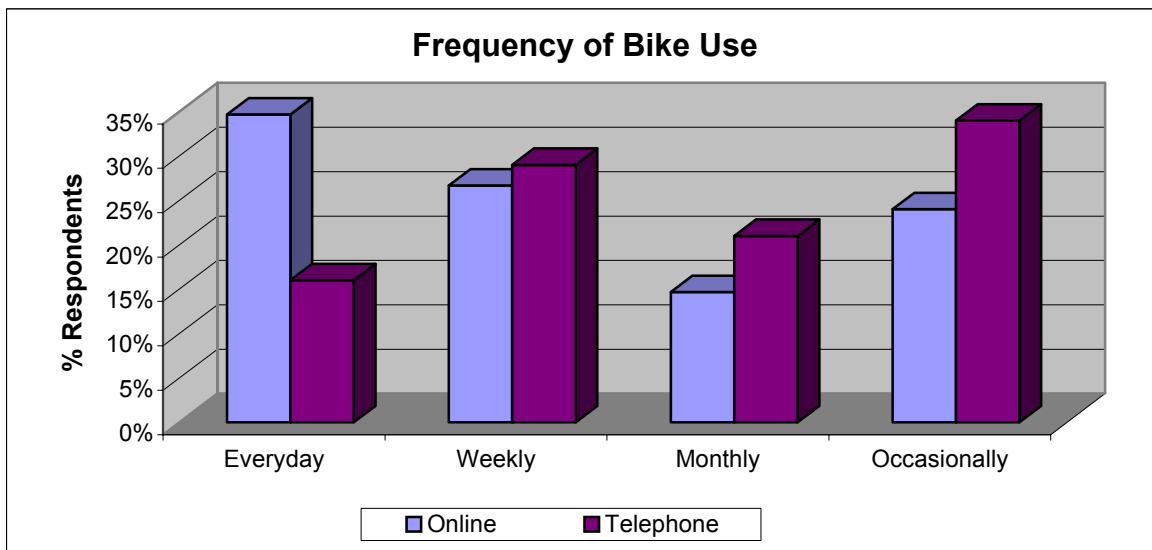
Introduction

Mahalo to everyone who completed the online survey! The questionnaire was posted on this website between February 12 and May 31, 2002. We received 36 electronic responses, one mailed via U.S Postal Service, and another faxed in for a total of 38 survey responses.

Our analysis also compares online responses against those obtained from a telephone survey of 402 randomly selected adults conducted during the first two weeks of February 2002. The results of the telephone survey are statistically significant, wherein the results can be generalized to the population base from which the sample was drawn: i.e., the Big Island, Maui, Kauai, and the suburban and rural areas of Oahu. The surveyed population inhabits an area that is essentially coterminous with geographic scope of the bike plan. In contrast, the results of the online survey represent the views of those who completed the questionnaire. In most cases, the results of both the online and telephone surveys are shown side by side.

Frequency of Bike Use

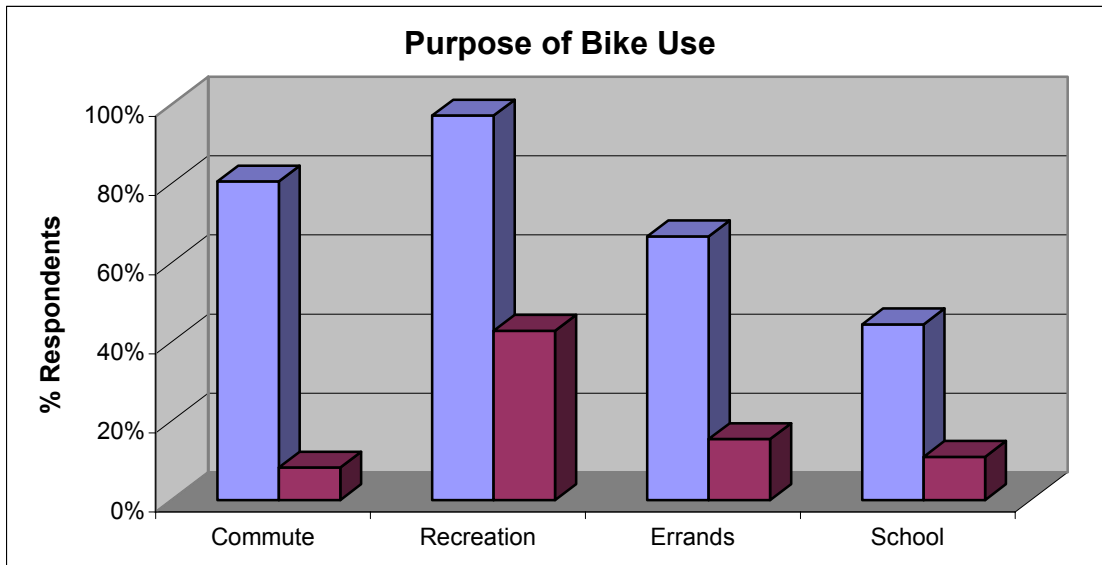
Figure 1



A substantial proportion (35%) of our online respondents are avid bike riders who ride everyday. Another 27% indicated that they ride a few times a week while 15% ride a few times a month. In total, 76% stated that they ride at least several times a month – a benchmark we used to identify “regular riders”. In contrast, only 66% of the telephone survey respondents can be categorized as regular riders.

Why Do People Bicycle?

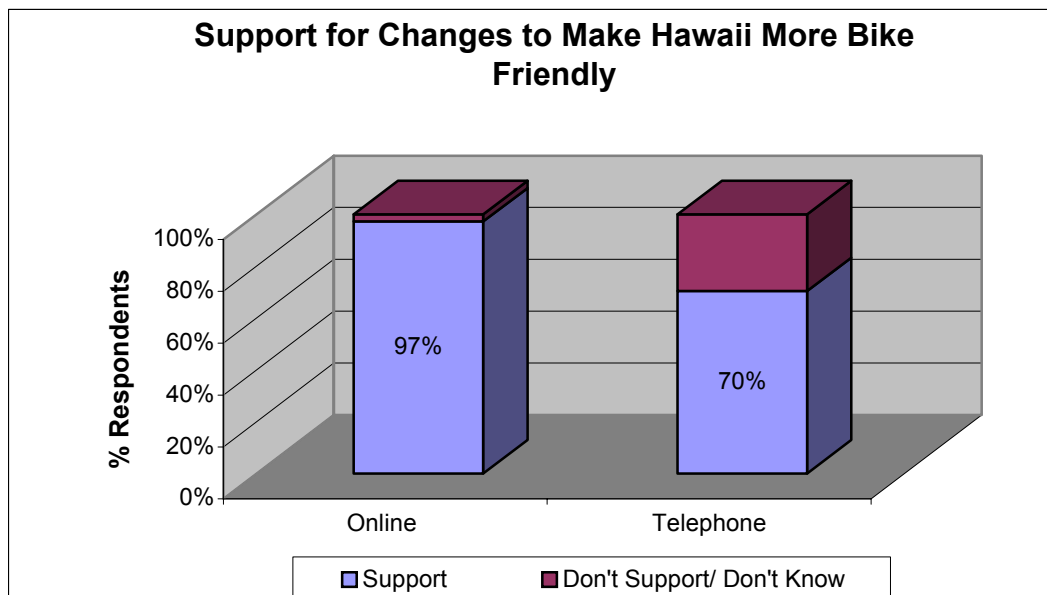
Figure 2



The most common use of a bicycle was recreation among both the online (97%) and telephone (43%) respondents. Noticeably, 81% of the online survey population also indicated commuting as an important purpose, partly explaining their frequent bike usage. Conversely, telephone survey participants reported that they rarely commute by bicycle.

Support for Changes to Make Hawaii More Bike Friendly

Figure 3



An overwhelming majority, 97% of the online respondents, support changes to make Hawaii more bike friendly. The telephone respondents also generated a fairly high level of support at 70%, though less enthusiastic than those online.

Preferred Type of Bicycle Improvements

Respondents were asked to indicate their level of support for ten specific types of bicycle improvements. For each, participants were asked to classify their opinion in one of five categories: very strongly support, somewhat strongly support, not very strongly support, not strongly at all, or do not know. The list of choices is as follows:

- 1) Create separate, on-road bicycle lanes with striping on the pavement
- 2) Add paved shoulders or widen narrow roads, but don't provide separate bike lanes
- 3) Build more off-road bicycle paths that are totally separate from the street
- 4) Clear debris and other obstructions from shoulders
- 5) Conduct safe bicycle riding classes in public schools
- 6) Improve bicycle-orientated signage ("Share the Road" signs, bike route markers)
- 7) Enforce motor vehicle laws regarding bicycles
- 8) Provide secure places to park or store bicycles
- 9) Support orientation rides (weekend rides with experienced bike leaders)
- 10) Add bicycling items to the state driving exam (such as how to interact with bicyclists on the road).

From the online survey, the five ideas with the strongest support are:

- Maintenance of existing bikeways
- Creation of new bike lanes
- Improvements on bike education
- Provision of bike storage
- Changing the state driving exam.

Respondents were strongly in favor of these ideas, with the last three resulting in a tie for support votes. When the respondents were asked to advocate only one idea, there was a tie between more bike lanes and improved bike shoulders, revealing an overall preference for road cycling.

The telephone survey results were similar with the five most supported ideas being:

- Maintenance
- Creation of bike paths
- Improvements on bike education
- Provision of bike storage
- Improved signage.

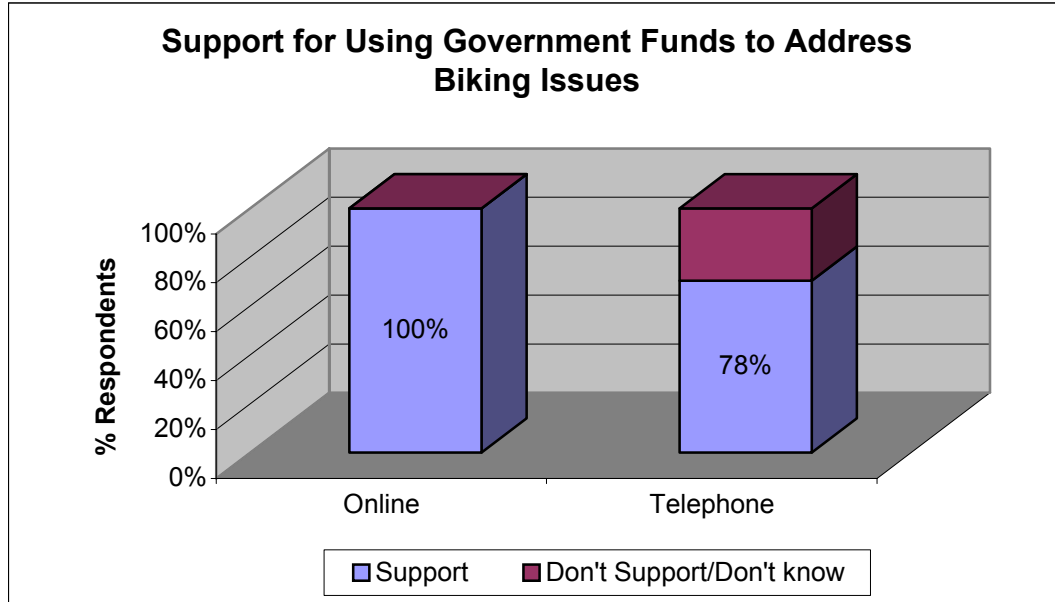
The single most favored idea was the creation of new bike paths, indicating a preference for bikeways that are separated from vehicular traffic.

To explain these results, the type of rider becomes very important. As online respondents are typically more skilled riders who use their bicycles more frequently—often for commuting—the the most advantageous bikeways would be along major roads that provide the most direct connection to their destination. On the other hand, telephone respondents use bicycles mainly for

recreation and are likely to be less practiced, thus revealing an understandable preference for bike paths, separate from roadways.

Support for Government Fund for Bicycle Improvements

Figure 4



When asked about the use of government funds for biking issues, a resounding 100% of the online respondents indicated their support. Even among the larger public, support for government funding is relatively high at 78%.

Possible Impacts of Bicycling Improvements

Improvements are not likely to have a significant impact on future ridership levels among online respondents (Figure 5a). Most of these respondents are probably experienced, confident riders who are not deterred from using the streets as is. Nevertheless, improvements are likely to increase the quality and enjoyment of the bicycling experience.

In contrast, if the streets were perceived to be safer, ridership is expected to increase significantly among less experienced and novice riders (Figure 5b).

Figure 5a – Online Respondents

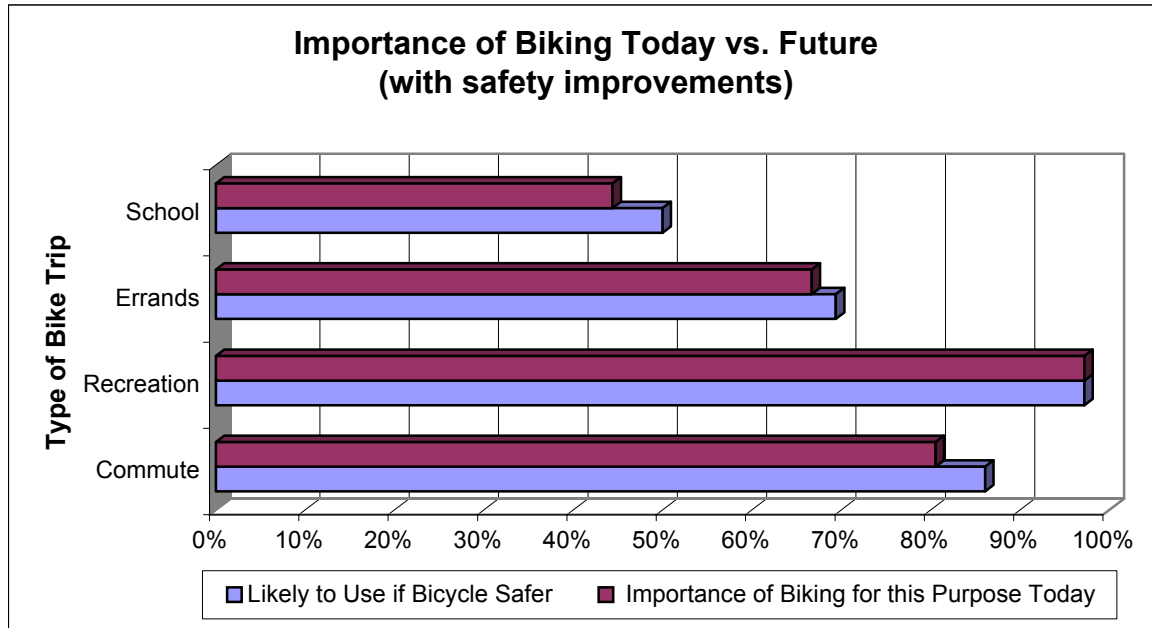
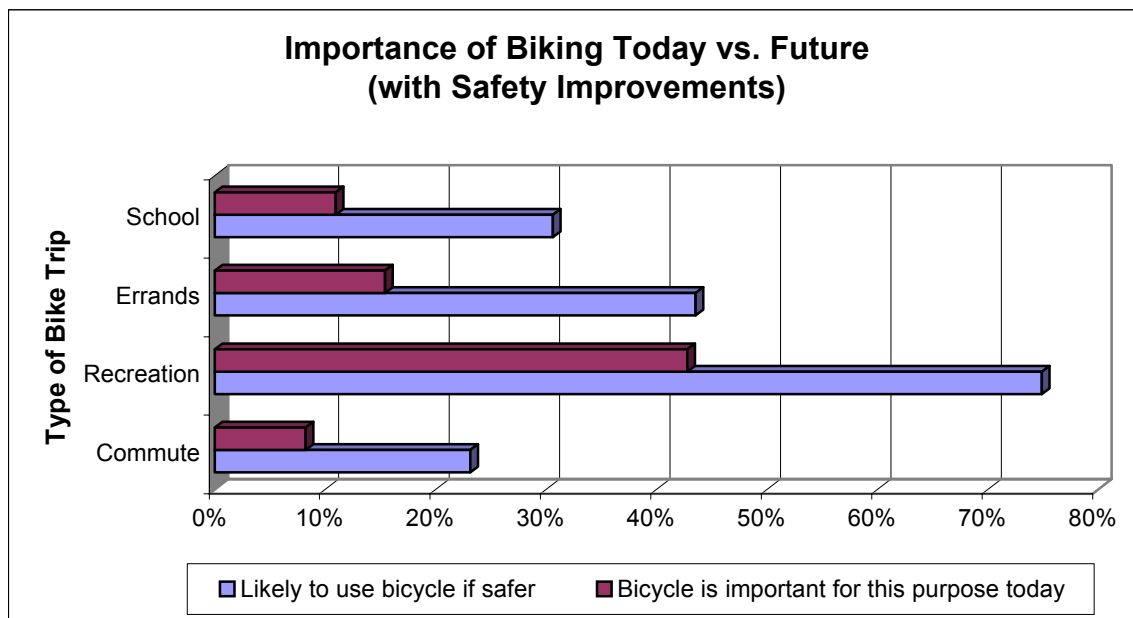


Figure 5b – Telephone Respondents



Who Responded to the Online Survey?

Access to the online survey was unrestricted. Based on the demographic questions asked, the average age of riders responding was 34, with a male to female ratio of 3:2.

Bike Plan Survey

Please take a few minutes to give us your opinions on the following bicycle facilities subjects.

*Bike Plan Hawaii * On-Line Survey*

[Please click in a field to enter data or reveal a pop-up menu of choices.]

Q1a. How many automobiles are there at your home address?

automobiles

Q1b. Does any one in your house hold ride *TheBus* on a regular basis?

Q1c. And how many bicycles are there at your home address?

bicycles

Q2. And in order to get a better understanding of bicycle riders, please fill in the age and gender of each person in your household who rides a bicycle.

Rider	AGE	GENDER
Bicycle Rider #1		
Bicycle Rider #2		
Bicycle Rider #3		
Bicycle Rider #4		
Bicycle Rider #5		
Bicycle Rider #6		
Bicycle Rider #7		
Bicycle Rider #8		
Bicycle Rider #9		
Bicycle Rider #10		

Q3. How often does the rider in your household ride his/her bicycle? Would you say almost everyday, a few days a week, a few days a month, or once a month or less?

Rider	Frequency of Bicycling
Bicycle Rider #1	
Bicycle Rider #2	
Bicycle Rider #3	
Bicycle Rider #4	
Bicycle Rider #5	
Bicycle Rider #6	
Bicycle Rider #7	
Bicycle Rider #8	
Bicycle Rider #9	
Bicycle Rider #10	

For the next series of questions, please answer thinking from the perspective of the "bikers in your household".

Q4. Please indicated how important bicycling is for the following types of trips? For each type of trip, please tell if it is very important, somewhat important, not very important, or not important at all to your household as a whole.

Commuting

Recreation/exercise

Errands in your neighborhood

School

Q5. And in general, how strongly do you support changes in bicycle facilities and policies to enable Hawaii to become more bicycle-friendly? Please indicated how strongly you support each idea: very strongly, somewhat strongly, not very strongly, or not strongly at all. Would you say:

Q6. Below is a list of ideas for improving bicycle transportation in the state of Hawaii. Please indicated how strongly you support each idea: very strongly, somewhat strongly, not very strongly, or not strongly at all.

- 1 Create separate, on-road bicycle lanes with striping on the pavement
.....
- 2 Add paved shoulders or widen narrow roads, but don't provide separate bike lanes.....
- 3 Build more off-road bicycle paths that are totally separate from the street
.....
- 4 Clear debris and other obstructions from shoulders
.....
- 5 Conduct safe bicycle riding classes in the public schools
.....
- 6 Improve bicycle-oriented signage ("Share the Road" signs, bike route markers).....
- 7 Enforce motor vehicle laws regarding bicycles
.....
- 8 Provide secure places to park or store bicycles
.....
- 9 Support orientation rides (weekend rides with experienced bike leaders)
.....
- 10 Add bicycling items to the state driving exam (such as how to interact with bicyclists on the road).....

Q6a: If you answered that you strongly support more than one of the above ideas, which one *single* idea would you say you support the most?

Q7. If bicycling were a safer mode of transportation, how likely would you personally be to use a bicycle more frequently for * Recreation or exercise, * Shopping trips or errands around your neighborhood, * Commuting to work, * Going to and from school by children in your household? Would you say very likely, somewhat likely, not very likely, or not likely at all?

Recreation or Exercise

Shopping trips or Errands in your neighborhood

Commuting to Work

Going to and from School by children in your household

Q8. And how willing would you be to support the use of government funding, namely the allocation of funds from the State Department of Transportation's budget, to address biking issues? Would you be * strongly in favor, * somewhat in favor, * somewhat opposed, or * strongly opposed to the use of government funding to address biking issues?

And thinking about biking conditions in your neighborhood community...

Q9. A good bicycle plan considers the condition of the routes where people ride frequently or would like to ride more frequently. Where, specifically, would you like to see improved bicycle facilities?

Q10. What else, if anything, would you like to state about bike transportation in your area?

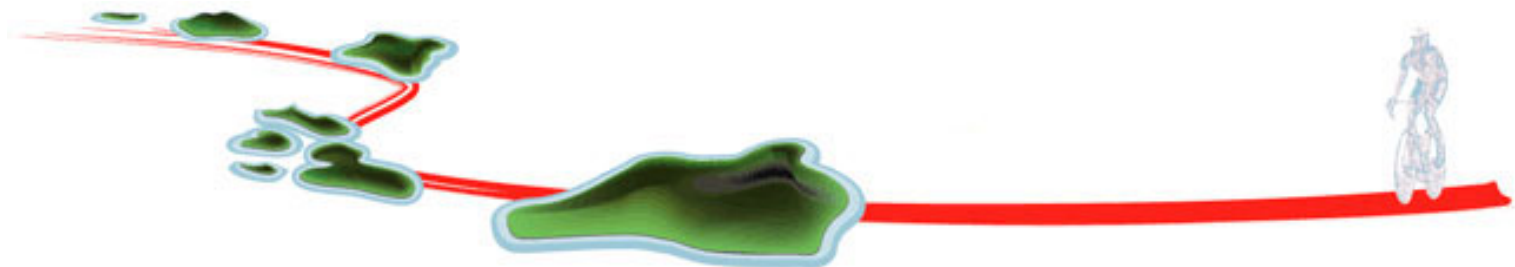
* *

Info. - If you would like to receive announcements of further planning or events related to *Bike Plan Hawaii*, please fill in your email address here:

* * * * *

Please save this document with a new name on your hard drive and mail it to:
<projects@kimurainternational.com>

Check back in April for results of the Surveys.



Results of the School Survey

Introduction

Mahalo to all the school administrators who completed the school survey! In February 2002, the questionnaire was mailed to public and private schools throughout the state to gather information on bicycle usage, bike-related policies and programs, and ways to promote safe bicycling for school-aged children.

Who Responded to the School Survey?

153 schools from Oahu, Kauai, Maui, Lanai, and Molokai participated to generate a total response rate of 57%. On Oahu, the survey was limited to the suburban and rural areas—corresponding to the geographic scope of the Bike Plan Hawaii update.

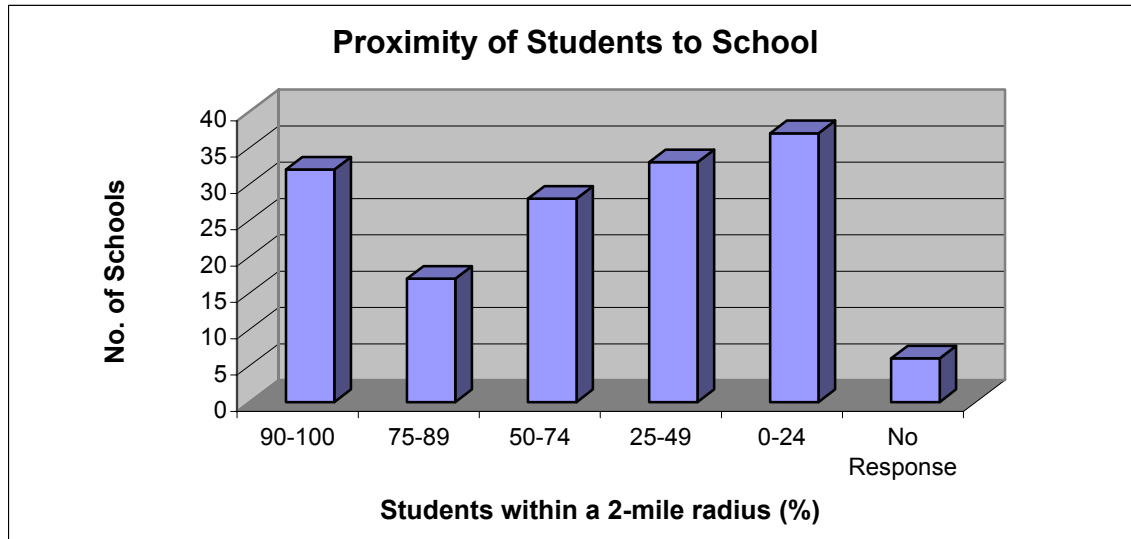
The age ranges of the schools that responded were distributed as follows:

- 72 -- elementary school grade levels
- 37 -- middle and/or high school grade levels
- 38 -- elementary, middle, and/or high school grade levels
- 6 -- not specified

Proximity of Students to School

Distance is one of many determining factors for bicycle riding. To assess the feasibility of bicycle commuting for each school, we asked administrators to estimate the percentage of students living within a 2-mile radius of the. A commute of 2 miles would generally be the upper limit of bicycling for younger bicyclists. In the case of 32 schools, an estimated 90-100% of the student body lives within a 2-mile radius (see Figure 1). Another 17 schools estimated that 75-89% of the student body lives within a 2-mile radius, and 28 schools estimated the percentage to be 50-74%. These findings indicate that significant clustering of students around a campus occurs in only about half the schools responding. For these schools, there's a potential critical mass of student bicyclists. For the other schools, the student body is distributed over a larger geographic area.

Figure 1 – Within a 2-mile Radius



Estimates of Actual Student/Faculty Bicycle Commuting

92 schools (60%) reported students who bicycle to and from school (see Figure 2a), but the numbers are very small. Only a handful of schools identified 25 or more student bicyclists. Faculty bicyclists are even more scarce with only 36 schools (24%) indicate that faculty members commute by bicycle (see Figure 2b).

Figure 2a – Student Commuters

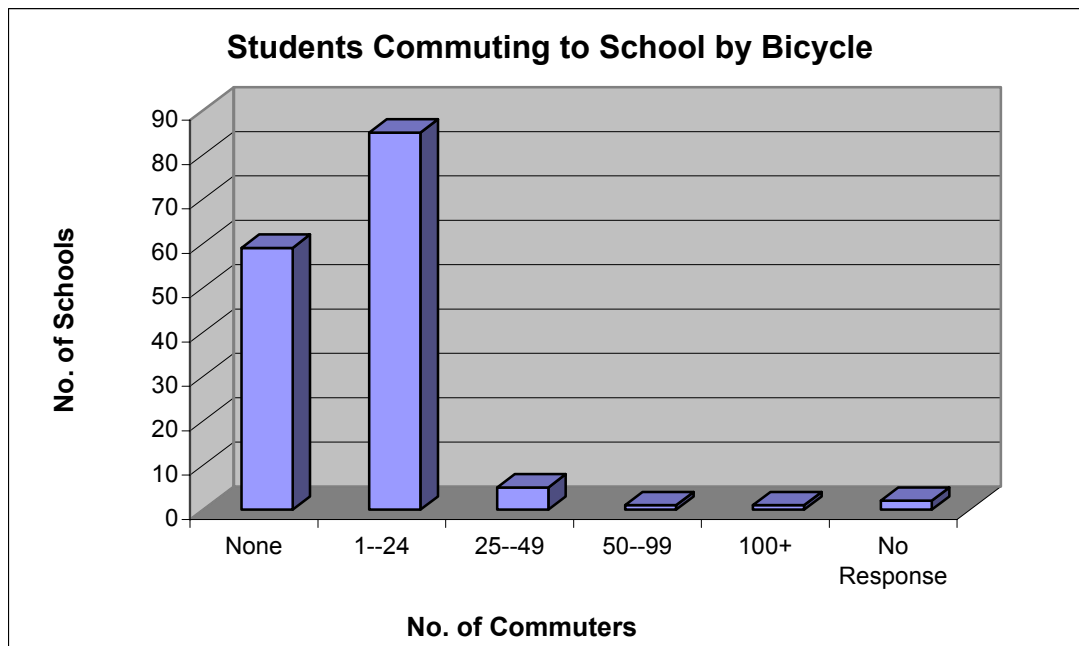
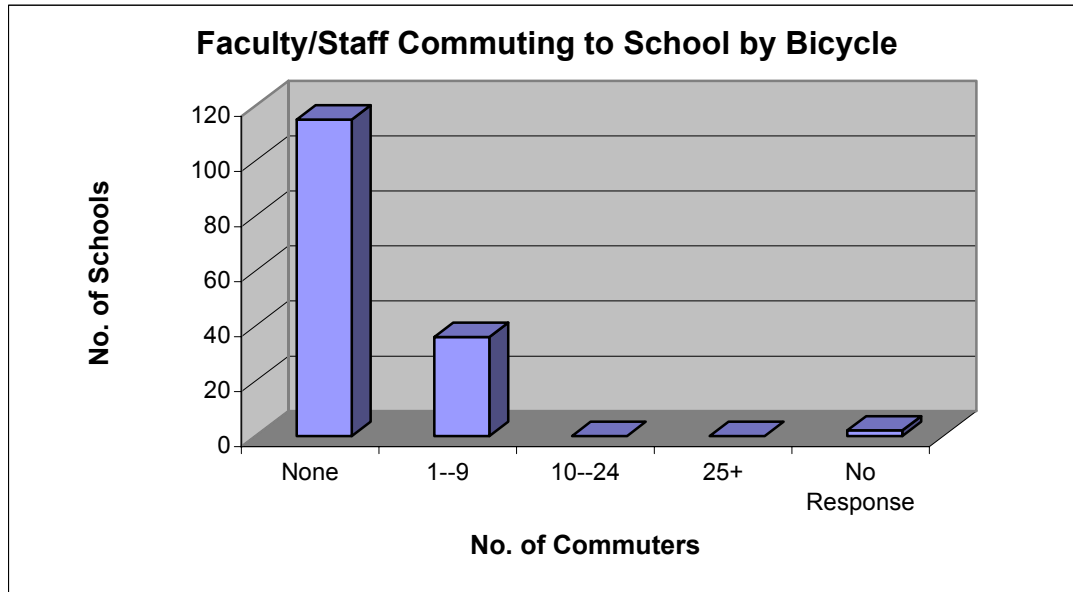


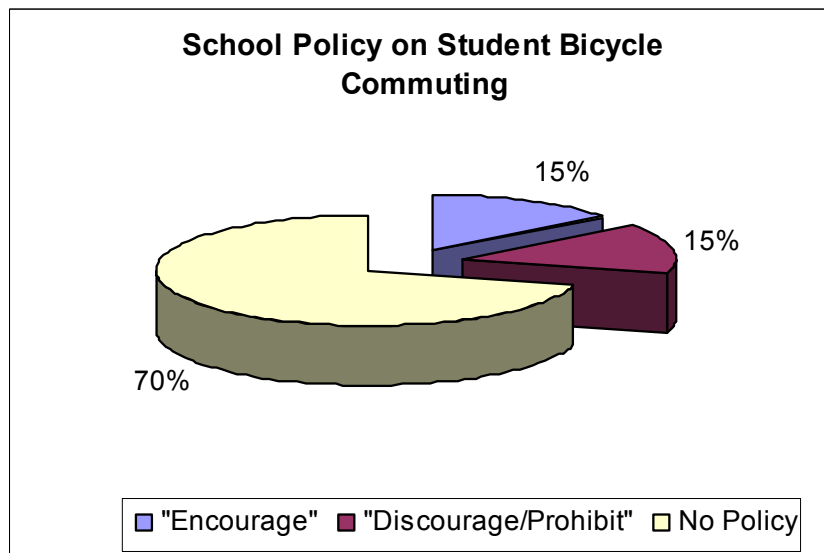
Figure 2b – Faculty Commuters



School Policy on Commuting by Bicycle

When asked about school policy on bicycling, 105 schools or 70%, stated that they have no policy (see Figure 3). The remaining 30% are evenly split between those that formally or informally encourage bicycling, and those that formally or informally discourage bicycling. Three schools in the latter group prohibit students from riding their bicycle to school.

Figure 3



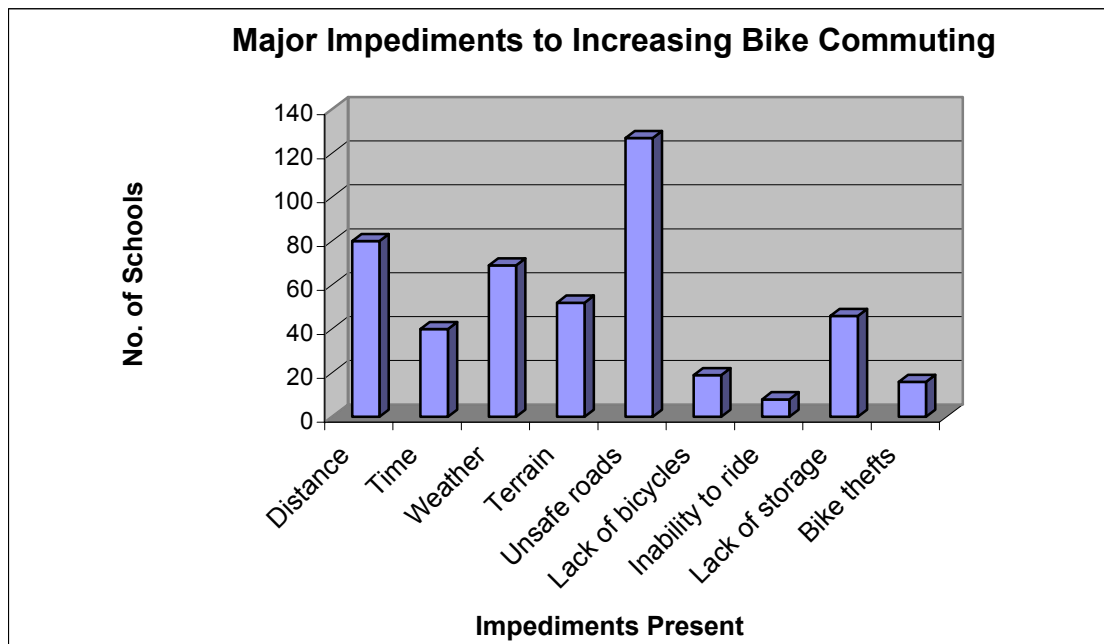
Structured Bicycle Education Program

55 schools (more than a third) reported that they participate in the bicycle education program known as BikeEd. This program is aimed at 4th graders and taught during school hours in five 45-minute sessions. A key feature of the program is the time spent on secondary roads near the campus to better instruct children on basic bicycling maneuvers and proper road behavior. Among the schools participating in BikeEd, all but one felt that it was successful. Many of the schools commented on their desire to expand the program to include all grade levels and even involve parents. Of the schools without an established bike program, 45 schools (58%) indicated their interest in having one.

Major Impediments to Increasing Bike Commuting

85% of the respondents cited the perception of unsafe roadways and high traffic levels as the most significant impediment to increased bicycle commuting (see Figure 4). Distance, weather, lack of storage space, and terrain were also mentioned frequently.

Figure 4



Suggestions to Increase Bicycle Commuting

Several off-campus improvements (Figure 5a) were suggested to increase bicycle commuting:

- Create bike paths
- Create bike lanes
- Reduce traffic and speed of cars
- Improve road shoulders
- Increase driver awareness of bicyclist's rights.

Suggestions for possible on-campus improvements (Figure 5b), included:

- Promote safe biking (bike programs for students and parents)
- Add bicycle racks
- Provide bicycle riding training
- Provide equipment (helmet, knee pads)
- Promote bicycling as exercise

Figure 5a – Off-campus Improvements

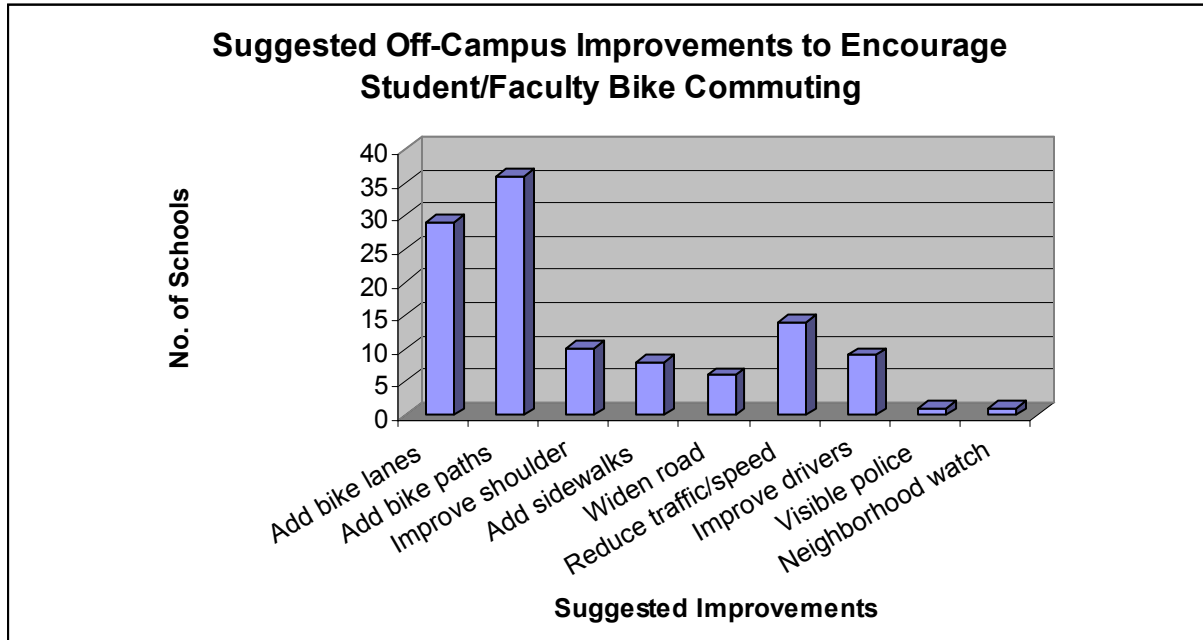
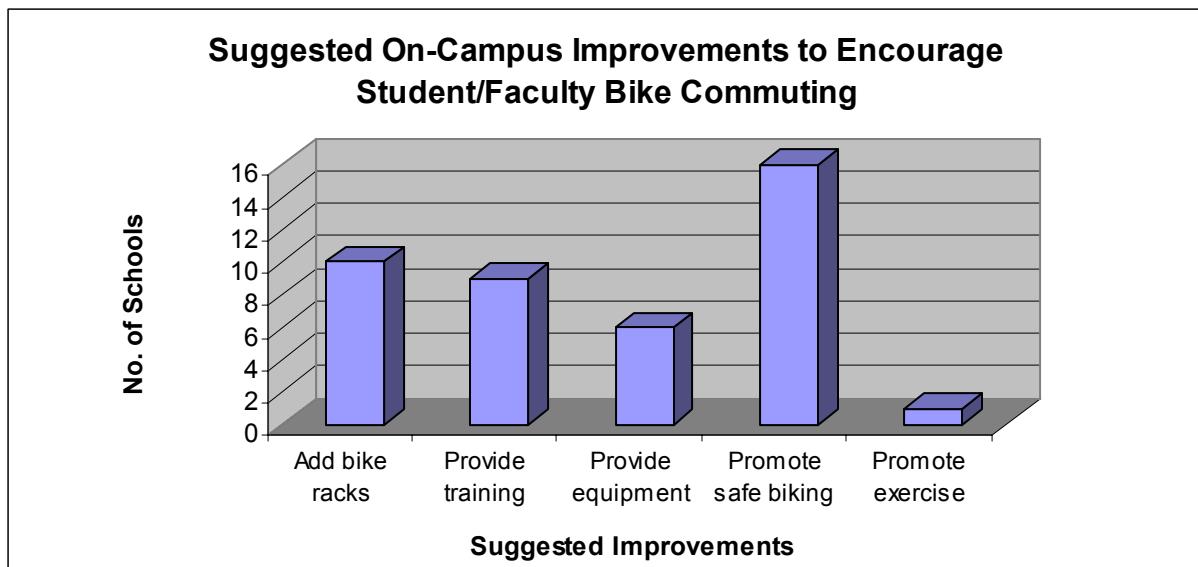


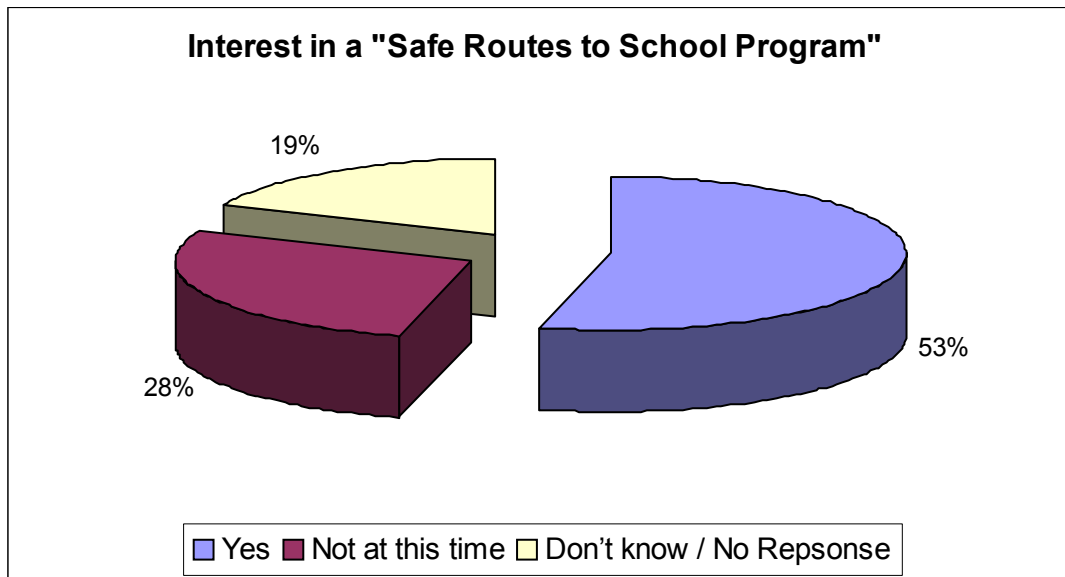
Figure 5b – On-campus Improvements

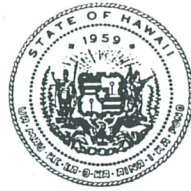


Safe Routes to School Program

When the schools were surveyed on their interest in establishing a “Safe Routes to School” program, 90 schools (53%) indicated their interest (see Figure 6). Safe Routes to School is a term used for community-based efforts to map routes to school, identify safety issues, and create an improvement plan. The program typically involves students, parents, school administrators, teachers, local law enforcement and public works departments, and possibly business and community groups.

Figure 6





STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

IN REPLY REFER TO:

HWY-TO
2.5671

February 8, 2002

Dear Principal:

Subject: State of Hawaii Bike Master Plan Update—School Survey

We are revising and updating *Bike Plan Hawaii*, the 1994 master plan for State bikeways. As part of our data gathering, we are contacting public and private schools throughout the state to gather information on bicycle usage, bike-related policies and programs, and ways to promote safe bicycling for school-aged children.

Our planning efforts are focusing on suburban and rural Oahu—areas within urban Honolulu were recently addressed in the City and County of Honolulu's 1999 Bicycle Master Plan. The planning area also covers all of Kauai, Maui, Lanai, Molokai, and the Big Island.

The primary goal of the bicycle master plan is to integrate bicycle facilities into the State's transportation system by proposing a network of bikeways and auxiliary bicycling facilities. We seek to promote bicycling as a viable, alternate means of transportation. Through our community workshops, we have also heard from many residents who want to enhance biking safety through educational programs and enforcement of traffic regulations.

We would appreciate your assistance by filling out the enclosed questionnaire and returning it in the enclosed envelope by **March 4, 2002**. This survey is being administered by our consultants, Kimura International, Inc. If you have any questions, please call Vincent Llorin, State Bicycle and Pedestrian Coordinator, at 692-7675.

Your comments and input are a valuable part of this project. Thank you for your time and cooperation.

Very truly yours,

A handwritten signature in cursive script, appearing to read "Glenn M. Yasui".

GLENN M. YASUI
Administrator
Highways Division

Bike Plan Hawaii
School Survey
State Department of Transportation

School Name: _____

Address: _____

Contact Person: _____

Phone: _____

Grade levels : _____

Estimated student enrollment: _____

1. Estimated percentage of students living in a two-mile radius:

- 90-100%
- 75-89%
- 50-74%
- 25-49%
- Less than 25%

2. Estimated percentage of students living in a five-mile radius:

- 90-100%
- 75-89%
- 50-74%
- 25-49%
- Less than 25%

3. What is the school's position on students commuting to school by bicycle?
(Please note that this question refers to bicycling to and from school, and not bicycling on the campus itself.)

- Formal (written) policy prohibiting students from riding bicycles to school
- Informal policy discouraging students from riding bicycles to school
- Informal policy encouraging students to ride bicycles to school
- Formal (written) policy encouraging students to ride bicycles to school
- None

4. How many students commute to school by bicycle on an average day?

- None
- 1-24
- 25-49
- 50-99
- 100 or more

5. How many faculty or staff members commute to school by bicycle on an average day?

- None
- 1-9
- 10-24
- 25 or more

6. Does your school participate in a structured bike education program (such as BikeEd, sponsored by the Hawaii Bicycling League or PATH—People’s Advocacy for Trails Hawaii)?

- Yes
- No

6a. If you answered “Yes” above, how would you rate the program?

- Very successful
- Moderately successful
- Not successful

What are the pluses and minuses of the program?

6b. If you answered “No” above, would your school be interested in a bike education program?

- Yes
- No

7. In your opinion, what are the major impediments to increased bike commuting by students and faculty? (please check all that apply)

- Commuting distances
- Commuting time
- Weather conditions
- Hilly terrain
- Unsafe roads/heavy traffic
- Lack of bicycles
- Inability to ride bicycle
- Lack of storage facility on campus (bike racks)
- Bike thefts
- Other: _____

8. What improvements (on- and off-campus) would encourage more students and faculty to commute to school by bicycle? *Please name specific streets and/or intersections that require safety improvements.*

9. Other comments or suggestions on how to promote safe biking to and from school?

10. If there were a “Safe Routes to Schools” program to identify, improve, and/or create safe travel corridors for students, would your school be interested?

- Yes, the administration would be interested—please send more information when available
- Yes, the PTSA is likely to be interested
- Not at this time
- Don't know

Thank you for your cooperation. Please return this questionnaire in the stamped envelope.

Kimura International, Inc.
1600 Kapiolani Boulevard, Suite 1610
Honolulu, HI 96814
Ph. (808) 944-8848

Survey of Neighborhood Boards and Community Associations

In October 2001, letters were sent to 16 Neighborhood Boards in the suburban and rural areas of Oahu and 7 Community Associations on Maui. The letters invited the members of these organizations to attend a public meeting/workshop for Bike Plan Hawaii schedule for various dates in November 2001, and included a one-page questionnaire requesting information and suggestions related to bicycle use in the respective communities. One questionnaire was returned (from the Kaneohe Neighborhood Board); however, the responses were not provided in a format suitable for analysis.

Bike Plan Hawaii
Neighborhood Board Survey

Neighborhood Board: _____

Contact Person: _____ Phone: _____

1. Please identify bikeway projects that are currently being planned, designed, or constructed in your neighborhood.

Project Location	Status
_____	_____
_____	_____
_____	_____

2. In general, how important is bicycling for the following types of trips?

	Very Important	Somewhat Important	Not Important
Commuting (to work)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recreation/fitness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Errands	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
School	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Please identify locations that are hazardous or potentially hazardous for bicyclists. Locations may be road segments or intersections.

4. Please identify places that need better bikeway connections or improvements.

From	To
_____	_____
_____	_____
_____	_____

5. Suggestions for promoting bicycle use in your community:

* * * * *

Additional sheets may be added, as needed. Thank you for completing this questionnaire. Please return it in the enclosed, stamped envelope to Kimura International, Inc., 1600 Kapiolani Boulevard, Suite 1610, Honolulu, HI 96814. For questions, please call Glenn Kimura or Nancy Nishikawa at (808) 944-8848.

Bike Plan Hawaii

Community Association Survey

Community Association: _____

Contact Person: _____ Phone: _____

1. Please identify bikeway projects that are currently being planned, designed, or constructed in your neighborhood.

Project Location	Status
_____	_____
_____	_____
_____	_____

2. In general, how important is bicycling for the following types of trips?

	Very Important	Somewhat Important	Not Important
Commuting (to work)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recreation/fitness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Errands	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
School	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Please identify locations that are hazardous or potentially hazardous for bicyclists. Locations may be road segments or intersections.

4. Please identify places that need better bikeway connections or improvements.

From	To
_____	_____
_____	_____
_____	_____

5. Suggestions for promoting bicycle use in your community:

* * * * *

Additional sheets may be added, as needed. Thank you for completing this questionnaire. Please return it in the enclosed, stamped envelope to Kimura International, Inc., 1600 Kapiolani Boulevard, Suite 1610, Honolulu, HI 96814. For questions, please call Glenn Kimura or Nancy Nishikawa at (808) 944-8848.