

December 22, 2012

## **Encouraging Equitable Access to Public Bikesharing Systems**

**Darren Buck**, Master of Urban and Regional Planning Candidate, [darren.buck@vt.edu](mailto:darren.buck@vt.edu)

Urban Affairs and Planning  
School of Public and International Affairs  
Virginia Tech Alexandria Center  
1021 Prince Street, Suite 200  
Alexandria, VA 22314  
Tel: 703-539-2825

## **ABSTRACT**

In recent years, bikesharing systems have spread throughout North America. There are a number of theorized benefits to use of bikesharing, such as mode shift from automotive travel, and lowering household travel expenses. While there has been rapid growth in systems, and apparent success in attracting riders, there is concern that bikesharing may not be reaching residents of low-income communities, or members of socioeconomic groups disproportionately underrepresented in bicycling. To help bridge this gap, this paper investigates how bikesharing systems are pursuing programs to lower access barriers for these groups.

This paper provides an overview of the results of a survey of 20 current and planned North American bikesharing systems. The purpose of this survey was to collect basic information about the systems, and the current status and details about programs that attempt to lower access barriers to bikesharing experienced by low-income communities, and minority groups underrepresented in bicycling. Responses are summarized by category, with certain notable examples of bikesharing system programs highlighted. All categories of programs to lower access barriers described in this paper have multiple bikesharing systems pursuing them. Additionally, an analysis of characteristics of sampled bikesharing systems finds only one significant negative correlation (nonprofit agency status) with the average number of programs bikesharing systems pursue to reduce access barriers.

A number of research proposals are offered to provide more detailed study of the extent of access barriers to bikesharing systems, more details on individual bikesharing system experiences with programs to lower access barriers, and a need to repeat an overview of the state of the practice after several large North American bikesharing systems deploy.

## **ACKNOWLEDGEMENTS**

I would like to thank Vincent Valdes of the Federal Transit Administration, and Dr. Ralph Buehler, Ph.D. and Kris Wernstedt, Ph.D. of Virginia Tech, for their thorough and helpful reviews of this paper. I would also like to thank Parry Burnap, Daisy De La Rosa, Allen Greenberg, Andrea Hamre, Patricia Happ, Matthew Lesh, Susan Shaheen, Ph.D., and Joanne Waszczak for their valued advice and assistance at various points in this project.

Finally, I would like to thank the bikesharing system managers and administrators who took the time to complete a survey response, without which this paper would not have been possible: Sandra L. Brecher, Kristen Camareno, Kevin Crouse, Paul DeMaio, Daisy De La Rosa, Scott Edwards, Chris Hamilton, Julie Harris, Samantha Herr, Holly Houser, Claire Hurley, Heath Maddox, Michel Philibert, Anne Piacentino, Philip Pugliese, Colby Reese, Jessica Robertson, William Rub, Steve Sander, Sarah Shipley, Tami Traeger, and Carl Voss.

## **INTRODUCTION**

Recently, North American cities such as Washington, DC, Minneapolis, Denver, Boston, Toronto and Montreal have implemented third generation public bikesharing systems. These new bikesharing systems overcome many of the operational problems associated with older bikesharing programs that operated with free or coin-deposit bicycle use, such as theft. Third generation bikesharing systems have docking stations, provide electronic kiosks to rent and return bicycles, use key cards or fobs for access to a bicycle, and have a fleet of specially designed, colored, and branded bicycles (1,2).

While these enhancements to bikesharing technology have enabled their success, it is possible that the new access-controlled systems create a barrier to use for low-income users, by requiring payment accounts to access the system. Most of the research on bikesharing in the U.S. focuses on the evolution of bikesharing systems over time, ridership trends, successful implementation strategies for new systems, and potential benefits of bike sharing (3,4,5,6). With a growing body of knowledge about bikesharing user demographics and rider motivations (6,7), there are public concerns (8) that bikesharing is not reaching large segments of the population in general, and segments of the population that stand to benefit greatly from bikesharing in particular.

This paper provides an overview of the results of a survey conducted in November 2012 of current and planned North American bikesharing systems. The purpose of this survey was to obtain the current status and details about the plans of bikesharing systems to pursue programs that attempt to lower access barriers to low-income communities, and minority groups underrepresented in bicycling.

The next sections briefly introduce the concept of bikesharing, provide an overview of the existing literature on characteristics of bikesharing users, and provide a summary of public

discussion of equity issues in bikesharing. After a short description of how the survey was created, I present a summary of the current state of ‘equity’ programs to reduce access barriers to bikesharing, and analyze some basic patterns in what types of systems are pursuing these equity programs.

## **BACKGROUND**

This section highlights the history and reported benefits of bikesharing in North America, describes the barriers to bicycling facing low-income and African-American communities, and a discussion about the concerns that bikesharing has its own access barriers.

### **History and Benefits of Bikesharing**

Detailed overviews about the history of public bikesharing systems worldwide, and descriptions of their theorized benefits, have been previously provided by Shaheen et al. (1,6) and DeMaio (2), and are briefly summarized here.

Bikesharing originated in Amsterdam in the Netherlands with the White Bikes program in 1965 (1). This first generation bikesharing system consisted of brightly colored bicycles left unlocked in Amsterdam, openly available for anyone to use without payment or prequalification. From an equity perspective, this open system was obviously beneficial, as low-income users did not have to pay, or concern themselves with having a credit card to access the system. However, damage and theft of bicycles led to the decline of these first generation bikesharing programs.

The second generation of bikesharing is considered to be the coin-deposit operated system. These, and subsequent generations, continue uniform color schemes like the first generation systems. Second generation systems required payment, and featured docking stations with a locking mechanism requiring a refundable deposit to unlock the bicycles. Anonymity of system users and inexpensive deposits failed to prevent bicycle theft (1,2,6). However, this cash-

based operation presumably also allowed for equitable access to the systems, assuming that the docking stations were placed in accessible areas.

The current crop of third generation bikesharing systems attempt to overcome many of the operational problems associated with older systems. Telecommunication systems, smartcards and key fobs allow users to electronically check-out or lock bicycles at kiosks (docking stations). Smartcards and fobs include identifiable links to a user and his or her payment account, eliminating the anonymity of bikesharing users, but also introducing a potential access barrier for low-income potential users, who may not possess the credit instrument necessary to establish a payment account. System operators use telecommunications to collect data on usage, such as duration of checkout and availability of bicycles at docking stations, and can use the identifiable user account links to collect data on patterns of usage. Users can check for bicycle availability through mobile phone applications (1,2,6). In Europe, the deployment and expansion of third generation bikesharing schemes in recent years has been rapid, and is now approaching market saturation (9).

Reported benefits of bikesharing include a reduction in greenhouse gas emissions through mode shift from automobiles and reduced fuel consumption; lower household transportation expenditures; increasing accessibility to public transit by addressing the first mile/last mile problem; and increasing overall physical activity (1,2,6). Much of the existing bikesharing research focuses on determinants of ridership, such as infrastructure and the built environment (3,4,5,10). No research focuses on whether those reported benefits are experienced proportionately by low-income and minority communities.

Several other studies of bikesharing systems outside the U.S. have provided information about annual members. Bachand-Marleau et al. (11) collected basic demographic information

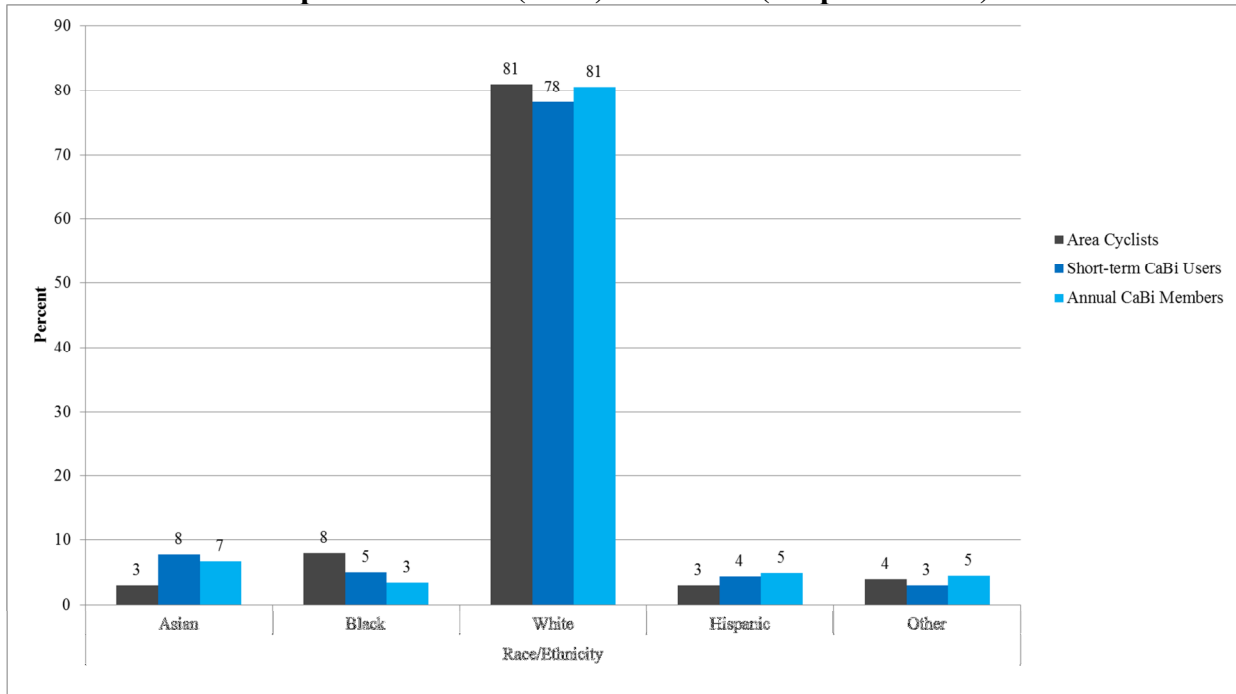
and attitudes of riders of Montreal's BIXI bikesharing system, and Tang et al. (12) collected information on bikesharing users in three cities in China.

Only one published academic study (6) provides demographic and socioeconomic details about bikesharing users across multiple bikesharing systems in the United States. Shaheen et al. conducted a survey of annual members of bikesharing systems in Minneapolis, Montreal, Denver, and Washington, DC. Aggregate statistics for all four systems combined indicate that the majority of bikesharing users were younger than 34 (60%), white (approximately 80%), and highly educated (85% had a Bachelor's degree or higher), all of which differ from the general populations of these cities.

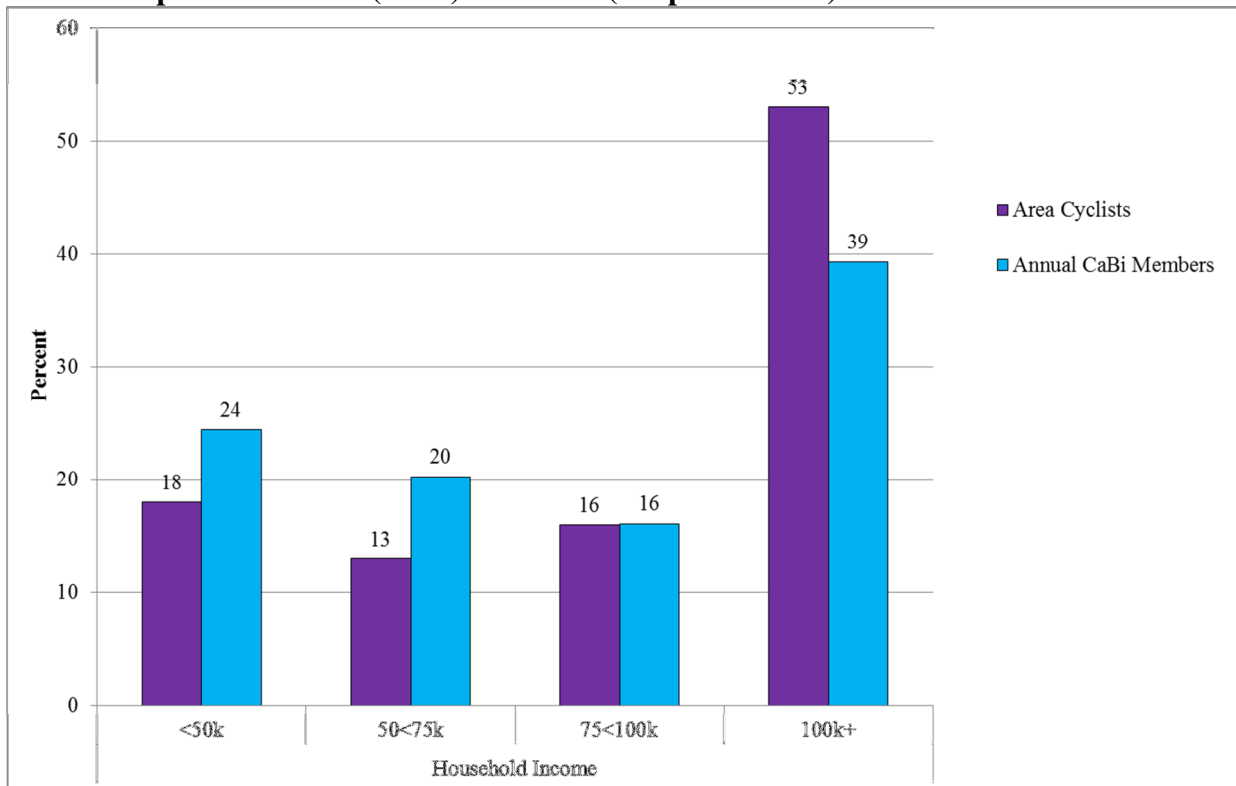
Shaheen et al. also describe the need for equitable access to bikesharing, and summarize aspects of some Capital Bikeshare programs to promote equity, but do not include any information or details on equity programs across North American bikesharing systems. A report on public bikesharing from the Pedestrian and Bicycle Information Center (13) also notes the importance of reducing access barriers, and provides several examples of programs, but does not purport to present a full overview on equity programs across North American bikesharing systems.

One draft paper (7) compares demographics of Washington, DC area bicyclists and Capital Bikeshare users, and finds a significantly lower share of African-American bikesharing members and short-term users, as compared to bicyclists in the Washington DC area in general. However, bikesharing users did report significantly lower income, indicating that bikesharing may be lowering access barriers to bicycling for some low income communities. Figures 1 and 2 show the demographics and household incomes of bicyclists and bikesharing users in the Capital Bikeshare service area (as of 2011).

**FIGURE 1. Comparison of Demographics of Washington, DC Area Cyclists and Short-Term and Annual Capital Bikeshare (CaBi) Members. (adapted from 7).**



**FIGURE 2. Comparison of Household Income of Washington, DC Area Cyclists and Annual Capital Bikeshare (CaBi) Members (adapted from 7).**





### **Barriers to Bicycling for Low-income and African American Communities**

A disproportional lack of access to bicycle facilities might be a significant barrier to bicycling in low-income communities. One review of Federal transportation funding (14) found that counties with persistent poverty and low educational attainment were significantly less likely to have funded pedestrian or bicycle projects. In counties where projects were implemented, the study also found that per-capita spending on bicycle and pedestrian facilities was significantly lower in counties with low educational attainment.

Additionally, African-Americans have significantly lower levels of self-reported bicycle use, and a higher incidence of feeling their safety threatened while bicycling (15). This study also reports that low income households have lower rates of access to a bicycle. It should be noted that this data was collected in 2002, but a new data collection effort is currently underway that will provide more current data to inform future research on the extent of access barriers to bicycling. Additionally, race and income variables are not used to control for each other, and no other control variables are used. Therefore, this study cannot conclude if race, income, or a combination thereof is the more significant predictor of bicycling perception, given the covariance of low-income household status and African-American race. However, another model, based on a 2000 household travel survey in San Francisco, predicts significantly lower rates of bicycle ownership for both low-income and non-white households (16). Providing access to bikesharing would directly address this bicycle access barrier.

### **Concerns About Bikesharing Access Barriers**

Offering bicycles for public use at a reasonable cost should, in theory, help to reduce access barriers to bicycling. However, concerns have been publicly raised that bikesharing systems are not accessible to a wide variety of potential users, because of station siting, financial barriers, and other reasons.

In Denver, CO, the Denver Post published an article (17) focusing on the objection of Councilman Paul Lopez to the lack of stations accessible to his low-income and largely Latino constituency in SW Denver. Mr. Lopez cited the high rate of obesity-related disease in his community, and how bikesharing should be available to his community as a means to improve their health:

“If it is truly about behavioral change, make it available where it is really needed or where it will have impact,” he said. “Is this truly, truly about the issues and behavioral change or is this just for looks?”

Soon afterward, the newspaper published an editorial (18) stating the opinion that financial considerations left Denver Bike Sharing with little choice but to site stations where they were projected to produce the most operating revenue, rather than in areas like Mr. Lopez’s district.

In Washington, DC, the Capital Bikeshare system has come under criticism from the free-market think-tank Reason Foundation (19). Citing demographic data from a Capital Bikeshare annual member survey (20) showing that members were disproportionately white and highly educated, the Reason Foundation questions the use of taxpayer funds for bikesharing system capital expenses to benefit this demographic group.

At the time of this writing, the City of Chicago had not yet deployed their planned bikesharing system, but city officials were already publicly discussing their plans to ensure that the bikesharing system reached a broad cross-section of the city. From the closing paragraph of a recent blog posting (21):

“My number-one priority is getting a membership that reflects the diversity of the city,” [Chicago Department of Transportation deputy commissioner Scott] Kubly assures them. “Since we’re using public dollars, it’s important that the folks who are using the service reflect everybody in the community. It’s a challenge but we’re going to crack it.”

With no existing research or guidance on how bikesharing systems can and are responding to these concerns, this report is intended to provide a first look at the various ways

that a significant number and variety of North American bikesharing systems are attempting to address access barriers. I hope to provide a useful overview of how bikesharing systems are responding to the challenge of reducing access barriers, in order to provide basic information for the large number of bikesharing systems currently in the initial planning stages.

## **DATA SOURCES AND METHODS**

I created a voluntary survey (Appendix A) that asked managers of both current and planned North American bikeshare systems to identify measures they have taken to increase access to bikesharing for low-income and minority groups disproportionately underrepresented in bicycling. The survey was posted online, with potential respondents provided with a secure link to a Google Form. The survey was publicized by email solicitations to North American bikesharing managers for whom I had contact information (gathered from an attendee list from a March 2012 bikesharing conference, and from public bikesharing system websites), posting to the Pedestrian Bicycle Information Center's Bikeshare listserv, and multiple posts on Twitter. My intent was to obtain responses from all currently operating public bikeshare systems in North America, and all planned public bikesharing systems, with "planned" defined herein as having progressed beyond the release of a Request for Proposal (or other formal expression of interest to the public) by the applicable municipal entity.

The survey asked respondents to characterize the status of equity programs that provide or promote greater access in seven broad categories: Station siting, financial assistance, safe places to ride, interoperable farecard media, community-specific outreach, overcoming bicycling barriers, and contributing to the local economy. To create these categories, I reviewed bikesharing system websites and media reports, discussed access barriers at a March 2012 bikesharing meeting, and participated in an October 2012 teleconference call with bikesharing

system operators. Based on these readings and firsthand interactions, I compiled a list of existing and planned programs among North American systems to reduce access barriers to bikesharing. I then organized these known programs into seven logical categories describing the theorized access barriers to bikesharing. These seven categories were not based on any existing research or accepted frameworks, and were created solely to provide a logical structure for the survey instrument.

For each of the seven categories, respondents were asked to characterize the status of their bikesharing systems' plans and programs with the following options:

- \*Yes
- \*Not yet, but planning/preparation underway
- \*No short term planning underway, but an intent to investigate in the future
- \*No intent to pursue plans in this area
- \*Did/made plans in the past, but discontinued

These status categories are intended to be partially ordinal, with "Yes" and "Not yet, but planning/preparation underway" responses considered positive responses, "No short term planning underway, but an intent to investigate in the future" considered a neutral response, and "No intent to pursue plans in this area" and "Did/made plans in the past, but discontinued" considered negative responses. Respondents were also provided an optional opportunity to provide details on their programs, explain reasons for pursuing particular strategies, or other details.

Respondents were also asked to provide some basic information on their bikesharing system, in order to investigate what system characteristics associate with the level of pursuit of equitable bikesharing system access. I requested information on ridership, number of bikes, number of docks, and number of stations, to investigate correlation between bikesharing system size, and the scope of equity programs. I also requested information on the bikesharing system business model, with options for characterizing business models adapted from DeMaio (2).

Additional business model options were added to the survey to differentiate between entities based upon the level of funding they receive from government transportation agencies for capital expenditures.

The next section will summarize and describe patterns in the bikesharing system responses. However, before doing so, I must note a number of qualifications and caveats with this study. First of all, responses in the survey are not weighted by importance. Certain interventions may be considered more important than others, such as the need for siting stations near low-income communities. However, this study does not attempt to attach different weights to any of the categories described.

This study also does not consider the scale of planned and implemented programs. As an example, Boston's provision of over 550 annual memberships at a subsidized price of \$5 counts equally in this analysis with a system that offers installment payments for an undiscounted annual membership. The former will arguably have a greater impact on increasing access to bikesharing, but each is given equal credit and weight in this analysis.

Additionally, optional supplementary comments provided by respondents do not always match the characterization of programs and plans indicated in the required multiple-choice questions. I did not amend any multiple-choice responses to better match the programs described in narrative text, as this would bias results for or against those who provided the optional narrative comments. However, the reader is cautioned to not over-rely on the reported number of programs planned or implemented by each system, and instead refer to the bikesharing systems' responses provided as Appendices B through W for necessary context.

Similarly, programs described may not be solely targeted to low income communities, or their establishment solely attributable to the bikesharing system. Again, these answers have been

left unchanged, and the reader is cautioned to refer to the bikesharing systems' responses provided as Appendices B through W for necessary context.

The next section summarizes the responses of bikesharing systems. It includes a basic summary of the responses received, summaries of the state of equity programs in each of the seven categories, discussion of similarities and differences between responses gathered from different-sized bikesharing systems, and discussion of similarities and differences between responses gathered from bikesharing systems of different business models and capital funding sources.

## **ANALYSIS AND DISCUSSION**

### **Characteristics of responding bikesharing systems**

A total of 22 survey responses were received from managers and operators of North American bikesharing systems. Responses came from officers of bikesharing operating entities, municipal planners, municipal transportation program managers, and public health program managers. Three people provided responses on behalf of Boston's Hubway system, and the information provided in those three responses is considered together as a single response in this analysis. Three people also provided responses on behalf of the Washington DC metropolitan area's Capital Bikeshare system. However, because each of those responses describes different programs being pursued by different and geographically-distinct government entities (Arlington County, VA, Montgomery County, MD, and Washington, DC), each of these responses is considered separately in this analysis. Therefore, a total of 20 bikesharing entities are represented in this report, out of an approximate total of 70 public bikesharing systems planned and deployed in North America (22).

Survey responses were solicited from all currently operating and planned North American bikesharing systems. Only two responses were received from Canadian bikesharing systems (the currently-operating Montreal, PQ system, and the planned Vancouver, BC system), so this report cannot provide any meaningful comparison between Canadian and American practices and plans. Responding bikesharing systems (shown in Table 1) have deployed (or plan to deploy) a total of 14,429 bicycles, 25,451 dock spots, located at 1,404 stations.

**Table 1. Basic information on responding bikesharing systems (listed by business model)**

Bikeshare System Name	Business Model	More / Less than half of capital funding from government transportation funds	Approximate number of bicycles available for use	Current number of dock spaces	Total rides in most recent 12 calendar months	Appendix
DecoBike (Miami Beach, Surfside & Bay Harbor Islands FL)	Concessionaire (for-profit)	Less	1,200	1,950	1,232,804	B
<i>Vancouver Public Bike Share (Canada)</i>	<i>For-profit organization</i>	<i>Less</i>	<i>1,500</i>	<i>3,000</i>	<i>**</i>	<i>C</i>
Boston (MA) Hubway	For-profit organization	More	1,000	1,770	512,682	D
Madison (WI) B-cycle	For-profit organization	Less	290	515	57,000	E
<i>Capital Bikeshare - Montgomery County, Maryland</i>	<i>Government agency directly administers system</i>	<i>More</i>	<i>**</i>	<i>**</i>	<i>**</i>	<i>F</i>
Capital Bikeshare - Washington DC	Government agency directly administers system	More	1,630	3,260	2,000,000	G
<i>San Francisco Bay Area Regional Bike Sharing Pilot (City of San Francisco)</i>	<i>Government agency directly administers system</i>	<i>More</i>	<i>500</i>	<i>950</i>	<i>**</i>	<i>H</i>
Capital Bikeshare - Arlington	Government agency directly administers system	More	360	550	88,000	J
Bike Chattanooga Bicycle Transit System	Government agency directly administers system	More	225	462	8,400	K
<i>Fort Worth Bike Sharing</i>	<i>Non-profit organization</i>	<i>More</i>	<i>**</i>	<i>**</i>	<i>**</i>	<i>L</i>
BIXI Montreal	Non-profit organization	Less	5,120	8,080	4,300,000	M
Nice Ride Minnesota	Non-profit organization	More	1,300	2,600	274,045	N
<i>Puget Sound Bike Share</i>	<i>Non-profit organization</i>	<i>Less</i>	<i>500</i>	<i>1,000</i>	<i>**</i>	<i>P</i>
Denver	Non-profit organization	Less	500	800	200,000	Q
Boulder B-cycle	Non-profit organization	More	125	262	23,500	R
Kansas City B-cycle	Non-profit organization	Less	90	110	*	S
Omaha B-cycle	Non-profit organization	Less	35	50	3,000	T
Des Moines (IA) Bicycle Collective	Non-profit organization	Less	22	44	2,200	U
Houston Bike Share aka Houston B-cycle	Non-profit organization	More	18	28	1,829	V
Spartanburg (SC) B-cycle	Non-profit organization	Less	14	20	3,000	W

\*System has not been open for 12 months

\*\*System is not yet open, and cannot provide estimates. Systems that did not provide information on number of docks or stations are not planned to be above the median of responding systems, and thus do not affect calculations later.

*Systems in italics have not yet deployed*

A range of bikesharing system business models are represented among the respondents. Four systems characterize themselves as for-profit entities, one system characterizes itself as a concessionaire, five systems are directly managed by a government agency, and ten systems (a plurality) are nonprofit entities. Table 1 further describes the business models represented in this

survey, with responses from for-profit and nonprofit entities separately classified by whether or not they receive a majority of their capital funding from government transportation funds. Fifteen of the systems represented in this study have been deployed, while five responses are from systems that are still in planning. All five of these systems are planned for deployment in calendar year 2013.

I also compiled basic demographic data for the municipalities served by the responding bikesharing systems. As shown in Table 2, median household income and percentage of non-white residents were compiled to provide basic context to the equity efforts of the responding bikesharing systems.



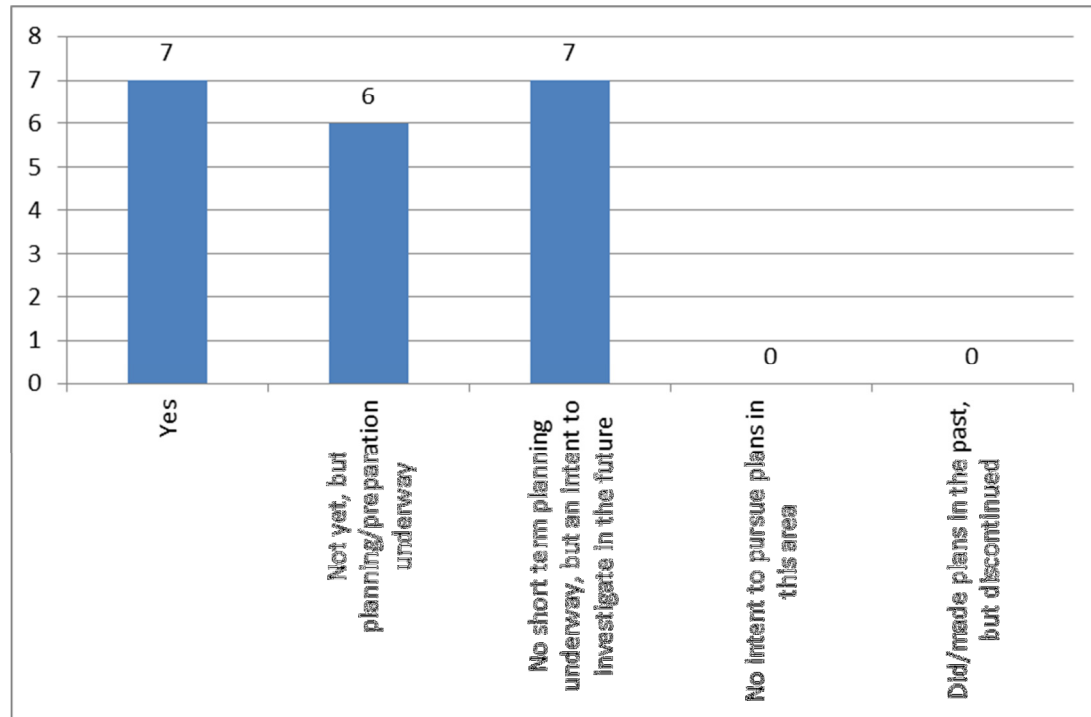
**Table 2. Median household income and percentage of non-white residents for municipalities corresponding to bikesharing systems (listed alphabetically)**

<b>Municipality</b>	<b>Median Household Income</b>	<b>Percentage of Population that is Non-White</b>	<b>Source</b>
Arlington County, VA	\$ 99,651	22.7%	a
Boston, MA	51,739	46.1%	a
Boulder, CO	54,051	12.0%	a
Chattanooga, TN	43,989	20.5%	a
Denver, CO	47,499	31.1%	a
Des Moines, IA	44,997	23.6%	a
Fort Worth, TX	50,456	38.9%	a
Houston, TX	44,124	49.5%	a
Kansas City, MO	45,246	40.8%	a
Madison, WI	52,374	11.6%	a
Miami Beach, FL	42,411	12.6%	a
Minneapolis, MN	47,478	36.2%	a
Montgomery County, MD	95,660	36.4%	a
Montreal, PQ	38,522*	26.0%	b
Omaha, NE	46,978	26.9%	a
San Francisco, CA	72,947	51.5%	a
Seattle, WA	61,856	30.5%	a
Spartanburg, SC	33,375	54.4%	a
Vancouver, BC	47,696*	51.0%	b
Washington, DC	61,835	57.6%	a
a -- US Census Bureau. State and County QuickFacts. Data derived from American Community Survey 2011. <a href="http://quickfacts.census.gov/qfd/index.html">http://quickfacts.census.gov/qfd/index.html</a> (accessed December 6, 2012)			
b -- Statistics Canada. 2007. 2006 Community Profiles. 2006 Census. Statistics Canada Catalogue no. 92-591-XWE. Ottawa. Released March 13, 2007. <a href="http://www12.statcan.gc.ca/census-recensement/2006/dp-pd/prof/92-591/index.cfm?Lang=E">http://www12.statcan.gc.ca/census-recensement/2006/dp-pd/prof/92-591/index.cfm?Lang=E</a> (accessed December 6, 2012)			
*Median income expressed in US Dollars, calculated using Bank of Canada December 6, 2012 closing exchange rate ( <a href="http://www.bankofcanada.ca/rates/exchange/">http://www.bankofcanada.ca/rates/exchange/</a> )			

### **Responses by category**

This section will present data on the status of any plans to attempt to reduce access barriers to bikesharing. It will also describe specific tactics and results, taken from an optional comment section in the survey where respondents were offered the opportunity to describe and provide further details on their particular tactics and results. This section will identify cities that are pursuing specific tactics, but it is not intended to be a conclusive inventory of specific tactics undertaken, as other cities may in fact be pursuing similar tactics, but chose not to describe them.

## STATION SITING

**FIGURE 3. Bikesharing system responses on siting stations to primarily serve low-income communities**

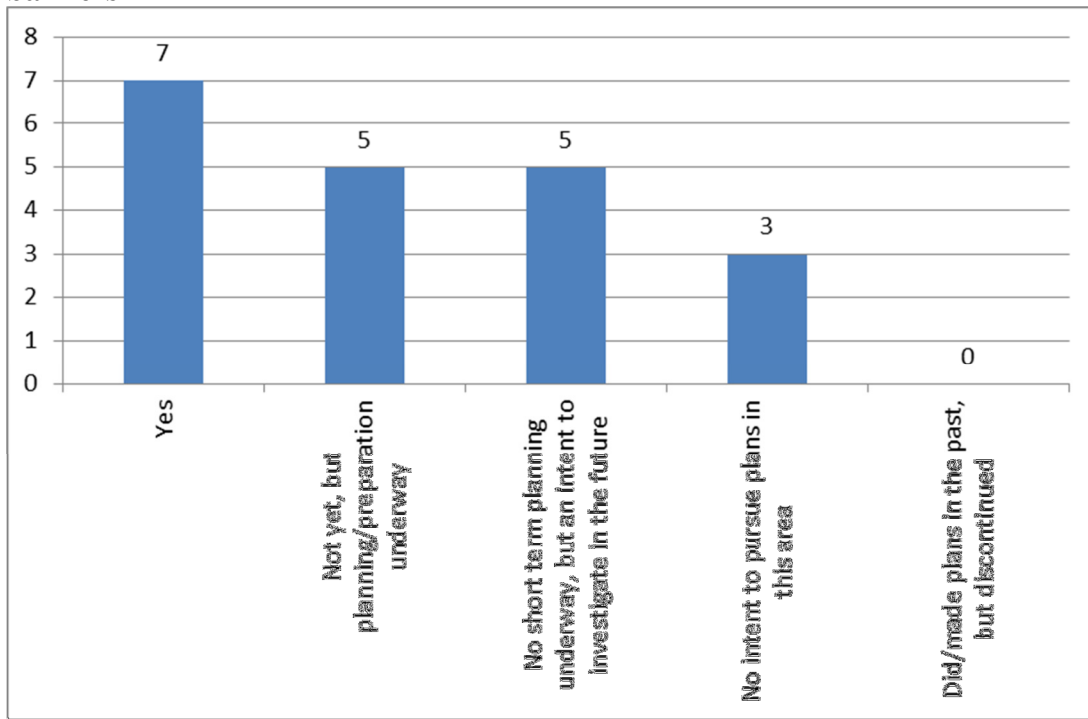
This question asked bikesharing system managers if they were planning to ensure that some stations are located in areas primarily serving low-income communities. Examples might include conscious placement of stations adjacent to affordable housing, or prioritizing expansion to minority neighborhoods disproportionately underrepresented in bicycling.

As shown in Figure 3, a majority of respondents have or are actively planning to deploy bikesharing stations in low-income communities, or with the input of communities underrepresented in bicycling. Most of the remainder report that they plan to pursue such station siting in the future. For a majority of these systems, a lack of available capital funding is often cited as a limiting factor in expanding bikesharing systems to low-income neighborhoods. One respondent noted that without funding identified to locate in low-income neighborhoods, few efforts are planned to lower access barriers to bikesharing, using the rationale that if there are no stations located near low-income populations, then any other measures would be largely wasted.

A notable example in this category is NiceRide Minnesota, which placed 30 stations (or approximately 20% of their system) in areas identified by the community as necessary for equity. Other systems reported placing systems in low-income neighborhoods, or adjacent to affordable housing, but often those placements were incidental, and determined in part by other factors.

FINANCIAL ASSISTANCE

**FIGURE 4. Bikesharing system responses on providing assistance in overcoming financial barriers**



Providing some variety of financial assistance to lower access barriers to bikesharing was the most prevalent category of equity program pursued by bikesharing systems. One specific tactic used is to partner with a nonprofit agency providing bank accounts and debit/credit cards to low-income “unbanked” citizens. Having a billing account is necessary to check out a bicycle, and not having such an account is an access barrier for many low-income potential users (23). Five respondents (Arlington County, Washington DC, Montgomery County, Fort Worth, and San Francisco) indicated existing or planned programs to partner with organizations to assist qualified recipients to obtain a bank account and debit/credit card. Seven respondents (Madison,

Chattanooga, Arlington County, Washington DC, Montgomery County, Minneapolis, and Miami) indicated that their system did not place a temporary ‘reserve’ on a user’s credit limit, or were investigating other solutions to securitize the rental. One system (Arlington County) noted that they were investigating ways to allow for cash payments, which would obviate the need for a debit/credit card entirely. Five respondents (Arlington County, Washington DC, Montgomery County, Miami, and Minneapolis) offer (or plan to offer) installment payment plans to overcome the cash-flow barrier of paying the full fixed cost of an annual membership at one time.

Seven respondents (Boston, Arlington County, Washington DC, Montgomery County, Denver, Miami, and Fort Worth) indicated existing or planned programs to provide subsidized memberships for low-income recipients. Such subsidy programs appear largely contingent upon securing a supplemental funding source, such as a public health grant or cooperation with an affordable housing authority, to support the subsidy.

One notable example is the planned Montgomery County Capital Bikeshare system, which will subsidize the entire membership fee and some usage fees for qualified low-income participants. Montgomery County’s program includes a variety of other measures intended to lower bikesharing access barriers, and is funded by the Federal Transit Administration’s now-defunct Job Access and Reverse Commute program, which:

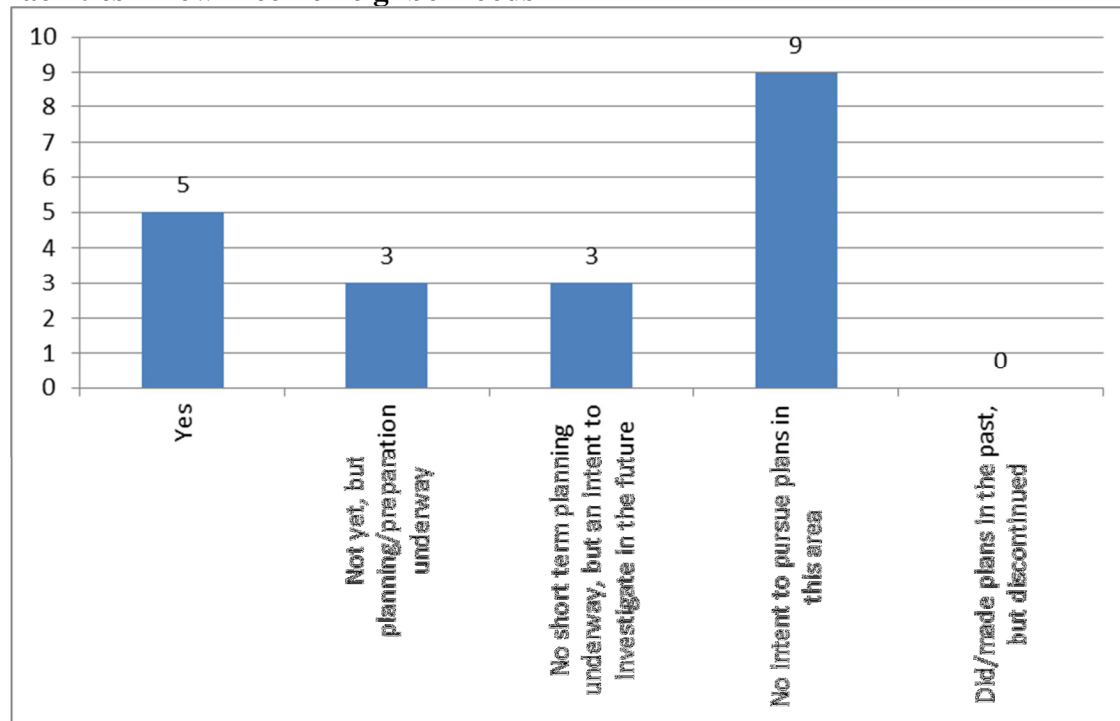
...was established to address the unique transportation challenges faced by welfare recipients and low-income persons seeking to obtain and maintain employment. Many new entry-level jobs are located in suburban areas, and low-income individuals have difficulty accessing these jobs from their inner city, urban, or rural neighborhoods. In addition, many entry level-jobs require working late at night or on weekends when conventional transit services are either reduced or non-existent. Finally, many employment related-trips are complex and involve multiple destinations including reaching childcare facilities or other services. (24)

Another notable example in this category is The Hubway Boston, which provided over 550 annual memberships to qualified low-income recipients at a cost of \$5 each, along with longer-

than-normal allowable trip durations. Boston also investigated (but ultimately had to cancel) a referral program dubbed “Prescribe a Bike,” where medical providers referred at-risk patients to subsidized bikesharing memberships. The Boston programs are administered and funded by an obesity prevention public health program.

#### SAFE PLACES TO RIDE

**FIGURE 5. Bikesharing system responses on promoting installation of bicycle travel facilities in low-income neighborhoods**



One possible barrier to bikesharing use could be a perceived absence of safe places to ride a bicycle. This question asked bikesharing systems to describe any efforts to encourage and promote the installation of bicycle travel facilities in neighborhoods with low-income and groups disproportionately underrepresented in bicycling. The inclusion of this category originated from a bikesharing system who indicated that they were active in identifying gaps in the bicycle facility network that occurred in socioeconomically-disadvantaged communities, and used their status as a significant stakeholder in the region’s bicycle community to lobby for improvements.

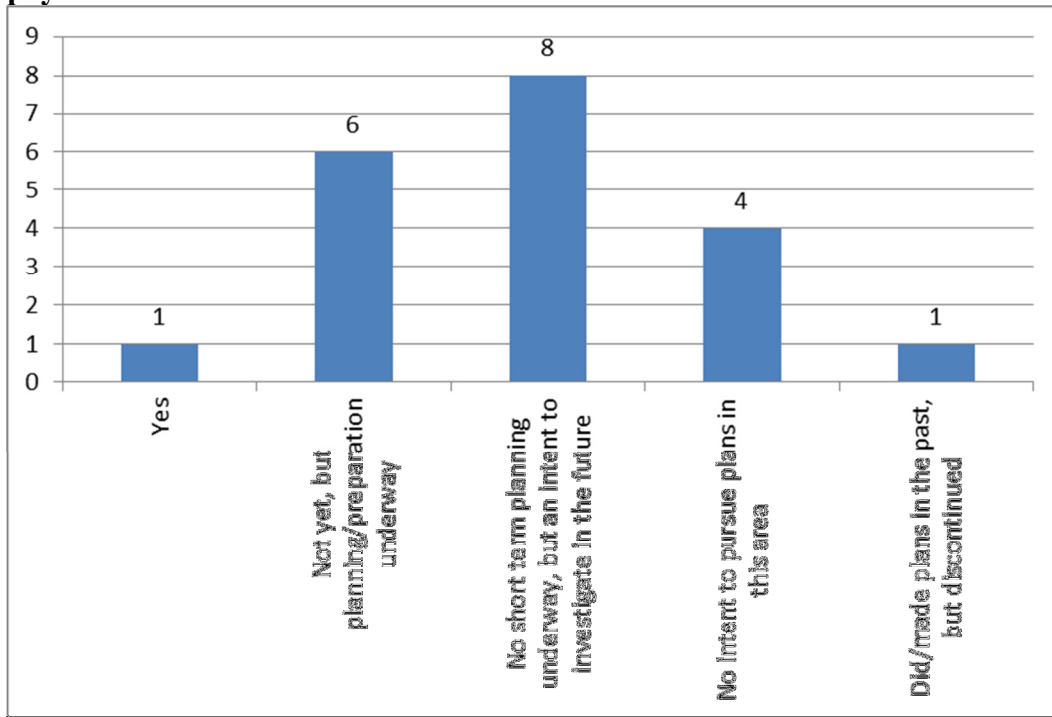
Six bikesharing systems (Arlington County, Kansas City, Miami, Montreal, Minneapolis, and Boston) indicated that they were proactive in identifying, encouraging, and/or assisting in creation of bike facilities in low income or minority groups underrepresented in bicycling. However, some of the detailed comments offered seemed to contradict this characterization, with some indicating that the bikesharing system was a strong advocate for bike facilities wherever the system had stations, and others conflating the bikesharing system's role in this category with that of the municipality.

A majority of systems do recognize the role that bike facilities play in encouraging ridership, and intend to play a role in encouraging bike facility development in areas around their stations. Several systems (such as Minnesota and Montgomery County) expressed the intent to pay particular attention to encouraging bike facilities in communities of low income or minority groups underrepresented in bicycling.

A notable example in this category is Kansas City B-cycle, a nonprofit bikesharing entity receiving less than half of its capital funding from government transportation funding, and among the smallest systems in this sample. Kansas City B-cycle is actively pursuing Safe Routes to School and other grants to directly institute bicycle travel facility improvements themselves.

MEMBERSHIP MEDIA

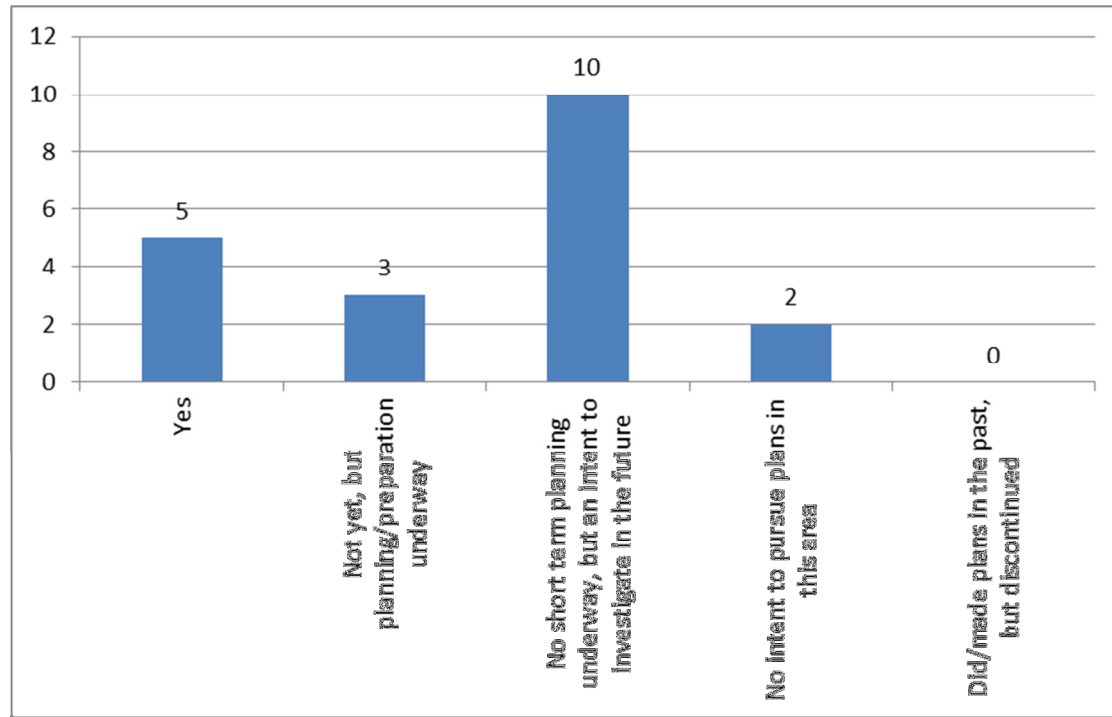
**FIGURE 6. Bikesharing system responses on providing more easily-obtained means of payment**



This question asked systems to characterize any plans to integrate bikesharing payment media with other accounts that low-income people may already have, including transit fare-cards and household utility billing accounts.

Five systems (San Francisco, Arlington County, Washington DC, Montgomery County, and Boston) specifically noted plans and efforts to integrate with regional public transportation fare-cards. However, obstacles with current bikesharing station hardware were cited, and Boston noted that they had unsuccessfully pursued grant funding to retrofit their bikesharing stations for compatibility with the regional transit fare-card.

## COMMUNITY-SPECIFIC MARKETING AND OUTREACH

**FIGURE 7. Bikesharing system responses on conducting community-specific marketing and outreach**

This question asks about community-specific marketing and outreach efforts being made to introduce low-income and minority groups underrepresented in bicycling to bikesharing. By targeting marketing and outreach specifically to low-income communities, or by targeting marketing and outreach to the concerns and communications channels of minority communities underrepresented in bicycling, bikesharing systems might be able to activate latent demand for system use in these communities.

Eight systems (Fort Worth, Arlington County, Washington DC, Montgomery County, Denver, Madison, Boston, and Minnesota) note that they have, or have plans to, conduct such outreach. Several mention targeted outreach through affordable housing authorities, churches, and community-based organizations.

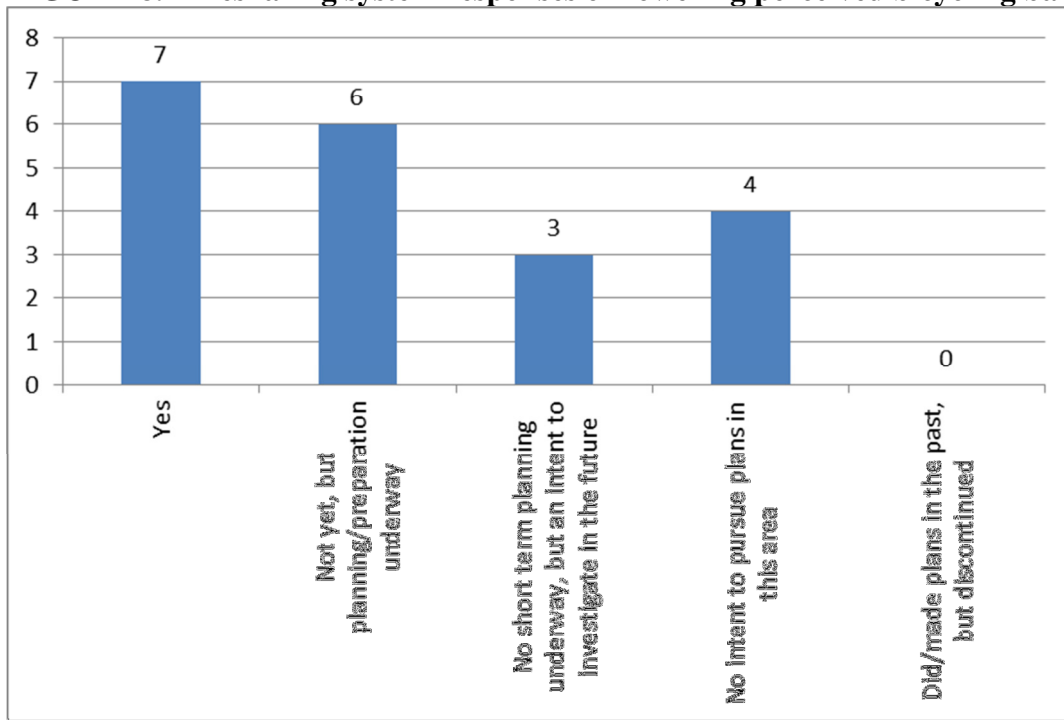
A notable example is Arlington County Capital Bikeshare, where the largest low-income demographic group is members of the Latino community with limited English proficiency. A



special outreach program targeted at the county’s non-English-speaking Latino community will provide encouragement for all of the County’s sustainable transportation programs, to include Capital Bikeshare.

OVERCOMING BICYCLING BARRIERS

**FIGURE 8. Bikesharing system responses on lowering perceived bicycling barriers**



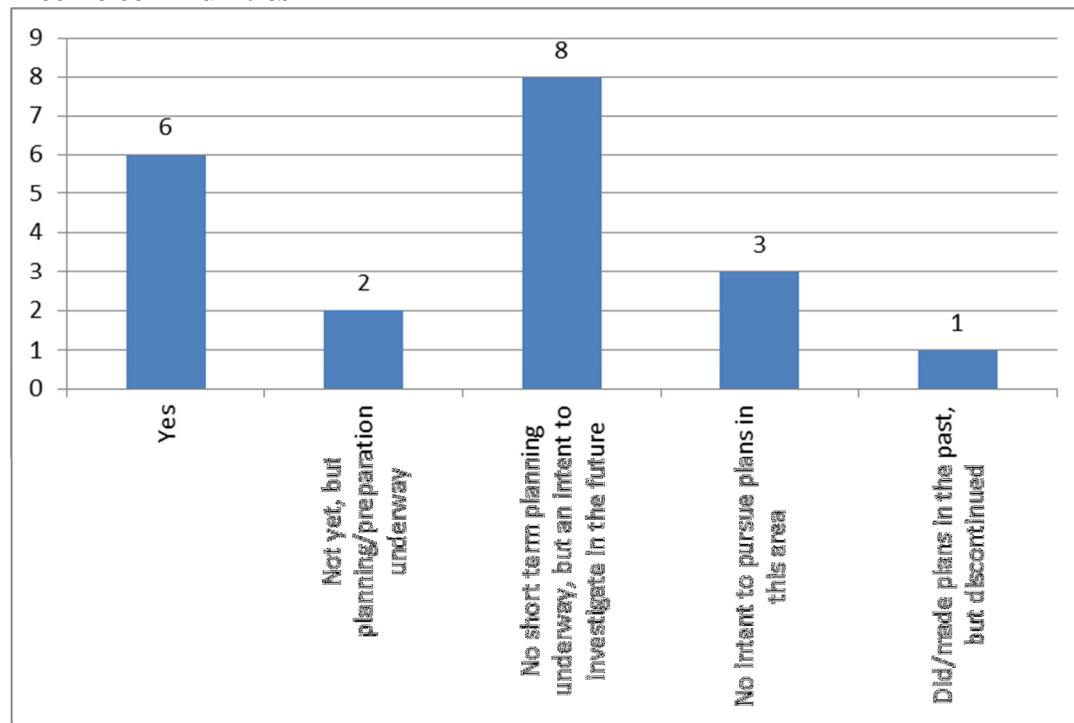
This question asked about efforts to make resources available that could help lower perceived barriers to bicycling and bikesharing use among low-income and minority groups underrepresented in bicycling, such as making helmets and basic bicycle instruction easily available. Several systems described programs to provide subsidized (even free) helmets, and bicycle safety instruction workshops. Partners identified in delivering these programs included bicycle shops, community colleges, and local bicycle advocacy organizations.

A notable example in this category is The Hubway Boston, where reduced-cost helmets are made available in retail locations in close proximity to stations, and free helmets are given to

subsidized low-income members. Instructional bicycling safety classes are also offered, though one Boston respondent characterizes attendance at these classes as “low.”

## PROVIDING ECONOMIC CONTRIBUTION TO COMMUNITIES

**FIGURE 9. Bikesharing system responses on contributions to economic vitality of low-income communities**



Bikesharing has the potential to provide some intrinsic economic benefits to all communities, such as reducing the personal costs of travel for users. Also, survey data indicates that bikesharing may help generate more trips overall (20), and higher per-capita trips are associated with greater economic activity. However, this question asked bikesharing systems about ways in which the operations are directly contributing to the economic well-being of low-income communities. Examples of such contributions could include active recruiting of employees from low-income communities, locating facilities (and their associated jobs) in places easily accessible to low-income neighborhoods, and partnering and subcontracting with community-oriented nonprofit agencies.

Eight systems (Kansas City, Denver, Montreal, Miami, Minnesota, Boston, Washington, and Montgomery County) noted that they implemented (or are planning to implement) measures to deliver direct economic benefits to low-income communities. Several noted that their facilities were located in a low-income neighborhood, providing close proximity to potential jobs for residents of those communities. Some other notable examples provided by survey respondents include partnering with a local Goodwill Industries nonprofit agency to recruit employees from low-income communities (Denver B-cycle), partnering with a youth-service program to provide maintenance labor (Montreal BIXI), and subcontracting procurement preferences for minority-owned small businesses (Montgomery County Capital Bikeshare).

### **Responses by system characteristics**

This section tests hypotheses that characteristics of sampled bikesharing systems (business model, system size, recipient of government funding, deployment status, median household income of the jurisdiction, and percentage of the jurisdiction's population who is non-white) have a significant correlation with the average number of programs bikesharing systems pursue to reduce access barriers. Examination of these independent variables may help to guide the decisions of bikesharing system managers and planners. Significant differences could indicate that particular strategies or circumstances are correlated with relatively higher or lower numbers of programs implemented or planned. Similarly, examining these independent variables may help to set expectations for community members interested in bikesharing system deployment.

With the hypothesis that for-profit bikesharing systems would be less likely to pursue equity programs because of a profit motive, the business model of responding bikesharing systems was selected as an independent variable to help inform bikesharing stakeholders. Conversely, a general government motivation to provide social services, and the socioeconomic

missions of nonprofit agencies, are hypothesized to create an incentive to pursue a greater number of programs to lower bikesharing system access barriers.

System size, as measured by number of stations, is hypothesized to have a positive relationship with pursuing equity programs. With the greater geographic reach of these systems, lowering access barriers to different spatially-distributed communities is not simply a “good” thing to do, but may be necessary to maximize the use of capital assets.

Most government transportation funding does not explicitly require pursuing proactive programs to lower access barriers (the JARC Program used by Montgomery County, MD referenced earlier is one exception). However, it is hypothesized that an inherent government interest in promoting equity would lead to government transportation funding being used in pursuit of bikesharing systems with fewer access barriers.

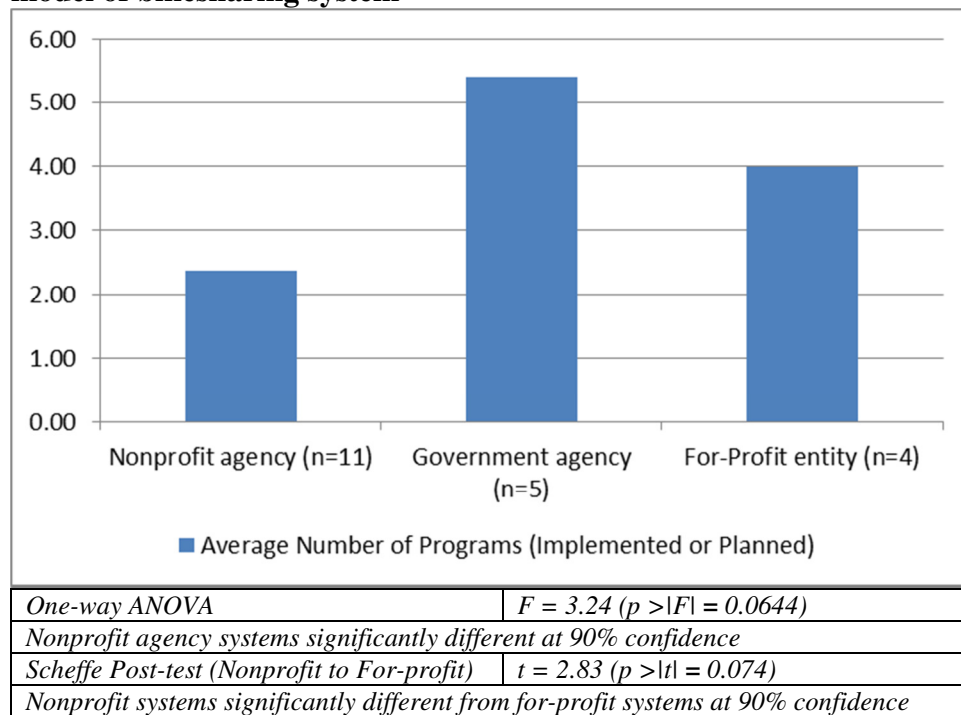
Deployment status is selected as an independent variable to examine whether or not the implementation of programs to lower access barriers is changing over time. It is hypothesized that, with the maturity of operational bikesharing systems and the growing awareness of possible access barriers, bikesharing systems still in a pre-deployment phase would plan for more programs to lower access barriers than operational bikesharing systems.

Two independent variables describe characteristics of the broader municipality where the bikesharing system operates. The median household income of the municipalities is hypothesized to have a negative relationship with the number of programs deployed to lower access barriers. The percentage of non-white residents is hypothesized to have a positive relationship with the number of programs deployed to lower access barriers. In both cases, it is hypothesized that lower incomes and more residents belonging to racial groups disproportionately underrepresented in bicycling would create greater impetus to lower access barriers to the bikesharing system.

In this analysis, I considered responses of “Yes” and “Not yet, but planning/preparation underway” as affirmative answers. Because public bikesharing systems are new to North America (with the oldest system in this sample, Montreal’s BIXI, deployed in May 2009), it is possible that systems that have deployed may not have rolled out their full set of planned programs to reduce access barriers. Also, this helps to make the responses from the five systems in this sample that have yet to begin operation more comparable to the systems that have already deployed.

**BUSINESS MODELS**

**FIGURE 10. Average number of programs implemented or in active planning, by business model of bikesharing system**



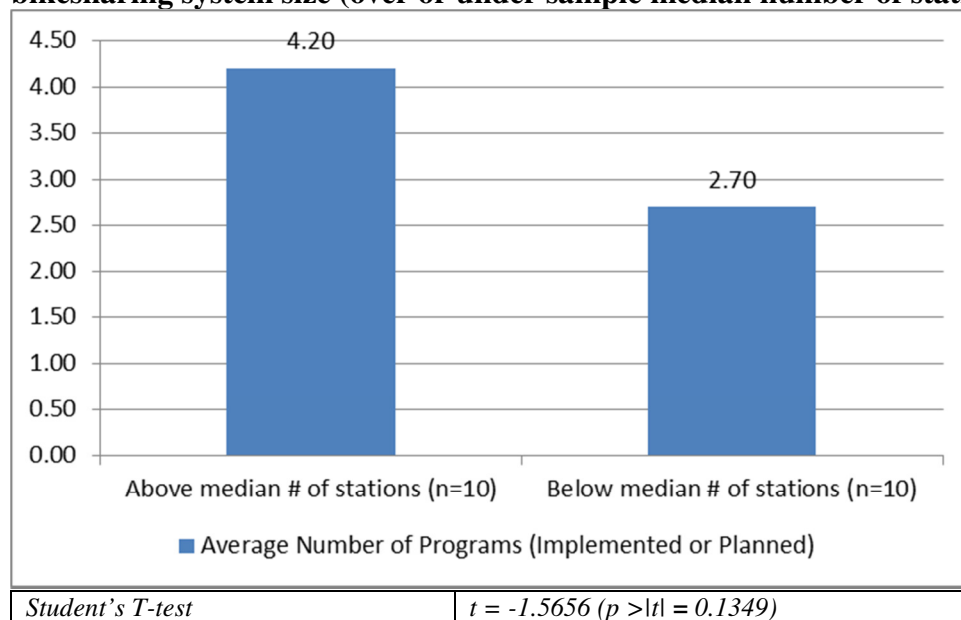
The survey asked respondents to classify their system in one of seven options for bikesharing system business models, depending on the type of organization leading the bikesharing system, and further subdivided by the amount of capital funding that the organization receives from government transportation funding sources. However, in this section, those seven options have

been generalized into three broader categories of business models – government, nonprofit agency, and for-profit entity.

For-profit entities report pursuing equity programs in an average of 4.0 categories, while nonprofit agencies report pursuing equity programs in an average of 2.4 categories, and government systems in 5.4 categories. This result is slightly counterintuitive, as one might hypothesize that the socioeconomic missions of nonprofit agencies would lead them into pursuit of equity. Nonprofit agency status is the only system characteristic variable where a statistically-significant difference (90%) was observed (using Scheffe post-test to the ANOVA).

SYSTEM SIZE

**FIGURE 11. Average number of programs implemented or in active planning, by bikesharing system size (over or under sample median number of stations)**

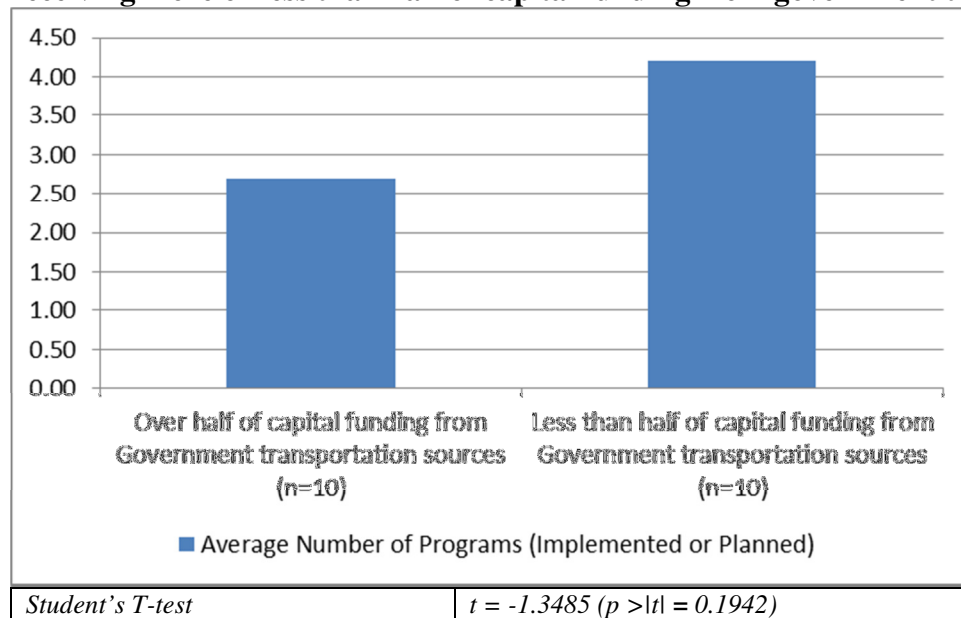


The median number of stations among the responding systems is 38.5. With some equity encouragement programs, such as station siting and targeted outreach efforts, scaling with system size, it is to be expected that smaller systems pursue equity programs in fewer among the seven categories than larger systems. Accordingly, larger systems in this study report pursuing equity programs in an average of 4.2 out of the seven categories, while smaller systems report

pursuing equity programs in an average of 2.7. However, this difference was not observed to be statistically significant.

GOVERNMENT TRANSPORTATION FUNDING

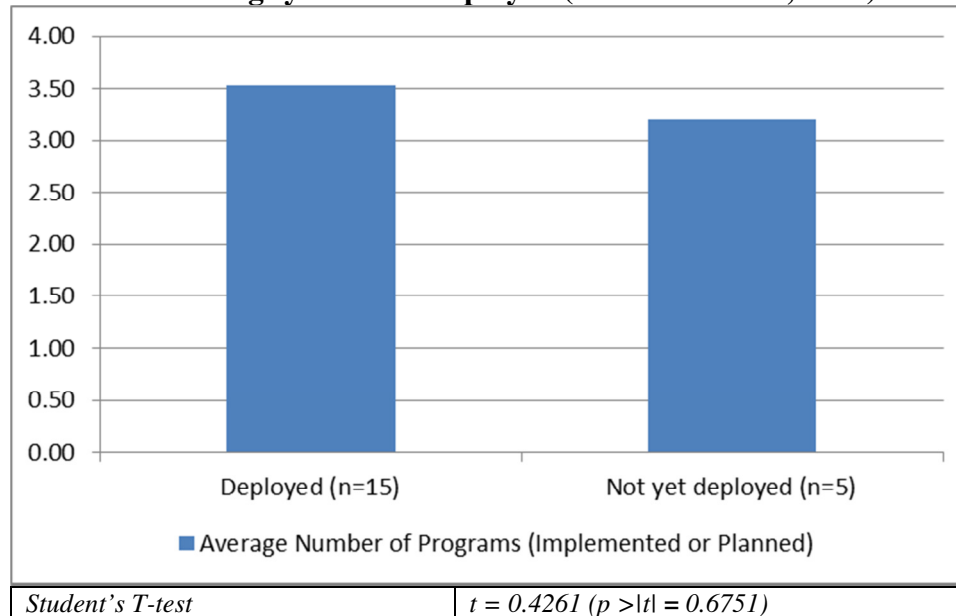
**FIGURE 12. Average number of programs implemented or in active planning, by system receiving more or less than half of capital funding from government transportation source**



As shown above, an equal number of bikesharing systems responding to the survey receive more than and less than half of their capital funding from government transportation sources. While these funds can only be used for a limited subset of the equity programs described herein (such as station siting), it is theorized that having a significant government financial role in a bikesharing system would encourage the pursuit of equity.

Contrary to this hypothesis, systems that do not receive over half of their capital funding from government actually report, on average, pursuing programs in more of the seven categories than those who do receive more than half of their capital funding from government transportation sources. However, this difference was not observed to be statistically significant.

## DEPLOYMENT STATUS

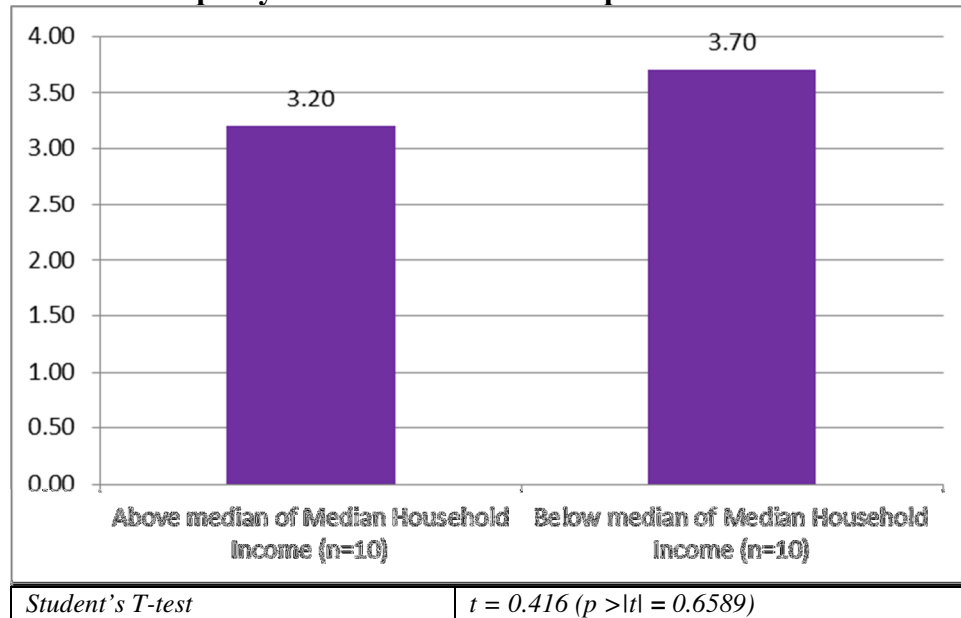
**FIGURE 13. Average number of programs implemented or in active planning, by whether or not bikesharing system had deployed (as of November, 2012)**

More responses were received from systems that have already deployed (fifteen), versus the number that have yet to deploy (five). Systems that have already deployed have pursued, or plan to pursue, an average of 3.5 of the seven categories of equity programs, while systems that have yet to deploy are planning on initially pursuing an average of 3.2 of the seven categories. This difference is not surprising, as systems that have yet to deploy have many considerations besides implementing programs to encourage equitable access. However, this difference was not observed to be statistically significant.



MEDIAN HOUSEHOLD INCOME OF MUNICIPALITY

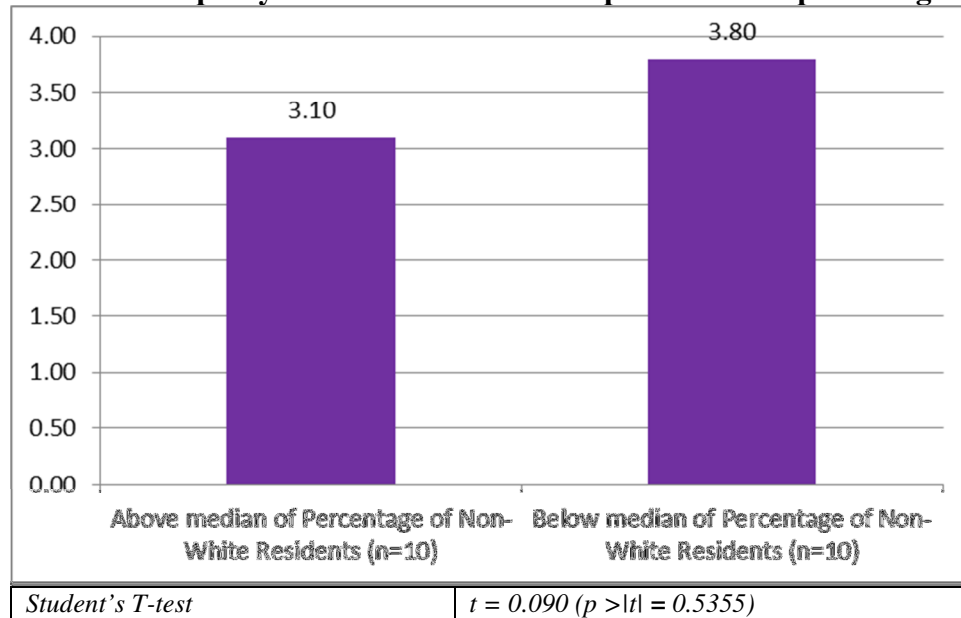
**FIGURE 14. Average number of programs implemented or in active planning, by whether or not municipality lies above or below sample median of Median Household Income**



Systems planned or deployed in municipalities where the median household income lies below the sample median have pursued, or plan to pursue, an average of 3.7 of the seven categories of equity programs, while systems planned or deployed in municipalities where the median household income lies above the sample median have pursued, or plan to pursue, an average of 3.2 of the seven categories. This difference conforms to the expectation of the hypothesis. However, this difference was not observed to be statistically significant.

PERCENTAGE OF NON-WHITE RESIDENTS IN MUNICIPALITY

**FIGURE 15. Average number of programs implemented or in active planning, by whether or not municipality lies above or below sample median of percentage of non-white residents**



Systems planned or deployed in municipalities where percentage of non-white residents lies below the sample median have pursued, or plan to pursue, an average of 3.8 of the seven categories of equity programs. Systems planned or deployed in municipalities where percentage of non-white residents lies above the sample median have pursued, or plan to pursue, an average of 3.1 of the seven categories. This difference does not conform to the expectation of the hypothesis. A weakness of this analysis is that the independent variable characterizes an entire municipality, while the bikesharing system may only serve a small portion of the municipality. However, this difference was not observed to be statistically significant.

**SUGGESTIONS FOR FURTHER RESEARCH**

Bikesharing in North America is relatively new, and as a result, there are very few studies describing exactly who is joining and using bikesharing systems. Furthermore, such demographic data is difficult to obtain for bicyclists in general, with national household travel

surveys only being conducted every few years, regional household travel surveys even rarer, and Census data only accounting for commute trips. Further research comparing socioeconomic traits of bikesharing users, bicyclists in general, and a region's overall population is needed to firmly establish whether or not there is a significant equity gap in bikesharing participation. For comparisons across bikesharing systems, there is a need for more detailed independent variables than those used here, such as measures of income gap, statistics more closely attributable to a bikesharing system's service area, or identification of races underrepresented in bicycling in particular municipalities

For the programs described herein, more research is necessary to make the information more useful to practitioners. This survey was kept intentionally short to maximize response rate, in order to provide a broad snapshot of current practice. Assuming that there is a significant equity gap in bikesharing, further study is needed to determine the relative significance of the theorized access barriers to bikesharing. Future research could also provide fuller case studies of equity programs in bikesharing, to include more details about the programs, their effectiveness, sources of funding, and their benefits and costs. Additionally, each of the seven categories of equity programs examined in this survey warrants its own separate examination of details, effectiveness, funding, and benefits and costs.

A repeat of this survey may be warranted in several years. Many of the systems responding to this survey indicated that planning or implementing programs focused on equity was premature, as they were still trying to get their systems established. Several representatives of systems in the planning stages communicated privately that they could not respond to the survey, due to procurement process concerns. Survey responses were not received from representatives of four planned systems, which are planned to be among the largest in North America: New York City, NY, Los Angeles, CA, Chicago, IL, and Portland, OR. An overview

of North American practices after those systems have been established, and other systems have developed, might provide more information on a range of equity programs.

European and Asian bikesharing systems were not included in this study for a variety of reasons, such as language barriers and difficulty in identifying points-of-contact for administering the survey. A survey that examines any equity gaps in European and Asian bikesharing system usage, and describes ways that those systems seek to address those gaps, could provide a useful comparison.

## **CONCLUSION**

North American public bikesharing systems are pursuing a variety of measures to lower access barriers. In all seven of the categories examined in this study, multiple bikesharing system respondents reported that they had implemented or planned measures to address access barriers. Where they had yet to implement or plan measures, comments often stated a desire to pursue measures, but a frequent reason given for not implementing a measure was a lack of funding. Conversely, many bikesharing systems that had implemented measures to reduce access barriers had identified and secured dedicated funding. With the significant costs of obesity, and the disproportionate impact on low-income communities, the public health and bikesharing communities have substantial common ground.

This study did not primarily seek to establish the determinants of efforts to reduce access barriers, and the only statistically significant pattern noted in this study is a lower adoption rate with those systems operating as nonprofit agencies. Because of the small sample size of this study, it was not possible to further cross-tabulate with other variables, such as government transportation funding or system size. There is no reason to believe that nonprofit agencies are

somehow intrinsically less likely to pursue measures to reduce access barriers to bikesharing, but may be an opportunity for closer examination of the barriers these nonprofit agencies experience in trying to reduce access barriers to the use of their systems.

## REFERENCES

1. Shaheen, Susan; Guzman, S., and H. Zhang (2010). Bikesharing in Europe, the Americas, and Asia: Past, Present, and Future. *Transportation Research Record: Journal of the Transportation Research Board*. [http://76.12.4.249/artman2/uploads/1/Bikesharing\\_in\\_Europe\\_the\\_Americas\\_and\\_Asia.pdf](http://76.12.4.249/artman2/uploads/1/Bikesharing_in_Europe_the_Americas_and_Asia.pdf)
2. Paul DeMaio and MetroBike, LLC (2009). Bike-sharing History, Impacts, Models of Provision, and Future. *Journal of Public Transportation*. 12(4), 41-56.
3. Krykewycz, Gregory R., Christopher M. Puchalsky, Joshua Rocks, Brittany Bonnette, Frank Jaskiewicz. Defining a Primary Market and Estimating Demand for Major Bicycle-Sharing Program in Philadelphia, Pennsylvania. *Transportation Research Record* 2143. 2010.
4. Buck, Darren and Buehler, Ralph. "Bike Lanes and Other Determinants of Capital Bikeshare Trips." Paper #12-3539. Presented at 91st Annual Meeting of the Transportation Research Board, Washington, D.C., 2012.
5. Maurer, Lindsay Kathryn. "Feasibility Study for a Bicycle Sharing Program in Sacramento, California." Paper #12-4431. Presented at 91st Annual Meeting of the Transportation Research Board, Washington, D.C., 2012.
6. Shaheen, Susan A., Martin, Elliot W., Cohen, Adam P., and Rachel S. Finson. 2012. Public Bikesharing in North America: Early Operator and user Understanding. Report 11-26. Mineta Transportation Institute. <http://transweb.sjsu.edu/PDFs/research/1029-public-bikesharing-understanding-early-operators-users.pdf>. Accessed October 12, 2012.
7. Buck, Darren, Ralph Buehler, Natalie Borecki, Payton Chung, Patricia Happ, and Bradley Rawls. "Are Bikeshare Users Different from Regular Cyclists? A First Look at Short-Term Users, Annual Members, and Area Cyclists in the Washington, DC Region" Paper #13-5029. Draft paper to be presented at 92nd Annual Meeting of the Transportation Research Board, Washington, D.C., 2012.
8. Meyer, Jeremy P. "Denver B-Cycle program faces criticism that it skirts poor, minorities." *Denver Post*. September 30, 2012. [http://www.denverpost.com/politics/ci\\_21663660/denver-b-cycle-program-faces-criticism-that-it](http://www.denverpost.com/politics/ci_21663660/denver-b-cycle-program-faces-criticism-that-it) . Accessed November 22, 2012.
9. Parkes, Stephen, and Marsden, Greg. "City Bike Hire Schemes: Emerging Trends in Europe." Paper #12-1579. Presented at 91st Annual Meeting of the Transportation Research Board, Washington, D.C., 2012.
10. Kim, DongJun, Shin, HeeCheol, Im, Hyeongjun, and Park, Junsik. "Factors Influencing Travel Behaviors in Bikesharing." Paper #12-1310. Presented at 91st Annual Meeting of the Transportation Research Board, Washington, D.C., 2012.
11. Bachand-Marleau, Julie, Lee, Brian H. Y, and El-Geneidy, Ahmed M. "Toward a Better Understanding of Factors Influencing Likelihood of Using Shared Bicycle Systems and Frequency of Use." Paper #12-1310. Presented at 91st Annual Meeting of the Transportation Research Board, Washington, D.C., 2012.
12. Tang, Y., Pan, H., Shen, Q., "Bike-sharing Systems in Beijing, Shanghai and Hangzhou and Their Impact on Travel Behavior." Paper #11-3862. Proceedings of 90th Transportation Research Board Annual Meeting, Washington, D.C., 2011.
13. "Bike Sharing in the United States: State of the Practice and Guide to Implementation." September 2012. Prepared by Toole Design Group and the Pedestrian and Bicycle Information Center for USDOT Federal Highway Administration. <http://www.bicyclinginfo.org/promote/bikeshareintheus.pdf>. Accessed November 11, 2012.
14. Cradock, Angie L., Philip J. Troped , Billy Fields, Steven J. Melly, Shannon V. Simms, Franz Gimmler, and Marianne Fowler. Factors Associated with Federal Transportation Funding for Local Pedestrian and Bicycle Programming and Facilities. *Journal of Public Health Policy* (2009) 30, S38-S72.
15. National Highway Transportation Safety Administration. Volume II: Findings Report National Survey of Bicyclist and Pedestrian Attitudes and Behavior. Report number DOT HS 810 972. August

2008.  
<http://www.nhtsa.gov/DOT/NHTSA/Traffic%20Injury%20Control/Articles/Associated%20Files/810972.pdf> Accessed November 2, 2012.
16. Pinjari, A.R., Eluru, N., Bhat, C.R., Pendyala, R.M., Spissu, E.: Joint model of choice of residential neighborhood and bicycle ownership: accounting for self-selection and unobserved heterogeneity. *Transportation Research Record* 2082, 17–26 (2008)
  17. Meyer, Jeremy P. “Denver B-Cycle program faces criticism that it skirts poor, minorities.” *The Denver Post*, September 30, 2012. [http://www.denverpost.com/politics/ci\\_21663660/denver-b-cycle-program-faces-criticism-that-it](http://www.denverpost.com/politics/ci_21663660/denver-b-cycle-program-faces-criticism-that-it) Accessed December 16, 2012.
  18. “Editorial: Putting those red bikes in every neighborhood.” *The Denver Post*, October 7, 2012. [http://www.denverpost.com/opinion/ci\\_21701258/editorial-putting-those-red-bikes-every-neighborhood?IADID=Search-www.denverpost.com-www.denverpost.com](http://www.denverpost.com/opinion/ci_21701258/editorial-putting-those-red-bikes-every-neighborhood?IADID=Search-www.denverpost.com-www.denverpost.com). Accessed December 16, 2012.
  19. Epstein, Jim, and Kennedy. “Washington, DC’s Capital Bikeshare: Tax \$\$\$ for Rich, Educated, White Riders.” June 20, 2012. Reason Foundation <http://reason.com/blog/2012/06/20/washington-dcs-capital-bikeshare-tax-for>. Accessed December 16, 2012.
  20. “Capital Bikeshare 2011 Member Survey Report.” LDA Consulting. Presented to Capital Bikeshare, June 14, 2012. <http://capitalbikeshare.com/assets/pdf/Capital%20Bikeshare-SurveyReport-Final.pdf>
  21. Greenfield, John. “Bike share, not white share: Can Chicago’s program achieve diversity?” Grid Chicago blog, November 22, 2012. <http://gridchicago.com/2012/bike-share-not-white-share-can-chicagos-program-achieve-diversity/> Accessed December 16, 2012.
  22. Metro-Bike LLC. “The Bike-Sharing World Map” <https://maps.google.com/maps/ms?ie=UTF8&hl=en&om=1&msa=0&msid=104227318304000014160.00043d80f9456b3416ced&ll=43.580391,-42.890625&spn=143.80149,154.6875&z=1&source=embed> Accessed November 30, 2012.
  23. Toussaint-Comeau, Maude; L.W. Rhine, Sherrie. The Financing Experiences of Minority Businesses: Evidence from Asian, Hispanic and Black Small Business Owners. Federal Reserve Bank of Chicago. [http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CDEQFjAA&url=http%3A%2F%2Fciteseerx.ist.psu.edu%2Fviewdoc%2Fdownload%3Fdoi%3D10.1.1.202.8260%26rep%3Drep1%26type%3Dpdf&ei=W9rBULO3KfS30AGWjYCABA&usq=AFQjCNGFwNXMjLJF-ZM\\_4Ipr7LhARbAAMw&cad=rja](http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CDEQFjAA&url=http%3A%2F%2Fciteseerx.ist.psu.edu%2Fviewdoc%2Fdownload%3Fdoi%3D10.1.1.202.8260%26rep%3Drep1%26type%3Dpdf&ei=W9rBULO3KfS30AGWjYCABA&usq=AFQjCNGFwNXMjLJF-ZM_4Ipr7LhARbAAMw&cad=rja) Accessed December 1, 2012.
  24. Federal Transit Administration. Job Access Reverse Commute program website. [http://www.fta.dot.gov/grants/13093\\_3550.html](http://www.fta.dot.gov/grants/13093_3550.html) Accessed December 1, 2012.





## Appendix A

### Bikeshare Equity Questionnaire

\* Required

Top of Form

Your Name \*

Your Position Title \* What is your position within the bikeshare system?

Bikeshare System Name \*What bikeshare system are you submitting responses on behalf of? If your responses only represent one distinct part of a bikeshare system (such as one city participating in a regional system), please note this:

Business Model \*Which category listed below best describes the organization managing and operating your existing or planned bikeshare system?

- For-profit organization receiving less than half of its capital funding from Federal, state, or local transportation funds
- For-profit organization receiving more than half of its capital funding from Federal, state, or local transportation funds
- Concessionaire performing bikeshare operations in exchange for rights to public advertising space (besides that provided by the bikeshare kiosks themselves), and some/all bikeshare membership and usage revenues going to a government sponsor
- Non-profit organization receiving less than half of its capital funding from Federal, state, or local transportation funds
- Non-profit organization receiving more than half of its capital funding from Federal, state, or local transportation funds
- Government agency directly administers system, with discrete functions such as system operations, marketing, and customer service performed by private entities via procurement
- Quasi-governmental entity (such as a public transit authority, Metropolitan Planning Organization (MPO), or Canadian Crown Corporation), directly administers bikeshare program, with discrete functions such as system operations, marketing, and customer service performed by private entities via procurement
- Other:

Current number of stations \*

Approximate number of bicycles available for use \*

Current number of dock spaces \*

Total rides in most recent 12 calendar months \*

Station Siting: Stations are located in areas primarily serving low-income communities, such as placement of stations adjacent to affordable housing. \*

- Yes
- Not yet, but planning/preparation underway
- No short term planning underway, but an intent to investigate in the future
- No intent to pursue plans in this area
- Did/made plans in the past, but discontinued
- Other:

Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:

Financial Assistance: Measures taken to reduce financial barriers to bikeshare participation, such as installment payment plans for memberships, assisting with obtaining a credit/debit card to securitize purchase, not placing a credit limit hold on a credit/debit card, securitizing membership via an alternative to personal credit/debit card, or providing discounted membership to qualifying low-income citizens. \*

- Yes
- Not yet, but planning/preparation underway
- No short term planning underway, but an intent to investigate in the future
- No intent to pursue plans in this area
- Did/made plans in the past, but discontinued
- Other:

Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:

Safe places to ride: Bikeshare entity is proactive in identifying, encouraging, and/or assisting in creation of bike facilities (such as lanes, cycletracks, and trails) in low income or minority groups underrepresented in bicycling. \*

- Yes
- Not yet, but planning/preparation underway
- No short term planning underway, but an intent to investigate in the future
- No intent to pursue plans in this area
- Did/made plans in the past, but discontinued
- Other:

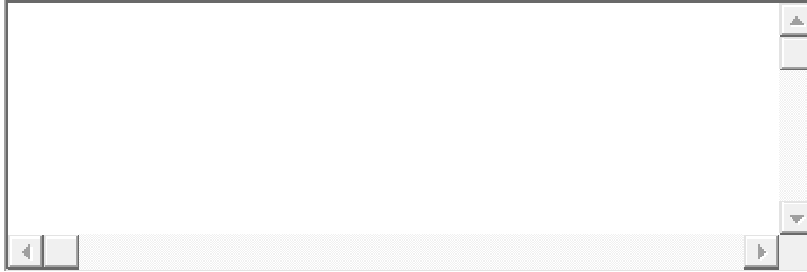
Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:

Membership media: Measures taken to reduce payment barriers to holding a bikeshare membership by linking membership and charges to another account and/or payment media, such as public transportation farecard or subsidized telephone account \*

- Yes
- Not yet, but planning/preparation underway
- No short term planning underway, but an intent to investigate in the future

- No intent to pursue plans in this area
- Did/made plans in the past, but discontinued
- Other:

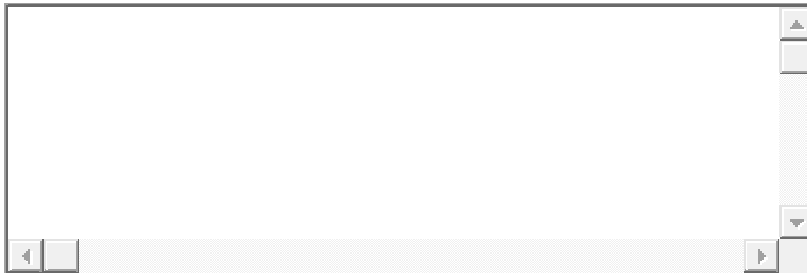
Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:



Community-specific marketing and outreach: Targeted marketing, promotion, and outreach to low-income people and minority groups underrepresented in bicycling, such as promotion through community human services providers, establishing partnerships with community groups, and community-specific marketing and sales efforts. \*

- Yes
- Not yet, but planning/preparation underway
- No short term planning underway, but an intent to investigate in the future
- No intent to pursue plans in this area
- Did/made plans in the past, but discontinued
- Other:

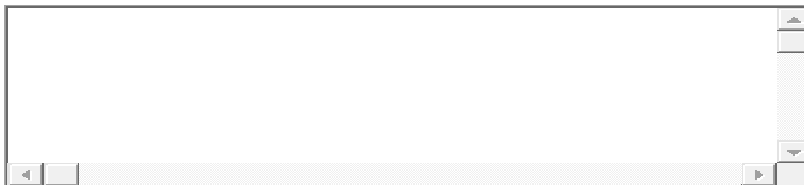
Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:



Overcoming bicycling barriers: Promotes access for low-income people, or minority groups underrepresented in bicycling, to information and products that aim to lower psychic barriers to bicycling, such as targeted provision of helmets and bicycling instructional classes. \*

- Yes
- Not yet, but planning/preparation underway
- No short term planning underway, but an intent to investigate in the future
- No intent to pursue plans in this area
- Did/made plans in the past, but discontinued
- Other:

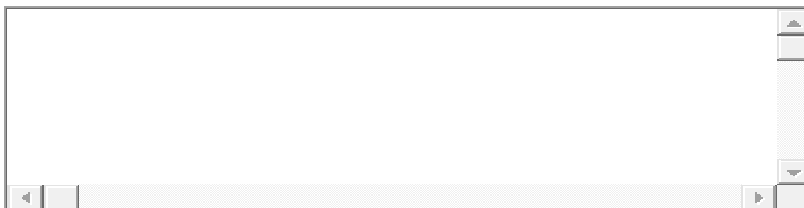
Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:



Community economic contribution: Bikeshare system directly promotes community economic activity, such as conducting targeted recruitment to create employment opportunities for low-income people or minorities underrepresented in bicycling, locating maintenance/operations facilities in low-income communities, or subcontracting with organizations serving low-income communities. \*

- Yes
- Not yet, but planning/preparation underway
- No short term planning underway, but an intent to investigate in the future
- No intent to pursue plans in this area
- Did/made plans in the past, but discontinued
- Other:

Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:



## Appendix B

Your Name \* Colby Reese

Your Position Title \* What is your position within the bikeshare system? Chief Marketing Officer

Bikeshare System Name \*What bikeshare system are you submitting responses on behalf of? If your responses only represent one distinct part of a bikeshare system (such as one city participating in a regional system), please note this: DecoBike (Miami Beach, Surfside & BAY Harbor Islands FL; Long Beach NY)

Business Model \*Which category listed below best describes the organization managing and operating your existing or planned bikeshare system?

- Concessionaire performing bikeshare operations in exchange for rights to public advertising space (besides that provided by the bikeshare kiosks themselves), and some/all bikeshare membership and usage revenues going to a government sponsor

Current number of stations \* 120

Approximate number of bicycles available for use \* 1200

Current number of dock spaces \* 1950

Total rides in most recent 12 calendar months \* 1,232,804

Station Siting: Stations are located in areas primarily serving low-income communities, such as placement of stations adjacent to affordable housing. \*

Not yet, but planning/preparation underway

Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons: As we expand our Miami area programs we will cover more areas with low-income housing.

Financial Assistance: Measures taken to reduce financial barriers to bikeshare participation, such as installment payment plans for memberships, assisting with obtaining a credit/debit card to securitize purchase, not placing a credit limit hold on a credit/debit card, securitizing membership via an alternative to personal credit/debit card, or providing discounted membership to qualifying low-income citizens. \*

- Yes

Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:

No credit line/deposit hold. Affordable monthly billing options. Discounted annual passes. Debit cards OK.

Safe places to ride: Bikeshare entity is proactive in identifying, encouraging, and/or assisting in creation of bike facilities (such as lanes, cycletracks, and trails) in low income or minority groups underrepresented in bicycling. \*

- Yes

Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:

We actively lobby for more bike infrastructure throughout the municipalities we operate in regardless of income level.

Membership media: Measures taken to reduce payment barriers to holding a bikeshare membership by linking membership and charges to another account and/or payment media, such as public transportation farecard or subsidized telephone account \*

- No short term planning underway, but an intent to investigate in the future

Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:

This will become more important as we expand into a more regional bikeshare service into several contiguous municipalities.

Community-specific marketing and outreach: Targeted marketing, promotion, and outreach to low-income people and minority groups underrepresented in bicycling, such as promotion through community human services providers, establishing partnerships with community groups, and community-specific marketing and sales efforts. \*

- No short term planning underway, but an intent to investigate in the future

Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:

---

Overcoming bicycling barriers: Promotes access for low-income people, or minority groups underrepresented in bicycling, to information and products that aim to lower psychic barriers to bicycling, such as targeted provision of helmets and bicycling instructional classes. \*

- Yes

Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:

Yes, we have offered safety workshops and also free helmets for our members.

Community economic contribution: Bikeshare system directly promotes community economic activity, such as conducting targeted recruitment to create employment opportunities for low-income people or minorities underrepresented in bicycling, locating maintenance/operations facilities in low-income communities, or subcontracting with organizations serving low-income communities. \*

- Yes

Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:

Our main operations center is in a low-income area and we have hired a variety of positions from the area.



## Appendix C

*Your Name* \* Scott Edwards

*Your Position Title* \* What is your position within the bikeshare system? Manager, Streets Activities Branch

*Bikeshare System Name* \*What bikeshare system are you submitting responses on behalf of? If your responses only represent one distinct part of a bikeshare system (such as one city participating in a regional system), please note this: Vancouver Public Bike Share (Canada)

*Business Model* \*Which category listed below best describes the organization managing and operating your existing or planned bikeshare system?

- For-profit organization receiving less than half of its capital funding from Federal, state, or local transportation funds

*Current number of stations* \* 125

*Approximate number of bicycles available for use* \* 1500

*Current number of dock spaces* \* 3000

*Total rides in most recent 12 calendar months* \* 0

*Station Siting: Stations are located in areas primarily serving low-income communities, such as placement of stations adjacent to affordable housing.* \*

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:* proposed system area based upon landuse and demand model, will include all income levels.

*Financial Assistance: Measures taken to reduce financial barriers to bikeshare participation, such as installment payment plans for memberships, assisting with obtaining a credit/debit card to securitize purchase, not placing a credit limit hold on a credit/debit card, securitizing membership via an alternative to personal credit/debit card, or providing discounted membership to qualifying low-income citizens.* \*

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

to be determined

*Safe places to ride: Bikeshare entity is proactive in identifying, encouraging, and/or assisting in creation of bike facilities (such as lanes, cycletracks, and trails) in low income or minority groups underrepresented in bicycling. \**

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

infrastructure planning focusses on all ages and abilities, and not prioritized by income levels

*Membership media: Measures taken to reduce payment barriers to holding a bikeshare membership by linking membership and charges to another account and/or payment media, such as public transportation farecard or subsidized telephone account \**

- Not yet, but planning/preparation underway

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

working with regional partners to explore integration of PBS with transit farecard.

*Community-specific marketing and outreach: Targeted marketing, promotion, and outreach to low-income people and minority groups underrepresented in bicycling, such as promotion through community human services providers, establishing partnerships with community groups, and community-specific marketing and sales efforts. \**

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

to be determined

*Overcoming bicycling barriers: Promotes access for low-income people, or minority groups underrepresented in bicycling, to information and products that aim to lower psychic barriers to bicycling, such as targeted provision of helmets and bicycling instructional classes. \**

- Not yet, but planning/preparation underway

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

integrated helmet system as part of the overall PBS, details of education and outreach to be determined.

*Community economic contribution: Bikeshare system directly promotes community economic activity, such as conducting targeted recruitment to create employment opportunities for low-income people or minorities underrepresented in bicycling, locating maintenance/operations facilities in low-income communities, or subcontracting with organizations serving low-income communities. \**

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

to be determined

## Appendix D

*Your Name* \* Daisy De La Rosa// Samantha Herr// Jessica Robertson

*Your Position Title* \* What is your position within the bikeshare system? Transportation Coordinator, Metropolitan Area Planning Council

*Bikeshare System Name* \*What bikeshare system are you submitting responses on behalf of? If your responses only represent one distinct part of a bikeshare system (such as one city participating in a regional system), please note this: Hubway

*Business Model* \*Which category listed below best describes the organization managing and operating your existing or planned bikeshare system?

- For-profit organization receiving more than half of its capital funding from Federal, state, or local transportation funds

*Current number of stations* \* 107

*Approximate number of bicycles available for use* \* 1000

*Current number of dock spaces* \* 1770

*Total rides in most recent 12 calendar months* \* 512682

*Station Siting: Stations are located in areas primarily serving low-income communities, such as placement of stations adjacent to affordable housing.* \*

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

The Lennox/Camden bike share station is located near a housing development. I have not learned of any discussions on placement of stations specifically adjacent to housing developments. Discussions have been made about expanding bike share into more areas located within low income neighborhoods, where the largest percentage of Black and Latino residents live. There were a total of 5 stations in or near Roxbury, a low income neighborhood. The system grew this year by another 11 stations, 4 of which were put in a low income neighborhood (1 additional in Roxbury and 3 in or near Dorchester). Expansion decisions are made by the City of Boston Transportation Dept. and Alta Bike Share, not the Health Dept., however we have offered to support their decision making by helping to engage residents in decisions related to where it makes most sense to install stations in low income neighborhoods.//

Boston Bikes continues to expand the network of stations that reach out into low income neighborhoods around the city. At the initial launch of Hubway in 2011, there were 3-4 stations in these areas, and now we've expanded to 7-8, and continue to grow the network in this way. The challenge is that the network has to grow out from itself. At first, the stations located in low income areas were more isolated, contributing to their under-usage. As we have been able to add stations, we've been able to fill in the gaps, creating a better system in these areas.//

Stations in Boston have been sited in low-income/minority areas, but those stations have not been the best-performing. Further expansions in those neighborhoods is planned, which will hopefully improve station utilization. Cambridge is much less segregated and therefore most stations are close to low-

income/minority communities. However, the network needs to be filled in in a couple of key areas, which is in the plans for future expansions. Somerville is not well-serving low-income areas of the city, and prospects for future expansions are less certain than in Boston and Cambridge.

*Financial Assistance: Measures taken to reduce financial barriers to bikeshare participation, such as installment payment plans for memberships, assisting with obtaining a credit/debit card to securitize purchase, not placing a credit limit hold on a credit/debit card, securitizing membership via an alternative to personal credit/debit card, or providing discounted membership to qualifying low-income citizens. \**

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

As part of the Communities Putting Prevention to Work Obesity Prevention funding to support the launch of Boston's bike share system, we incorporated the distribution of 600 subsidized memberships for low income residents of Boston. The system launched in the Summer of 2011 and by December 2011 we had only distributed only about 12% of these subsidies. From system relaunch in the spring of 2012 to date October 31, 2012, we have been able to distribute about 83% of these subsidies. Increased outreach in low income neighborhoods including membership drives in partnership with community-based organizations, participation in community events, and dedicated staff time for doing outreach were factors that support the increased distribution and update of subsidized memberships. The credit card issue has not been a major issue for participation of low income residents as we had initially expected. We raised awareness about using a debit card as well and no security deposits being required for the annual subsidized memberships. In October 2012, we piloted a non-profit organizational bike share memberships in which an organization serving low income residents subscribed for a set # of keys (10 in this pilot) and used these to organize community group bike rides. "Prescribe a bike", an initiative in which providers refer high-risk patients to bike share through an established agency bike share referral system accessing available subsidized memberships, was put on hold due to concerns by the hospital of utilizing their credit card for the referred members. Further discussions will be made about how to modify this referral program to make it work. The health dept. would also like to discuss the possibility of a monthly installment payment for low income residents and possibility of MassHealth, the state's medicaid/medicare provider, providing a pilot fitness reimbursement for paid annual bike share memberships. //

In partnership with the Boston Public Health Commission (BPHC), Boston Bikes has been able to offer subsidized memberships for \$5 to low income residents who qualify. BPHC has provided the funding and low income stipulations, and Boston Bikes has done the outreach and management of distribution for this initiative. Currently Boston has distributed over 550 subsidized memberships since July of 2011 when bike share launched. Measured by how many low income residents participate in bike share through the subsidized membership program, this is a highly successful equity program relative to the rest of cities with bike share. The lesson here is strong partners and lots of outreach. Unfortunately, our main barrier is the credit/debit card issue. We as of yet have still been unable to overcome the need for users to have a credit/debit card. This is one of the main challenges in increasing numbers of low income users of Hubway. We have tried to start programs that would use an organizational sponsorship model, but these organizations too have issues putting up their credit card.//

City of Boston provides grant-funded subsidized memberships (\$5 annual) to residents meeting any one of various criteria for low income (resident of public housing, eligible for food stamps, eligible for MassHealth, etc.). Usage fees do not apply for trips under 60 minutes. MAPC is exploring funding options to expand this program to residents of Cambridge and Somerville.

*Safe places to ride: Bikeshare entity is proactive in identifying, encouraging, and/or assisting in creation of bike facilities (such as lanes, cycletracks, and trails) in low income or minority groups underrepresented in bicycling. \**

- No intent to pursue plans in this area

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

The Boston Transportation Dept. has installed over 50 miles of new bike lanes, up from only 20 yards in 2007 before Mayor Menino launched its Boston Bikes program to support making Boston a world-class biking city. Bike lanes have been included in low income neighborhoods including Dorchester. There have been increased discussions of incorporating cycle tracks in some major redesign projects in low income neighborhoods underway.//

The Boston Transportation Dept. has installed over 50 miles of new bike lanes, up from only 20 yards in 2007 before Mayor Menino launched its Boston Bikes program to support making Boston a world-class biking city. Bike lanes have been included in low income neighborhoods including Dorchester. // There have been increased discussions of incorporating cycle tracks in some major redesign projects in low income neighborhoods underway.

*Membership media: Measures taken to reduce payment barriers to holding a bikeshare membership by linking membership and charges to another account and/or payment media, such as public transportation farecard or subsidized telephone account \**

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Boston Bikes/Boston Transportation Dept., hoped to link bike share memberships with subway usage cards, it is my understanding that this has not been accomplished yet.//

We have researched these options and pursued grant funding to support such an effort, but funding did not manifest. Options are still limited within the Alta/Bixi system framework. BCycle technology has a few loop holes that make this easier.//

No clear options available. Public transit farecards are not linked to an individual and would also not be technologically compatible with current bike share equipment.

*Community-specific marketing and outreach: Targeted marketing, promotion, and outreach to low-income people and minority groups underrepresented in bicycling, such as promotion through community human services providers, establishing partnerships with community groups, and community-specific marketing and sales efforts. \**

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Partnering with CBO's that serve low income residents and communities of colors to support with outreach of available subsidized memberships has been helpful. This includes faith-based organizations, community development corporations, housing developments, farmers markets, community events organized by these organizations, etc. The health department which employes over 1000 employees, agreed to pilot a corporate membership for the first 100 employees who were interested in registering with bike share with a discounted corporate rate. Many of the health department employees are low income Boston residents of color. Targeting large employers of Black/Latino residents in Boston for supporting discounted bike share memberships is a promising approach.//

We've done all of the above. We've created numerous partnerships with organizations and housing developments that serve low income residents to distribute information on the subsidized membership opportunity. A few of these partners also hold membership drives in partnership with Boston Bikes where people can sign-up on the spot and get online help. Language and computer literacy are barriers here. We've been pretty good about overcoming these.//

City of Boston has actively promoted bike share through public housing, community centers, churches, health centers, etc. Most effective has been to partner with public housing and health centers for a membership drive where people can test ride the bikes, check eligibility for subsidized membership, and sign up on the spot.

*Overcoming bicycling barriers: Promotes access for low-income people, or minority groups underrepresented in bicycling, to information and products that aim to lower psychic barriers to bicycling, such as targeted provision of helmets and bicycling instructional classes. \**

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Boston Bikes/Boston Transportation Department in partnership with the Boston Public Health Commission (Chronic Disease Division and Injury Prevention Program), have increased efforts to getting low cost helmets out into the neighborhoods. This includes availability of low cost helmets at strategic retail sites such as pharmacies, health care sites, and events. Targeted distribution of helmets such as to nonprofit organizations, community colleges, and through the "Roll-it-forward" program, and bike repair clinics set up across Boston farmers' markets. The Boston Bikes program has an aggressive youth bike training serving thousands of youth per year and offering free bikes and helmets. Adult biking classes have been offered through their Rock-Roll&Ride community events and other targeted efforts, however, a systematic approach to providing adult biking training should be considered in order to have larger reach and impact of biking in communities of color.//

We offer Hubway safety classes, free and open to the public. We also run a low cost helmet initiative, where residents of Boston can purchase subsidized helmets for \$7.99 at retail locations around Boston. Retail locations are selected for their close proximity to Hubway stations. As Hubway stations expand, we add helmet retail locations when needed. Subsidized Hubway members receive free helmets automatically that are shipped to their house.//

All subsidized memberships come with a free helmet. Boston and Cambridge have provided numerous free cycling/Hubway classes, but attendance has been very low.

*Community economic contribution: Bikeshare system directly promotes community economic activity, such as conducting targeted recruitment to create employment opportunities for low-income people or minorities underrepresented in bicycling, locating maintenance/operations facilities in low-income communities, or subcontracting with organizations serving low-income communities. \**

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Increased effort to market created bike share jobs was incorporated into the CPPW subcontract between the health dept. and Boston Bikes/Transportation Dept. Boston Bikes subcontracted with Bicycle Cyclist Union to provide bike repair clinics in farmers markets in Boston low income neighborhoods that don't have bike repair shops. Increased efforts to distribute low cost/free bikes in low income neighborhoods was also part of the CPPW contract expectations, and were all met and/or exceeded. In addition, complete streets resident advocate received stipends to promote bike share and organize bike rides in communities of color.//

warehouse located in low-income community, proactive effort to subcontract to women and minority-owned businesses. I'm not aware of Alta's recruiting practices.



## Appendix E

*Your Name* \* Claire Hurley

*Your Position Title* \* What is your position within the bikeshare system? Manager

*Bikeshare System Name* \*What bikeshare system are you submitting responses on behalf of? If your responses only represent one distinct part of a bikeshare system (such as one city participating in a regional system), please note this: Madison B-cycle

*Business Model* \*Which category listed below best describes the organization managing and operating your existing or planned bikeshare system?

- For-profit organization receiving less than half of its capital funding from Federal, state, or local transportation funds

*Current number of stations* \* 32

*Approximate number of bicycles available for use* \* 290

*Current number of dock spaces* \* 515

*Total rides in most recent 12 calendar months* \* 57000

*Station Siting: Stations are located in areas primarily serving low-income communities, such as placement of stations adjacent to affordable housing.* \*

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

a few of our current stations are located near low-income communities, but their sites are chosen based on a number of different factors

*Financial Assistance: Measures taken to reduce financial barriers to bikeshare participation, such as installment payment plans for memberships, assisting with obtaining a credit/debit card to securitize purchase, not placing a credit limit hold on a credit/debit card, securitizing membership via an alternative to personal credit/debit card, or providing discounted membership to qualifying low-income citizens.* \*

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

- No deposit for membership
- Discounted annual membership available for those that qualify.

*Safe places to ride: Bikeshare entity is proactive in identifying, encouraging, and/or assisting in creation of bike facilities (such as lanes, cycletracks, and trails) in low income or minority groups underrepresented in bicycling. \**

- No intent to pursue plans in this area

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Other Wisconsin bike advocacy groups work on these projects like the Bike Fed of Wisconsin

*Membership media: Measures taken to reduce payment barriers to holding a bikeshare membership by linking membership and charges to another account and/or payment media, such as public transportation farecard or subsidized telephone account \**

- Did/made plans in the past, but discontinued

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

-----

*Community-specific marketing and outreach: Targeted marketing, promotion, and outreach to low-income people and minority groups underrepresented in bicycling, such as promotion through community human services providers, establishing partnerships with community groups, and community-specific marketing and sales efforts. \**

- Not yet, but planning/preparation underway

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

-----

*Overcoming bicycling barriers: Promotes access for low-income people, or minority groups underrepresented in bicycling, to information and products that aim to lower psychic barriers to bicycling, such as targeted provision of helmets and bicycling instructional classes. \**

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

-----

*Community economic contribution: Bikeshare system directly promotes community economic activity, such as conducting targeted recruitment to create employment opportunities for low-income people or minorities underrepresented in bicycling, locating maintenance/operations facilities in low-income communities, or subcontracting with organizations serving low-income communities. \**

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

\_\_\_\_\_

## Appendix F

*Your Name* \* Sandra L. Brecher

*Your Position Title* \* What is your position within the bikeshare system? Chief, Commuter Services, and Project Director for Bikeshare

*Bikeshare System Name* \*What bikeshare system are you submitting responses on behalf of? If your responses only represent one distinct part of a bikeshare system (such as one city participating in a regional system), please note this: Montgomery County, Maryland CaBi

*Business Model* \*Which category listed below best describes the organization managing and operating your existing or planned bikeshare system?

- Government agency directly administers system, with discrete functions such as system operations, marketing, and customer service performed by private entities via procurement

*Current number of stations* \* 0

*Approximate number of bicycles available for use* \* 0

*Current number of dock spaces* \* 0

*Total rides in most recent 12 calendar months* \* 0

*Station Siting: Stations are located in areas primarily serving low-income communities, such as placement of stations adjacent to affordable housing.* \*

- Not yet, but planning/preparation underway

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Efforts are being made to site bikeshare stations in a way that will effectively serve the target population of our Job Access Reverse Commute (JARC) grant from FTA. Sites will be selected proximate to residential concentrations and to jobs and job training sites, other activity centers, and to transit stations that can provide commute options for the participants.

*Financial Assistance: Measures taken to reduce financial barriers to bikeshare participation, such as installment payment plans for memberships, assisting with obtaining a credit/debit card to securitize purchase, not placing a credit limit hold on a credit/debit card, securitizing membership via an alternative to personal credit/debit card, or providing discounted membership to qualifying low-income citizens.* \*

- Not yet, but planning/preparation underway

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

All of the above options are being explored and most are intended to be implemented. Some of these are part of the regional Capital Bikeshare system already. Others will be integral to the JARC portion of our bikeshare effort. For example, all membership fees and some usage fees will be paid for JARC-eligible participants.

*Safe places to ride: Bikeshare entity is proactive in identifying, encouraging, and/or assisting in creation of bike facilities (such as lanes, cycletracks, and trails) in low income or minority groups underrepresented in bicycling. \**

- Not yet, but planning/preparation underway

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

We are coordinating with our Division of Transportation Engineering to try to plan for safe circulation using existing and future bikeways, as well as making selection of safe routes and related education a centerpiece of our efforts with JARC participants, as well as the general public.

*Membership media: Measures taken to reduce payment barriers to holding a bikeshare membership by linking membership and charges to another account and/or payment media, such as public transportation farecard or subsidized telephone account \**

- Not yet, but planning/preparation underway

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Exploring options, including Bank on DC program and permitting cash payment at one of our commuter stores.

*Community-specific marketing and outreach: Targeted marketing, promotion, and outreach to low-income people and minority groups underrepresented in bicycling, such as promotion through community human services providers, establishing partnerships with community groups, and community-specific marketing and sales efforts. \**

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Efforts of this nature were made during initial planning and grant writing, and are continuing.

*Overcoming bicycling barriers: Promotes access for low-income people, or minority groups underrepresented in bicycling, to information and products that aim to lower psychic barriers to bicycling, such as targeted provision of helmets and bicycling instructional classes. \**

- Not yet, but planning/preparation underway

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Special outreach, information/education & training programs are planned. Classes in safe cycling, learn to ride, etc. will be provided for JARC-eligible participants free of charge thru a partnership with local community college coupled with support from the grant and the County. Helmets will also be provided to those participants free of charge, thru a partnership with a local bike shop coupled with support from the grant and funding from the County.

*Community economic contribution: Bikeshare system directly promotes community economic activity, such as conducting targeted recruitment to create employment opportunities for low-income people or minorities underrepresented in bicycling, locating maintenance/operations facilities in low-income communities, or subcontracting with organizations serving low-income communities. \**

- Not yet, but planning/preparation underway

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

The County has a Minority Business Enterprise program that will be used to the extent possible while working with the primary vendor under contract to jurisdictions elsewhere in the region. It is hoped the bikeshare system will contribute to local economic activity. We will be targeting low income populations to increase access to jobs and potentially provide enhanced employment opportunities. We have explored the potential for employment of some of those participants with the bikeshare vendor itself.

## Appendix G

*Your Name* \* Paul DeMaio

*Your Position Title* \* What is your position within the bikeshare system? program manager for Arlington, VA (responding for regional service)

*Bikeshare System Name* \*What bikeshare system are you submitting responses on behalf of? If your responses only represent one distinct part of a bikeshare system (such as one city participating in a regional system), please note this: Capital Bikeshare

*Business Model* \*Which category listed below best describes the organization managing and operating your existing or planned bikeshare system?

- Government agency directly administers system, with discrete functions such as system operations, marketing, and customer service performed by private entities via procurement

*Current number of stations* \* 191

*Approximate number of bicycles available for use* \* 1630

*Current number of dock spaces* \* 3260

*Total rides in most recent 12 calendar months* \* 2000000

*Station Siting: Stations are located in areas primarily serving low-income communities, such as placement of stations adjacent to affordable housing.* \*

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

We offer a Bank on DC service which allows unbanked individuals to obtain a checking account and secured credit card. To date we have had about 90 people take advantage of this offering, which is in conjunction with local financial institutions. The customer also receives a \$25 discount on annual membership. We need to market this more to get better uptake.

We recently also have begun offering a monthly installment plan of \$7 for an annual membership.

*Financial Assistance: Measures taken to reduce financial barriers to bikeshare participation, such as installment payment plans for memberships, assisting with obtaining a credit/debit card to securitize purchase, not placing a credit limit hold on a credit/debit card, securitizing membership via an alternative to personal credit/debit card, or providing discounted membership to qualifying low-income citizens.* \*

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

*Safe places to ride: Bikeshare entity is proactive in identifying, encouraging, and/or assisting in creation of bike facilities (such as lanes, cycletracks, and trails) in low income or minority groups underrepresented in bicycling. \**

- No intent to pursue plans in this area

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Capital Bikeshare isn't responsible for creating bike infrastructure, however, members of the Board of Directors are in their roles with the local government owners of the service..

*Membership media: Measures taken to reduce payment barriers to holding a bikeshare membership by linking membership and charges to another account and/or payment media, such as public transportation farecard or subsidized telephone account \**

- Not yet, but planning/preparation underway

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

We hope to allow members to link to their SmarTrip card with their CaBi key so they could use their CaBi key for payment on transit using the SmarTrip card and vice versa. We need SmarTrip card verification to be able to use it with our service, as well as a dock that accepts SmarTrip cards. Our vendor (PBSC) offers it, but would require us paying for the next generation of their technology, which could be cost-prohibitive..

*Community-specific marketing and outreach: Targeted marketing, promotion, and outreach to low-income people and minority groups underrepresented in bicycling, such as promotion through community human services providers, establishing partnerships with community groups, and community-specific marketing and sales efforts. \**

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Arlington has sent postcards encouraging usage of a new station to nearby residents. We'll continue doing this in English and Spanish as we are about to expand the service into more low-income neighborhoods along Columbia Pike and South Arlington.



*Overcoming bicycling barriers: Promotes access for low-income people, or minority groups underrepresented in bicycling, to information and products that aim to lower psychic barriers to bicycling, such as targeted provision of helmets and bicycling instructional classes. \**

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

We have helmet and bike light give-aways in targeted neighborhoods.

We also market bike safety education classes in English and Spanish County-wide in a quarterly newsletter sent to all residences.

*Community economic contribution: Bikeshare system directly promotes community economic activity, such as conducting targeted recruitment to create employment opportunities for low-income people or minorities underrepresented in bicycling, locating maintenance/operations facilities in low-income communities, or subcontracting with organizations serving low-income communities. \**

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

We have partnered with an organization that pays for memberships for homeless people who can use CaBi to commute and better meet their transport needs.

## Appendix H

*Your Name* \* Heath Maddox

*Your Position Title* \* What is your position within the bikeshare system? Program Manager

*Bikeshare System Name* \*What bikeshare system are you submitting responses on behalf of? If your responses only represent one distinct part of a bikeshare system (such as one city participating in a regional system), please note this: San Francisco Bay Area Regional Bike Sharing Pilot (City of San Francisco)

*Business Model* \*Which category listed below best describes the organization managing and operating your existing or planned bikeshare system?

- Government agency directly administers system, with discrete functions such as system operations, marketing, and customer service performed by private entities via procurement

*Current number of stations* \* 50

*Approximate number of bicycles available for use* \* 500

*Current number of dock spaces* \* 950

*Total rides in most recent 12 calendar months* \* 0

*Station Siting: Stations are located in areas primarily serving low-income communities, such as placement of stations adjacent to affordable housing.* \*

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Initial service area was chosen using criteria that seek to maximize membership and use in order to ensure financial success. Station locations, after covering key transit anchors and trying to locate along bikeways, are chosen primarily with the goal of achieving the desired density of coverage.

*Financial Assistance: Measures taken to reduce financial barriers to bikeshare participation, such as installment payment plans for memberships, assisting with obtaining a credit/debit card to securitize purchase, not placing a credit limit hold on a credit/debit card, securitizing membership via an alternative to personal credit/debit card, or providing discounted membership to qualifying low-income citizens.* \*

- Not yet, but planning/preparation underway

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Planning to work with Bank on SF to get potential members in San Francisco access to credit.

*Safe places to ride: Bikeshare entity is proactive in identifying, encouraging, and/or assisting in creation of bike facilities (such as lanes, cycletracks, and trails) in low income or minority groups underrepresented in bicycling. \**

- No intent to pursue plans in this area

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Individual participating jurisdictions in regional pilot are responsible for bikeway implementation, and bikeways are not generally located according to income or race/ethnicity.

*Membership media: Measures taken to reduce payment barriers to holding a bikeshare membership by linking membership and charges to another account and/or payment media, such as public transportation farecard or subsidized telephone account \**

- Not yet, but planning/preparation underway

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Technical specifications for the procurement here require that bikeshare payment technology be compatible with our regional transit farecard, Clipper.

*Community-specific marketing and outreach: Targeted marketing, promotion, and outreach to low-income people and minority groups underrepresented in bicycling, such as promotion through community human services providers, establishing partnerships with community groups, and community-specific marketing and sales efforts. \**

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

---

*Overcoming bicycling barriers: Promotes access for low-income people, or minority groups underrepresented in bicycling, to information and products that aim to lower psychic barriers to bicycling, such as targeted provision of helmets and bicycling instructional classes. \**

- Not yet, but planning/preparation underway

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Subsidized helmets will be provided in SF as well as bike safety classes..

*Community economic contribution: Bikeshare system directly promotes community economic activity, such as conducting targeted recruitment to create employment opportunities for low-income people or minorities underrepresented in bicycling, locating maintenance/operations facilities in low-income communities, or subcontracting with organizations serving low-income communities. \**

- No intent to pursue plans in this area

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

---

## Appendix J

*Your Name* \* Chris Hamilton

*Your Position Title* \* What is your position within the bikeshare system? Commuter Services Bureau Chief

*Bikeshare System Name* \*What bikeshare system are you submitting responses on behalf of? If your responses only represent one distinct part of a bikeshare system (such as one city participating in a regional system), please note this: Capital Bikeshare - Arlington

*Business Model* \*Which category listed below best describes the organization managing and operating your existing or planned bikeshare system?

- Government agency directly administers system, with discrete functions such as system operations, marketing, and customer service performed by private entities via procurement

*Current number of stations* \* 45

*Approximate number of bicycles available for use* \* 360

*Current number of dock spaces* \* 550

*Total rides in most recent 12 calendar months* \* 88000

*Station Siting: Stations are located in areas primarily serving low-income communities, such as placement of stations adjacent to affordable housing.* \*

- Not yet, but planning/preparation underway

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Stations have been located where we have density, transit and bike facilities. Initially attempts were not made to primarily serve low-income, nor should that have been the leading variable when deciding to place stations. We have done a Capital Bikeshare Transit Development Plan (strategic plan) that looks at issues and planning 10+ years out. As we put in more stations and we're putting in another 35 over the next 6 months, we will be serving areas further away from Metrorail and served primarily by bus. Some of these areas have lower incomes.

*Financial Assistance: Measures taken to reduce financial barriers to bikeshare participation, such as installment payment plans for memberships, assisting with obtaining a credit/debit card to securitize purchase, not placing a credit limit hold on a credit/debit card, securitizing membership via an alternative to personal credit/debit card, or providing discounted membership to qualifying low-income citizens.* \*

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

We participate in Bank on DC which helps get people a credit card. Our team has begun conversations on how we can provide memberships to people without having to even do this. In addition we are looking at ways to reduce costs. Our goal is to have this in place by spring 2013 when our 35 new stations are introduced. Because we have Commuter Stores where people can come in and buy transit fare with cash, we think we have some solutions.

*Safe places to ride: Bikeshare entity is proactive in identifying, encouraging, and/or assisting in creation of bike facilities (such as lanes, cycletracks, and trails) in low income or minority groups underrepresented in bicycling. \**

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

\_\_\_\_\_.

*Membership media: Measures taken to reduce payment barriers to holding a bikeshare membership by linking membership and charges to another account and/or payment media, such as public transportation farecard or subsidized telephone account \**

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Described above.

*Community-specific marketing and outreach: Targeted marketing, promotion, and outreach to low-income people and minority groups underrepresented in bicycling, such as promotion through community human services providers, establishing partnerships with community groups, and community-specific marketing and sales efforts. \**

- Not yet, but planning/preparation underway

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

In figuring out how to lower the barriers to low-income persons and person who mainly use cash we are also planning on figuring out how to do outreach to these folks. In addition - because the two groups are not one in the same, we have a recent grant to do transportation options (transit and bikes) marketing to the Hispanic community. This program has just started and we'll be hiring one outreach person to work in the community to promote our local transit, Capital Bikeshare and biking.

*Overcoming bicycling barriers: Promotes access for low-income people, or minority groups underrepresented in bicycling, to information and products that aim to lower psychic barriers to bicycling, such as targeted provision of helmets and bicycling instructional classes. \**

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

As part of our general marketing and outreach, we've done a number of events (described on our blogs) where the outreach or safety classes or events have been specifically targeted to these groups.

*Community economic contribution: Bikeshare system directly promotes community economic activity, such as conducting targeted recruitment to create employment opportunities for low-income people or minorities underrepresented in bicycling, locating maintenance/operations facilities in low-income communities, or subcontracting with organizations serving low-income communities. \**

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

---

## Appendix K

*Your Name* \* Philip Pugliese

*Your Position Title* \* What is your position within the bikeshare system? Project Director

*Bikeshare System Name* \*What bikeshare system are you submitting responses on behalf of? If your responses only represent one distinct part of a bikeshare system (such as one city participating in a regional system), please note this: Bike Chattanooga Bicycle Transit System

*Business Model* \*Which category listed below best describes the organization managing and operating your existing or planned bikeshare system?

- Government agency directly administers system, with discrete functions such as system operations, marketing, and customer service performed by private entities via procurement

*Current number of stations* \* 28

*Approximate number of bicycles available for use* \* 225

*Current number of dock spaces* \* 462

*Total rides in most recent 12 calendar months* \* 8400

*Station Siting: Stations are located in areas primarily serving low-income communities, such as placement of stations adjacent to affordable housing.* \*

- Not yet, but planning/preparation underway

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Phase I site installations are focused on core central business district, North Shore Community, and University of Tennessee at Chattanooga campus. Phase II plans include expansion into neighboring residential areas which include lower income communities.

*Financial Assistance: Measures taken to reduce financial barriers to bikeshare participation, such as installment payment plans for memberships, assisting with obtaining a credit/debit card to securitize purchase, not placing a credit limit hold on a credit/debit card, securitizing membership via an alternative to personal credit/debit card, or providing discounted membership to qualifying low-income citizens.* \*

- Not yet, but planning/preparation underway

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*



Evaluation of credit hold policy is under review. Intention is provide a community funded risk pool to provide access to those unable to meet security requirements.

*Safe places to ride: Bikeshare entity is proactive in identifying, encouraging, and/or assisting in creation of bike facilities (such as lanes, cycletracks, and trails) in low income or minority groups underrepresented in bicycling. \**

- Not yet, but planning/preparation underway

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

\_\_\_\_\_.

*Membership media: Measures taken to reduce payment barriers to holding a bikeshare membership by linking membership and charges to another account and/or payment media, such as public transportation farecard or subsidized telephone account \**

- Not yet, but planning/preparation underway

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

\_\_\_\_\_.

*Community-specific marketing and outreach: Targeted marketing, promotion, and outreach to low-income people and minority groups underrepresented in bicycling, such as promotion through community human services providers, establishing partnerships with community groups, and community-specific marketing and sales efforts. \**

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

\_\_\_\_\_.

*Overcoming bicycling barriers: Promotes access for low-income people, or minority groups underrepresented in bicycling, to information and products that aim to lower psychic barriers to bicycling, such as targeted provision of helmets and bicycling instructional classes. \**

- Not yet, but planning/preparation underway

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

---

*Community economic contribution: Bikeshare system directly promotes community economic activity, such as conducting targeted recruitment to create employment opportunities for low-income people or minorities underrepresented in bicycling, locating maintenance/operations facilities in low-income communities, or subcontracting with organizations serving low-income communities. \**

- Did/made plans in the past, but discontinued

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

---

## Appendix L

*Your Name* \* Kristen Camareno

*Your Position Title* \* What is your position within the bikeshare system? Acting President

*Bikeshare System Name* \*What bikeshare system are you submitting responses on behalf of? If your responses only represent one distinct part of a bikeshare system (such as one city participating in a regional system), please note this: Fort Worth Bike Sharing

*Business Model* \*Which category listed below best describes the organization managing and operating your existing or planned bikeshare system?

- Non-profit organization receiving more than half of its capital funding from Federal, state, or local transportation funds

*Current number of stations* \* 0

*Approximate number of bicycles available for use* \* 0

*Current number of dock spaces* \* 0

*Total rides in most recent 12 calendar months* \* 0

*Station Siting: Stations are located in areas primarily serving low-income communities, such as placement of stations adjacent to affordable housing.* \*

- Not yet, but planning/preparation underway

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

As our system is still in the planning stages, with implementation slated for Mid-2013, not all sites have been identified. We do have plans to work with area partners to identify low-income areas of our population that could benefit from access to our planned system. The commonly issue of "banked" and "unbanked" is one hurdle we are working through. We plan to work with our local housing authority for some possible solutions. We also hope to apply for grant funding targeted at accessibility for low-income populations, in order to subsidize memberships for those who qualify for other government aid programs.

*Financial Assistance: Measures taken to reduce financial barriers to bikeshare participation, such as installment payment plans for memberships, assisting with obtaining a credit/debit card to securitize purchase, not placing a credit limit hold on a credit/debit card, securitizing membership via an alternative to personal credit/debit card, or providing discounted membership to qualifying low-income citizens.* \*

- Not yet, but planning/preparation underway

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

See answer above.

*Safe places to ride: Bikeshare entity is proactive in identifying, encouraging, and/or assisting in creation of bike facilities (such as lanes, cycletracks, and trails) in low income or minority groups underrepresented in bicycling. \**

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Working with the bike/ped planner at the City of Fort Worth to identify current plans for bike facilities, and increase the plans for facilities in areas where bike share stations are planned.

*Membership media: Measures taken to reduce payment barriers to holding a bikeshare membership by linking membership and charges to another account and/or payment media, such as public transportation farecard or subsidized telephone account \**

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

\_\_\_\_\_.

*Community-specific marketing and outreach: Targeted marketing, promotion, and outreach to low-income people and minority groups underrepresented in bicycling, such as promotion through community human services providers, establishing partnerships with community groups, and community-specific marketing and sales efforts. \**

- Not yet, but planning/preparation underway

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

\_\_\_\_\_

*Overcoming bicycling barriers: Promotes access for low-income people, or minority groups underrepresented in bicycling, to information and products that aim to lower psychic barriers to bicycling, such as targeted provision of helmets and bicycling instructional classes. \**

- Not yet, but planning/preparation underway

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

---

Will be working with Bike Friendly Fort Worth, the City of Fort Worth, and Safe Communities to reach out and promote bicycle safety through an educational campaign targeted at all groups equally.

*Community economic contribution: Bikeshare system directly promotes community economic activity, such as conducting targeted recruitment to create employment opportunities for low-income people or minorities underrepresented in bicycling, locating maintenance/operations facilities in low-income communities, or subcontracting with organizations serving low-income communities. \**

---

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

---

## Appendix M

*Your Name* \* Michel Philibert

*Your Position Title* \* What is your position within the bikeshare system? Director Communications - Marketing

*Bikeshare System Name* \*What bikeshare system are you submitting responses on behalf of? If your responses only represent one distinct part of a bikeshare system (such as one city participating in a regional system), please note this: BIXI Montreal

*Business Model* \*Which category listed below best describes the organization managing and operating your existing or planned bikeshare system?

- Non-profit organization receiving less than half of its capital funding from Federal, state, or local transportation funds

*Current number of stations* \* 411

*Approximate number of bicycles available for use* \* 5120

*Current number of dock spaces* \* 8080

*Total rides in most recent 12 calendar months* \* 4300000

*Station Siting: Stations are located in areas primarily serving low-income communities, such as placement of stations adjacent to affordable housing.* \*

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

We don't make any difference between the boroughs in Montreal. We have a lot of stations located in low income areas / boroughs.

*Financial Assistance: Measures taken to reduce financial barriers to bikeshare participation, such as installment payment plans for memberships, assisting with obtaining a credit/debit card to securitize purchase, not placing a credit limit hold on a credit/debit card, securitizing membership via an alternative to personal credit/debit card, or providing discounted membership to qualifying low-income citizens.* \*

- No intent to pursue plans in this area

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

No special measures has been adopted. Bike share is cheap and everybody can use it.

*Safe places to ride: Bikeshare entity is proactive in identifying, encouraging, and/or assisting in creation of bike facilities (such as lanes, cycletracks, and trails) in low income or minority groups underrepresented in bicycling. \**

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Montreal has a good network of bike lanes. There's a political willing to increase the number bike lanes.

*Membership media: Measures taken to reduce payment barriers to holding a bikeshare membership by linking membership and charges to another account and/or payment media, such as public transportation farecard or subsidized telephone account \**

- No intent to pursue plans in this area

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

\_\_\_\_\_.

*Community-specific marketing and outreach: Targeted marketing, promotion, and outreach to low-income people and minority groups underrepresented in bicycling, such as promotion through community human services providers, establishing partnerships with community groups, and community-specific marketing and sales efforts. \**

- No intent to pursue plans in this area

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

\_\_\_\_\_

*Overcoming bicycling barriers: Promotes access for low-income people, or minority groups underrepresented in bicycling, to information and products that aim to lower psychic barriers to bicycling, such as targeted provision of helmets and bicycling instructional classes. \**

- No intent to pursue plans in this area

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

---

*Community economic contribution: Bikeshare system directly promotes community economic activity, such as conducting targeted recruitment to create employment opportunities for low-income people or minorities underrepresented in bicycling, locating maintenance/operations facilities in low-income communities, or subcontracting with organizations serving low-income communities. \**

---

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

The maintenance of the fleet of bike is done by a non profit organisation who fight against drop out. They provide training, delivers diploma, and hire youth for summer.



## Appendix N

*Your Name* \* Tami Traeger

*Your Position Title* \* What is your position within the bikeshare system? Outreach and Sponsor Relationship Manager

*Bikeshare System Name* \*What bikeshare system are you submitting responses on behalf of? If your responses only represent one distinct part of a bikeshare system (such as one city participating in a regional system), please note this: Nice Ride Minnesota

*Business Model* \*Which category listed below best describes the organization managing and operating your existing or planned bikeshare system?

- Non-profit organization receiving more than half of its capital funding from Federal, state, or local transportation funds

*Current number of stations* \* 145

*Approximate number of bicycles available for use* \* 1300

*Current number of dock spaces* \* 2600

*Total rides in most recent 12 calendar months* \* 274045

*Station Siting: Stations are located in areas primarily serving low-income communities, such as placement of stations adjacent to affordable housing.* \*

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

30 stations placed for regional equity by including input from each of the communities.

*Financial Assistance: Measures taken to reduce financial barriers to bikeshare participation, such as installment payment plans for memberships, assisting with obtaining a credit/debit card to securitize purchase, not placing a credit limit hold on a credit/debit card, securitizing membership via an alternative to personal credit/debit card, or providing discounted membership to qualifying low-income citizens.* \*

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

3-installment payment option available.

No longer using a deposit for debit/credit cards.

Worked with non-profit partners in low-income neighborhoods to give demonstrations and tours with free annual subscriptions.

Some experimentation with pre-paid cards.

*Safe places to ride: Bikeshare entity is proactive in identifying, encouraging, and/or assisting in creation of bike facilities (such as lanes, cycletracks, and trails) in low income or minority groups underrepresented in bicycling. \**

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Working closely with the city governments and other advocates of cycling infrastructure to continue providing safe cycling routes throughout our system area.

*Membership media: Measures taken to reduce payment barriers to holding a bikeshare membership by linking membership and charges to another account and/or payment media, such as public transportation farecard or subsidized telephone account \**

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Integrated farecards for all transit options is a goal. The current hardware and software do not support this payment method.

*Community-specific marketing and outreach: Targeted marketing, promotion, and outreach to low-income people and minority groups underrepresented in bicycling, such as promotion through community human services providers, establishing partnerships with community groups, and community-specific marketing and sales efforts. \**

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Efforts have been made to partner with non-profits serving communities where we are attempting to expand access.

We have also reached out to our partners to help us provide success stories to the media and for photo sessions.

*Overcoming bicycling barriers: Promotes access for low-income people, or minority groups underrepresented in bicycling, to information and products that aim to lower psychic barriers to bicycling, such as targeted provision of helmets and bicycling instructional classes. \**

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

---

We've been providing a free helmet and one-year membership to tour participants recruited by non-profit partners.

*Community economic contribution: Bikeshare system directly promotes community economic activity, such as conducting targeted recruitment to create employment opportunities for low-income people or minorities underrepresented in bicycling, locating maintenance/operations facilities in low-income communities, or subcontracting with organizations serving low-income communities. \**

---

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Our offices were located in a low-income area.

We are looking for opportunities to increase our diversity in staff and volunteers.

## Appendix P

*Your Name* \* Holly Houser

*Your Position Title* \* What is your position within the bikeshare system? Executive Director

*Bikeshare System Name* \*What bikeshare system are you submitting responses on behalf of? If your responses only represent one distinct part of a bikeshare system (such as one city participating in a regional system), please note this: Puget Sound Bike Share

*Business Model* \*Which category listed below best describes the organization managing and operating your existing or planned bikeshare system?

- Non-profit organization receiving less than half of its capital funding from Federal, state, or local transportation funds

*Current number of stations* \* 50

*Approximate number of bicycles available for use* \* 500

*Current number of dock spaces* \* 1000

*Total rides in most recent 12 calendar months* \* 0

*Station Siting: Stations are located in areas primarily serving low-income communities, such as placement of stations adjacent to affordable housing.* \*

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

---

*Financial Assistance: Measures taken to reduce financial barriers to bikeshare participation, such as installment payment plans for memberships, assisting with obtaining a credit/debit card to securitize purchase, not placing a credit limit hold on a credit/debit card, securitizing membership via an alternative to personal credit/debit card, or providing discounted membership to qualifying low-income citizens.* \*

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

---

*Safe places to ride: Bikeshare entity is proactive in identifying, encouraging, and/or assisting in creation of bike facilities (such as lanes, cycletracks, and trails) in low income or minority groups underrepresented in bicycling. \**

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

---

*Membership media: Measures taken to reduce payment barriers to holding a bikeshare membership by linking membership and charges to another account and/or payment media, such as public transportation farecard or subsidized telephone account \**

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

---

*Community-specific marketing and outreach: Targeted marketing, promotion, and outreach to low-income people and minority groups underrepresented in bicycling, such as promotion through community human services providers, establishing partnerships with community groups, and community-specific marketing and sales efforts. \**

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

---

*Overcoming bicycling barriers: Promotes access for low-income people, or minority groups underrepresented in bicycling, to information and products that aim to lower psychic barriers to bicycling, such as targeted provision of helmets and bicycling instructional classes. \**

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

---



---

*Community economic contribution: Bikeshare system directly promotes community economic activity, such as conducting targeted recruitment to create employment opportunities for low-income people or minorities underrepresented in bicycling, locating maintenance/operations facilities in low-income communities, or subcontracting with organizations serving low-income communities. \**

---

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

----

## Appendix Q

*Your Name* \* Steve Sander

*Your Position Title* \* What is your position within the bikeshare system? Marketing

*Bikeshare System Name* \*What bikeshare system are you submitting responses on behalf of? If your responses only represent one distinct part of a bikeshare system (such as one city participating in a regional system), please note this: Denver

*Business Model* \*Which category listed below best describes the organization managing and operating your existing or planned bikeshare system?

- Non-profit organization receiving less than half of its capital funding from Federal, state, or local transportation funds

*Current number of stations* \* 52

*Approximate number of bicycles available for use* \* 500

*Current number of dock spaces* \* 800

*Total rides in most recent 12 calendar months* \* 200000

*Station Siting: Stations are located in areas primarily serving low-income communities, such as placement of stations adjacent to affordable housing.* \*

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

A number of stations were located in low income areas (5-7) and programs were developed to subsidize memberships for low income riders however the acceptance and use by low income target audiences was very low.

*Financial Assistance: Measures taken to reduce financial barriers to bikeshare participation, such as installment payment plans for memberships, assisting with obtaining a credit/debit card to securitize purchase, not placing a credit limit hold on a credit/debit card, securitizing membership via an alternative to personal credit/debit card, or providing discounted membership to qualifying low-income citizens.* \*

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Personal outreach and outreach to residents of low income housing complexes through the management offices. Research to try to understand why usage was so low.

*Safe places to ride: Bikeshare entity is proactive in identifying, encouraging, and/or assisting in creation of bike facilities (such as lanes, cycletracks, and trails) in low income or minority groups underrepresented in bicycling. \**

- No intent to pursue plans in this area

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

---

*Membership media: Measures taken to reduce payment barriers to holding a bikeshare membership by linking membership and charges to another account and/or payment media, such as public transportation farecard or subsidized telephone account \**

- Not yet, but planning/preparation underway

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

---

*Community-specific marketing and outreach: Targeted marketing, promotion, and outreach to low-income people and minority groups underrepresented in bicycling, such as promotion through community human services providers, establishing partnerships with community groups, and community-specific marketing and sales efforts. \**

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Outreach through the building management entities in low income housing buildings.

*Overcoming bicycling barriers: Promotes access for low-income people, or minority groups underrepresented in bicycling, to information and products that aim to lower psychic barriers to bicycling, such as targeted provision of helmets and bicycling instructional classes. \**

- Not yet, but planning/preparation underway

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

---



---

*Community economic contribution: Bikeshare system directly promotes community economic activity, such as conducting targeted recruitment to create employment opportunities for low-income people or minorities underrepresented in bicycling, locating maintenance/operations facilities in low-income communities, or subcontracting with organizations serving low-income communities. \**

---

- Not yet, but planning/preparation underway

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Investigating working with employers such as Goodwill who hire low income employees and and might be a way to encourage their employees to use the bikes to commute to work.

## Appendix R

*Your Name* \* Kevin Crouse

*Your Position Title* \* What is your position within the bikeshare system? Operations Manager

*Bikeshare System Name* \*What bikeshare system are you submitting responses on behalf of? If your responses only represent one distinct part of a bikeshare system (such as one city participating in a regional system), please note this: Boulder B-cycle

*Business Model* \*Which category listed below best describes the organization managing and operating your existing or planned bikeshare system?

- Non-profit organization receiving more than half of its capital funding from Federal, state, or local transportation funds

*Current number of stations* \* 21

*Approximate number of bicycles available for use* \* 125

*Current number of dock spaces* \* 262

*Total rides in most recent 12 calendar months* \* 23500

*Station Siting: Stations are located in areas primarily serving low-income communities, such as placement of stations adjacent to affordable housing.* \*

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

---

*Financial Assistance: Measures taken to reduce financial barriers to bikeshare participation, such as installment payment plans for memberships, assisting with obtaining a credit/debit card to securitize purchase, not placing a credit limit hold on a credit/debit card, securitizing membership via an alternative to personal credit/debit card, or providing discounted membership to qualifying low-income citizens.* \*

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Presently our system requires that a credit card be used and retained on file for every access pass purchased (24-hour to annual), although while considering ways to change this we were advised that our

present \$55 annual membership price is already squarely in the realm in highly affordable transportation for those who live or work near stations.

*Safe places to ride: Bikeshare entity is proactive in identifying, encouraging, and/or assisting in creation of bike facilities (such as lanes, cycletracks, and trails) in low income or minority groups underrepresented in bicycling. \**

- No intent to pursue plans in this area

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

---

*Membership media: Measures taken to reduce payment barriers to holding a bikeshare membership by linking membership and charges to another account and/or payment media, such as public transportation farecard or subsidized telephone account \**

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Presently our system requires that a credit card be used and retained on file for every access pass purchased (24-hour to annual), although while considering ways to change this we were advised that our present \$55 annual membership price is already squarely in the realm in highly affordable transportation for those who live or work near stations.

*Community-specific marketing and outreach: Targeted marketing, promotion, and outreach to low-income people and minority groups underrepresented in bicycling, such as promotion through community human services providers, establishing partnerships with community groups, and community-specific marketing and sales efforts. \**

- No intent to pursue plans in this area

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

---

*Overcoming bicycling barriers: Promotes access for low-income people, or minority groups underrepresented in bicycling, to information and products that aim to lower psychic barriers to bicycling, such as targeted provision of helmets and bicycling instructional classes. \**

- No intent to pursue plans in this area

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

---

*Community economic contribution: Bikeshare system directly promotes community economic activity, such as conducting targeted recruitment to create employment opportunities for low-income people or minorities underrepresented in bicycling, locating maintenance/operations facilities in low-income communities, or subcontracting with organizations serving low-income communities. \**

---

- No intent to pursue plans in this area

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

## Appendix S

*Your Name* \* Sarah Shipley

*Your Position Title* \* What is your position within the bikeshare system? Director of Marketing and Communications

*Bikeshare System Name* \*What bikeshare system are you submitting responses on behalf of? If your responses only represent one distinct part of a bikeshare system (such as one city participating in a regional system), please note this: Kansas City B-cycle

*Business Model* \*Which category listed below best describes the organization managing and operating your existing or planned bikeshare system?

- Non-profit organization receiving less than half of its capital funding from Federal, state, or local transportation funds

*Current number of stations* \* 12

*Approximate number of bicycles available for use* \* 90

*Current number of dock spaces* \* 110

*Total rides in most recent 12 calendar months* \* 0

*Station Siting: Stations are located in areas primarily serving low-income communities, such as placement of stations adjacent to affordable housing.* \*

- Not yet, but planning/preparation underway

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

This is a tough question and one that we have been working with from the start. We are always looking for sponsors for these stations - but as of yet have not found one.

*Financial Assistance: Measures taken to reduce financial barriers to bikeshare participation, such as installment payment plans for memberships, assisting with obtaining a credit/debit card to securitize purchase, not placing a credit limit hold on a credit/debit card, securitizing membership via an alternative to personal credit/debit card, or providing discounted membership to qualifying low-income citizens.* \*

- Not yet, but planning/preparation underway

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

we have done research on best practices and have asked a few partners how to do this - we have had little positive response.

*Safe places to ride: Bikeshare entity is proactive in identifying, encouraging, and/or assisting in creation of bike facilities (such as lanes, cycletracks, and trails) in low income or minority groups underrepresented in bicycling. \**

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

we are working on better blocks initiatives, SRTS grants in underserved areas etc.

*Membership media: Measures taken to reduce payment barriers to holding a bikeshare membership by linking membership and charges to another account and/or payment media, such as public transportation farecard or subsidized telephone account \**

- No intent to pursue plans in this area

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

-----

*Community-specific marketing and outreach: Targeted marketing, promotion, and outreach to low-income people and minority groups underrepresented in bicycling, such as promotion through community human services providers, establishing partnerships with community groups, and community-specific marketing and sales efforts. \**

- No intent to pursue plans in this area

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

we are not going to market our b-cycle to underserved until we have a way to serve that population. that would be unfair.

*Overcoming bicycling barriers: Promotes access for low-income people, or minority groups underrepresented in bicycling, to information and products that aim to lower psychic barriers to bicycling, such as targeted provision of helmets and bicycling instructional classes. \**

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

---

we already offer classes to the the underserved and pair with DIY bike shops gor helmets and trainings - the trainings are on bikes not bikes bikes -

*Community economic contribution: Bikeshare system directly promotes community economic activity, such as conducting targeted recruitment to create employment opportunities for low-income people or minorities underrepresented in bicycling, locating maintenance/operations facilities in low-income communities, or subcontracting with organizations serving low-income communities. \**

---

- Yes

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

## Appendix T

Your Name \* Julie Harris

Your Position Title \* What is your position within the bikeshare system? Project Manager

Bikeshare System Name \*What bikeshare system are you submitting responses on behalf of? If your responses only represent one distinct part of a bikeshare system (such as one city participating in a regional system), please note this: Omaha B-cycle

Business Model \*Which category listed below best describes the organization managing and operating your existing or planned bikeshare system?

- Non-profit organization receiving less than half of its capital funding from Federal, state, or local transportation funds

Current number of stations \* 5

Approximate number of bicycles available for use \* 35

Current number of dock spaces \* 50

Total rides in most recent 12 calendar months \* 3000

Station Siting: Stations are located in areas primarily serving low-income communities, such as placement of stations adjacent to affordable housing. \*

- No short term planning underway, but an intent to investigate in the future

Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:

Planning to discuss this indepth further with other communities with B-cycle.

Financial Assistance: Measures taken to reduce financial barriers to bikeshare participation, such as installment payment plans for memberships, assisting with obtaining a credit/debit card to securitize purchase, not placing a credit limit hold on a credit/debit card, securitizing membership via an alternative to personal credit/debit card, or providing discounted membership to qualifying low-income citizens. \*

- No short term planning underway, but an intent to investigate in the future

Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:

Another item on our list to investigate as we explore expanding our system.



*Safe places to ride: Bikeshare entity is proactive in identifying, encouraging, and/or assisting in creation of bike facilities (such as lanes, cycletracks, and trails) in low income or minority groups underrepresented in bicycling. \**

- No intent to pursue plans in this area

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

This is not a role specific to our B-cycle program. Others in our community are working on these items, however.

*Membership media: Measures taken to reduce payment barriers to holding a bikeshare membership by linking membership and charges to another account and/or payment media, such as public transportation farecard or subsidized telephone account \**

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

-----

*Community-specific marketing and outreach: Targeted marketing, promotion, and outreach to low-income people and minority groups underrepresented in bicycling, such as promotion through community human services providers, establishing partnerships with community groups, and community-specific marketing and sales efforts. \**

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

-----

*Overcoming bicycling barriers: Promotes access for low-income people, or minority groups underrepresented in bicycling, to information and products that aim to lower psychic barriers to bicycling, such as targeted provision of helmets and bicycling instructional classes. \**

- No intent to pursue plans in this area

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*Community economic contribution:  
*Bikeshare system directly promotes community economic activity, such as conducting targeted recruitment to create employment opportunities for low-income people or minorities underrepresented*

*in bicycling, locating maintenance/operations facilities in low-income communities, or subcontracting with organizations serving low-income communities. \**

---

- No intent to pursue plans in this area

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

## Appendix U

Your Name \* Carl Voss

Your Position Title \* What is your position within the bikeshare system? Chair

Bikeshare System Name \*What bikeshare system are you submitting responses on behalf of? If your responses only represent one distinct part of a bikeshare system (such as one city participating in a regional system), please note this: Des Moines Bicycle Collective

Business Model \*Which category listed below best describes the organization managing and operating your existing or planned bikeshare system?

- Non-profit organization receiving less than half of its capital funding from Federal, state, or local transportation funds

Current number of stations \* 5

Approximate number of bicycles available for use \* 22

Current number of dock spaces \* 44

Total rides in most recent 12 calendar months \* 2200

Station Siting: Stations are located in areas primarily serving low-income communities, such as placement of stations adjacent to affordable housing. \*

- Yes

Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:

B-cycle brochures provided at an adjacent building (110 units; 80% affordable housing). Very little interest in annual memberships.

Financial Assistance: Measures taken to reduce financial barriers to bikeshare participation, such as installment payment plans for memberships, assisting with obtaining a credit/debit card to securitize purchase, not placing a credit limit hold on a credit/debit card, securitizing membership via an alternative to personal credit/debit card, or providing discounted membership to qualifying low-income citizens. \*

- No intent to pursue plans in this area

Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:

Will again offer a spring special for memberships metro wide--not limited by income.

*Safe places to ride: Bikeshare entity is proactive in identifying, encouraging, and/or assisting in creation of bike facilities (such as lanes, cycletracks, and trails) in low income or minority groups underrepresented in bicycling. \**

- Not yet, but planning/preparation underway

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Two nearby streets should have bike lanes when spring allows paint crew to stripe new bike lanes.

*Membership media: Measures taken to reduce payment barriers to holding a bikeshare membership by linking membership and charges to another account and/or payment media, such as public transportation farecard or subsidized telephone account \**

- No intent to pursue plans in this area

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

-----

*Community-specific marketing and outreach: Targeted marketing, promotion, and outreach to low-income people and minority groups underrepresented in bicycling, such as promotion through community human services providers, establishing partnerships with community groups, and community-specific marketing and sales efforts. \**

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

-----

*Overcoming bicycling barriers: Promotes access for low-income people, or minority groups underrepresented in bicycling, to information and products that aim to lower psychic barriers to bicycling, such as targeted provision of helmets and bicycling instructional classes. \**

- No intent to pursue plans in this area

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

*Community economic contribution: Bikeshare system directly promotes community economic activity, such as conducting targeted recruitment to create employment opportunities for low-income people or*

*minorities underrepresented in bicycling, locating maintenance/operations facilities in low-income communities, or subcontracting with organizations serving low-income communities. \**

---

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

## Appendix V

*Your Name* \* William Rub

*Your Position Title* \* What is your position within the bikeshare system? Director of Houston Bike Share

*Bikeshare System Name* \*What bikeshare system are you submitting responses on behalf of? If your responses only represent one distinct part of a bikeshare system (such as one city participating in a regional system), please note this: Houston Bike Share aka Houston B-cycle

*Business Model* \*Which category listed below best describes the organization managing and operating your existing or planned bikeshare system?

- Non-profit organization receiving more than half of its capital funding from Federal, state, or local transportation funds

*Current number of stations* \* 3

*Approximate number of bicycles available for use* \* 18

*Current number of dock spaces* \* 28

*Total rides in most recent 12 calendar months* \* 1829

*Station Siting: Stations are located in areas primarily serving low-income communities, such as placement of stations adjacent to affordable housing.* \*

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

We only have 3 stations and been operating since 5.02.2012. Our next phase will add 20 more stations and are planned to add density to downtown and surrounding urban areas. Our next expansion will include stations in lesser socioeconomic areas on the east side of downtown Houston.

*Financial Assistance: Measures taken to reduce financial barriers to bikeshare participation, such as installment payment plans for memberships, assisting with obtaining a credit/debit card to securitize purchase, not placing a credit limit hold on a credit/debit card, securitizing membership via an alternative to personal credit/debit card, or providing discounted membership to qualifying low-income citizens.* \*

- No intent to pursue plans in this area

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

We are still struggling to get the program up and running and have not considered this element.

*Safe places to ride: Bikeshare entity is proactive in identifying, encouraging, and/or assisting in creation of bike facilities (such as lanes, cycletracks, and trails) in low income or minority groups underrepresented in bicycling. \**

- No intent to pursue plans in this area

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

This is beyond the scope of Houston Bike Share - we have no official input into the creation of bike lanes or bike facilities.

*Membership media: Measures taken to reduce payment barriers to holding a bikeshare membership by linking membership and charges to another account and/or payment media, such as public transportation farecard or subsidized telephone account \**

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Still very early in the development of our program and this is still a bit beyond our scope at this time.

*Community-specific marketing and outreach: Targeted marketing, promotion, and outreach to low-income people and minority groups underrepresented in bicycling, such as promotion through community human services providers, establishing partnerships with community groups, and community-specific marketing and sales efforts. \**

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Still very early in the development of our program and this is still a bit beyond our scope at this time.

*Overcoming bicycling barriers: Promotes access for low-income people, or minority groups underrepresented in bicycling, to information and products that aim to lower psychic barriers to bicycling, such as targeted provision of helmets and bicycling instructional classes. \**

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

---

Still very early in the development of our program and this is still a bit beyond our scope at this time.

*Community economic contribution: Bikeshare system directly promotes community economic activity, such as conducting targeted recruitment to create employment opportunities for low-income people or minorities underrepresented in bicycling, locating maintenance/operations facilities in low-income communities, or subcontracting with organizations serving low-income communities. \**

---

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

Still very early in the development of our program and this is still a bit beyond our scope at this time.



## Appendix W

*Your Name* \* Anne Piacentino

*Your Position Title* \* What is your position within the bikeshare system? Active Lifestyles Coordinator

*Bikeshare System Name* \*What bikeshare system are you submitting responses on behalf of? If your responses only represent one distinct part of a bikeshare system (such as one city participating in a regional system), please note this: Spartanburg B-cycle

*Business Model* \*Which category listed below best describes the organization managing and operating your existing or planned bikeshare system?

- Non-profit organization receiving less than half of its capital funding from Federal, state, or local transportation funds

*Current number of stations* \* 2

*Approximate number of bicycles available for use* \* 14

*Current number of dock spaces* \* 20

*Total rides in most recent 12 calendar months* \* 3000

*Station Siting: Stations are located in areas primarily serving low-income communities, such as placement of stations adjacent to affordable housing.* \*

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

With growth of the system we will pursue the options and look at best practices for this type of location.

*Financial Assistance: Measures taken to reduce financial barriers to bikeshare participation, such as installment payment plans for memberships, assisting with obtaining a credit/debit card to securitize purchase, not placing a credit limit hold on a credit/debit card, securitizing membership via an alternative to personal credit/debit card, or providing discounted membership to qualifying low-income citizens.* \*

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

With growth of the system we will pursue the options and look at best practices for these types of situations.

*Safe places to ride: Bikeshare entity is proactive in identifying, encouraging, and/or assisting in creation of bike facilities (such as lanes, cycletracks, and trails) in low income or minority groups underrepresented in bicycling. \**

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

We are using B-cycle as a way to connect our bicycle/pedestrian infrastructure as well as have it point out potential improvements and opportunities.

*Membership media: Measures taken to reduce payment barriers to holding a bikeshare membership by linking membership and charges to another account and/or payment media, such as public transportation farecard or subsidized telephone account \**

- No intent to pursue plans in this area

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

-----

*Community-specific marketing and outreach: Targeted marketing, promotion, and outreach to low-income people and minority groups underrepresented in bicycling, such as promotion through community human services providers, establishing partnerships with community groups, and community-specific marketing and sales efforts. \**

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

-----

*Overcoming bicycling barriers: Promotes access for low-income people, or minority groups underrepresented in bicycling, to information and products that aim to lower psychic barriers to bicycling, such as targeted provision of helmets and bicycling instructional classes. \**

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

---

-----

*Community economic contribution: Bikeshare system directly promotes community economic activity, such as conducting targeted recruitment to create employment opportunities for low-income people or minorities underrepresented in bicycling, locating maintenance/operations facilities in low-income communities, or subcontracting with organizations serving low-income communities. \**

---

- No short term planning underway, but an intent to investigate in the future

*Please describe measures that you have taken, or plan to take, with details, if the measures were effective, and any lessons-learned that might help others understand and learn from your experience. If measures have not been pursued, please describe any reasons:*

-----