

## List of Appendices

- Appendix A. Letter of Support (Multiple Signatories)
- Appendix B. Letter of Support from Congressman Earl Blumenauer
- Appendix C. Letter of Support from Sam Adams, Mayor of the City of Portland
- Appendix D. Lead Private Sponsor Confirmation Letter
- Appendix E. Relevant Plan and Policies
- Appendix F. Portland's Air Toxics Maps
- Appendix G. Central City Population and Employment Density
- Appendix H. Evaluation and Characteristics of Other Bike Share Programs
- Appendix I. Income and Demographic Information
- Appendix J. Proposed Infrastructure

## Appendix A – Letter of Support (Multiple Signatories)

June 3, 2011

Victor Mendez  
Administrator  
Federal Highway Administration  
1200 New Jersey Ave SE  
Washington, DC 20590

**RE: Portland Bike Share TCSP Grant Proposal**

Dear Secretary LaHood:

We are writing to show our support for the City of Portland's **Portland Bike Share** grant proposal under the Transportation Community and System Preservation program.

A safe and efficient transportation system is a system of options. Portland has made significant bicycle transportation investments that allow for up to 8% of our trips to be taken by bicycle, reducing our emissions, preserving capacity for goods and services, and reducing transportation costs for many Portland residents. Bike sharing is not a new concept. DC's Capital Bikeshare has been wildly successful, drawing 32,000 day passes in the first nine months of operations. Minneapolis, Denver and Chicago have invested in bike share programs. But no American city can provide the living laboratory that Portland offers; the large-scale bike share program supported by this grant will be the first bike share program to be launched in a "Platinum" level bicycle city.

We see the **Portland Bike Share** project as a key to supporting a healthy community, by encouraging biking and walking; supplementing transit ridership, and advancing Portland's bicycling transportation network. Importantly, Portland has lobbied at the state level for lower speed streets that support active transportation. The stage has been set for the investment in bike share.

The **Portland Bike Share** project area includes 20,900 households and 153,000 jobs that will be served by this new transportation option. And those numbers are growing due to our smart investments in transit and smart urban planning. The **Portland Bike Share** network would include at least 74 stations and introduce 740 shared bikes, providing a seamless array of transportation choices for moving throughout the central city. This project will transform many occasional riders into regular cyclists and it will be a unique lure to the coveted 'interested but concerned' riders essential to meeting our Bike Plan 2030 and Climate Action Plan goals. In its first 12 months of operation, staff estimates that bike sharing will generate 500,000 new bicycle trips. The City of Portland recognizes the importance of shifting trips to bicycles to **preserve our constrained capacity, increase the efficiency of our current system and reduce our city's and region's investments in costly transportation infrastructure.**

We support this project because it goes beyond a bike share program, essentially creating a health promotion program, reducing transportation costs for our residents and our transportation system's impact on our environment. Bike share systems have proven successful at increasing the number of bicycle trips taken in cities across the globe by providing access to bicycles at a low cost, increasing the visibility and presence of bicycles on downtown streets, and providing a transportation option that connects residents, employees, and tourists to work, home, transit, and attractions.

We, the undersigned, urge you to support the **Portland Bike Share** project because of the innovative approach to meeting the goals of the program and the multifaceted return on the investment for our community. This project has broad community support as exemplified by the partners in this letter.

**Rob Bennet**  
Director  
*Portland Oregon Sustainability Institute*

**Jeff Cogen**  
Chair  
*Multnomah County*

**Kristin Dahl**  
Architect, Sustainable Tourism  
*Travel Oregon*

**Nina DiConcini**  
Northwest Region Administrator  
*Oregon Department of Environmental Quality*

**David Kenny**  
President & Executive Director  
*Oregon Best*

**Jeff Miller**  
President & CEO  
*Travel Portland*

**Rebecca Okken**  
Capital Bond Project Manager  
*Portland Community College*

**Rob Sadowsky**  
Executive Director  
*Bicycle Transportation Alliance*

**Rick Williams**  
Director  
*Lloyd Transportation Management Association*

**Paul Carlson**  
Senior Vice President  
*Oregon Museum of Science and Industry*

**Pete Collins**  
Director  
*South Waterfront Transportation Management Association*

**Justin Delaney,**  
Vice President, External Affairs  
*Standard Insurance*

**Jay Graves**  
Owner  
*Bike Gallery*

**Neal McFarlane**  
Director  
*TriMet*

**Mark Morford**  
Sustainability Partner  
*Stoel Rives LLP*

**Michael Powell**  
Chair  
*Portland Streetcar, Inc.*

**Wim Wiewel**  
President  
*Portland State University*

**Appendix B. Letter of Support from  
Congressman Earl Blumenauer**

EARL BLUMENAUER  
THIRD DISTRICT, OREGON

COMMITTEE ON WAYS AND MEANS  
SUBCOMMITTEE ON HEALTH

COMMITTEE ON BUDGET



WASHINGTON OFFICE:  
1502 LONGWORTH BUILDING  
WASHINGTON, DC 20515  
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729 N.E. OREGON STREET  
SUITE 115  
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(503) 231-2300  
FAX: (503) 230-5413

website: blumenauer.house.gov

**Congress of the United States**  
**House of Representatives**  
**Washington, DC 20515-3703**

June 1, 2011

Victor M. Mendez  
Federal Highway Administrator  
Federal Highway Administration  
1200 New Jersey Ave., SE  
Washington, DC 20590

RE: TCSP Application: Portland Bikeshare: Sustainable Transportation Investment System

Dear Administrator Mendez,

I write to support of the Portland Bikeshare application for funding from the Transportation Community and System Preservation (TCSP) program.

Bike share systems have proven successful at increasing the number of bicycle trips taken in cities across the globe by providing access to bicycles as a low cost transportation option that connects residents to work, home, transit, and attractions.

A safe and efficient transportation system supplies the public with options. Portland Bikeshare will include 74 stations and 740 shared bikes and provide our current 29,500 households and 150,000 employees with new transportation options in the central city. This will provide the opportunity to transform many occasional, or those merely interested, into regular cyclists essential to meeting the City's Bike Plan 2030 and Climate Action Plan goals and increase the city's already robust 8% bicycle mode share.

Recognizing that the region is expected to grow by a million new residents by 2030, now is the time to invest in low cost options that will reduce the demand on the transportation system. The Portland Bikeshare project is key to supporting a healthy community by encouraging biking and walking, supplementing transit ridership, and advancing Portland's investment in a Platinum rated bicycling transportation network.

I urge you to give the application for this important project full and fair consideration.

Sincerely,

  
Earl Blumenauer  
Member of Congress

**Appendix C. Letter of Support from Sam Adams,  
Mayor of the City of Portland**



OFFICE OF MAYOR SAM ADAMS  
CITY OF PORTLAND

Victor Mendez  
Administrator  
Federal Highway Administration  
1200 New Jersey Ave., SE  
Washington, DC 20590

May 31, 2011

Dear Mr. Mendez,

I am writing you to urge your support for the City of Portland's **Portland Bikeshare** grant proposal under the Transportation Community and System Preservation (TCSP) program. As both the Mayor and the Commissioner in charge of Portland's Bureau of Transportation, I see the Portland Bikeshare project as an integral component of our transportation system. Portland Bikeshare will help maintain the balance between an aging system in need of repair that faces increasing capacity demands and maximizing the system in a cost effective way using our existing right of way and promoting safety.

Portland Bikeshare will allow us to improve efficiency of the system, preserve capacity for goods and services, reduce the impact of our benzene and carbon emissions on the environment, provide transportation options to over 150,000 jobs in the central city and support the higher density development that we expect along the Portland Streetcar Loop.

The City of Portland will invest in at least 74 stations that will support 740 bikes. Based on the ridership in other cities Portland expects this will translate into 500,000 new bike trips, and eliminating 90,000 auto trips.

With Portland's high bicycle ridership, over 8% of all trips, Portland is the perfect place to invest federal money into a bikeshare program. Portland Bikeshare will build on the current ridership by encouraging short trips to be taken by bike within the central city. Many people come into the central city by transit or car, by providing an alternative to driving or taking transit for trips under 3 miles, Portland Bikeshare will support work day trips and errands, allowing more capacity within our current system.

Under my leadership the Bike Plan for 2030 and the Climate Action Plan were developed. Both plans stress the importance of reducing vehicle trips and moving trips to biking or walking. Portland Bikeshare will directly support this work and our efforts to reduce the transportation impact on the environment. Additionally, we are working towards greater

density in the City Center through Portland's Central City Plan, streetcar plans and the in-process Portland Plan, as well as our investments in a streetcar system and new light rail connections. The Portland Bikeshare supports this goal as well by providing another transportation amenity that encourages development and reduces the need to build expensive tuck under parking.

Thank you for considering Portland Bikeshare for funding from the TCSP program. Portland is a willing partner in this project and will deliver outstanding results.

Sincerely,

A handwritten signature in black ink, appearing to read 'Sam Adams', with a stylized, cursive script.

Sam Adams  
Mayor of Portland

## **Appendix D. Lead Private Sponsor Confirmation Letter**



May 24, 2011

Dan Bower  
Portland Office of Transportation  
1120 SW Fifth Avenue, Suite 800  
Portland, OR 97204

Dear Dan:

In recent weeks, Regence has valued its discussions with you and others regarding the Portland Bike Share Program. I'm writing to confirm our strong interest in becoming the lead private sector sponsor of the program.

We believe the Portland Bike Share Program is a tremendous opportunity to drive healthy lifestyle choices among Portlanders. This program can help build Portland's reputation as a sustainable, progressive, community-oriented place to live. These are all values shared by Regence and we are proud of the work we've done over the years in support of similar activities.

I know you are aware our sister company Blue Cross Blue Shield of Minnesota has established a similar partnership with the Twin Cities' Nice Ride Minnesota Bike Share program over the past several years. They report that the partnership has delivered tremendous results.

With great enthusiasm, we look forward to partnering with the City of Portland and helping to shape and promote this important program.

Sincerely,

Kerry Barnett  
Executive Vice President, Corporate Services

## **Appendix E – Relevant Plans & Policies**

The following Plans and Policies developed by the City of Portland and/or other organizations support the proposed bike share program:

### **Portland's Transportation System Plan**

<http://www.portlandonline.com/transportation/index.cfm?c=52495>

### **2035 Regional Transportation Plan**

[http://library.oregonmetro.gov/files//2035\\_rtp\\_final\\_document\\_as\\_submitted\\_to\\_dlcd\\_us\\_dot\\_web.pdf](http://library.oregonmetro.gov/files//2035_rtp_final_document_as_submitted_to_dlcd_us_dot_web.pdf)

### **Climate Action Plan 2009**

<http://www.portlandonline.com/bps/index.cfm?c=49989&a=268612>

### **Waterfront Park Master Plan**

<http://www.portlandonline.com/parks/finder/index.cfm?action=ViewFile&PolPdfsID=328&/Waterfront%20Park%20Master%20Plan.pdf>

### **Portland Bicycle Plan for 2030**

[ftp://ftp02.portlandoregon.gov/PBOT/Bicycle\\_Plan\\_for\\_2030/Plan\\_Documents/Complete\\_Plan/Portland\\_Bicycle\\_Plan\\_for\\_2030\\_as-adopted.pdf](ftp://ftp02.portlandoregon.gov/PBOT/Bicycle_Plan_for_2030/Plan_Documents/Complete_Plan/Portland_Bicycle_Plan_for_2030_as-adopted.pdf)

## **Appendix F. Portland's Air Toxics Information**

The State of Oregon Department of Environmental Quality is currently conducting a Modeling Study to better understand the types and concentrations of air toxins in the Portland Metropolitan Area. The study includes a stakeholder group dedicated to findings and implementing strategies to reduce air toxic levels in the City, one of which is reducing emissions from vehicles and aligns with a bikeshare program for the Central City.

The following briefing paper describes the DEQ's efforts. Maps are also included to better show the current air toxic situation in the City of Portland.

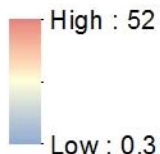
## PATS air toxics: Cumulative benchmark exceedances from on-road mobile emissions

### Portland Air Toxics Solutions

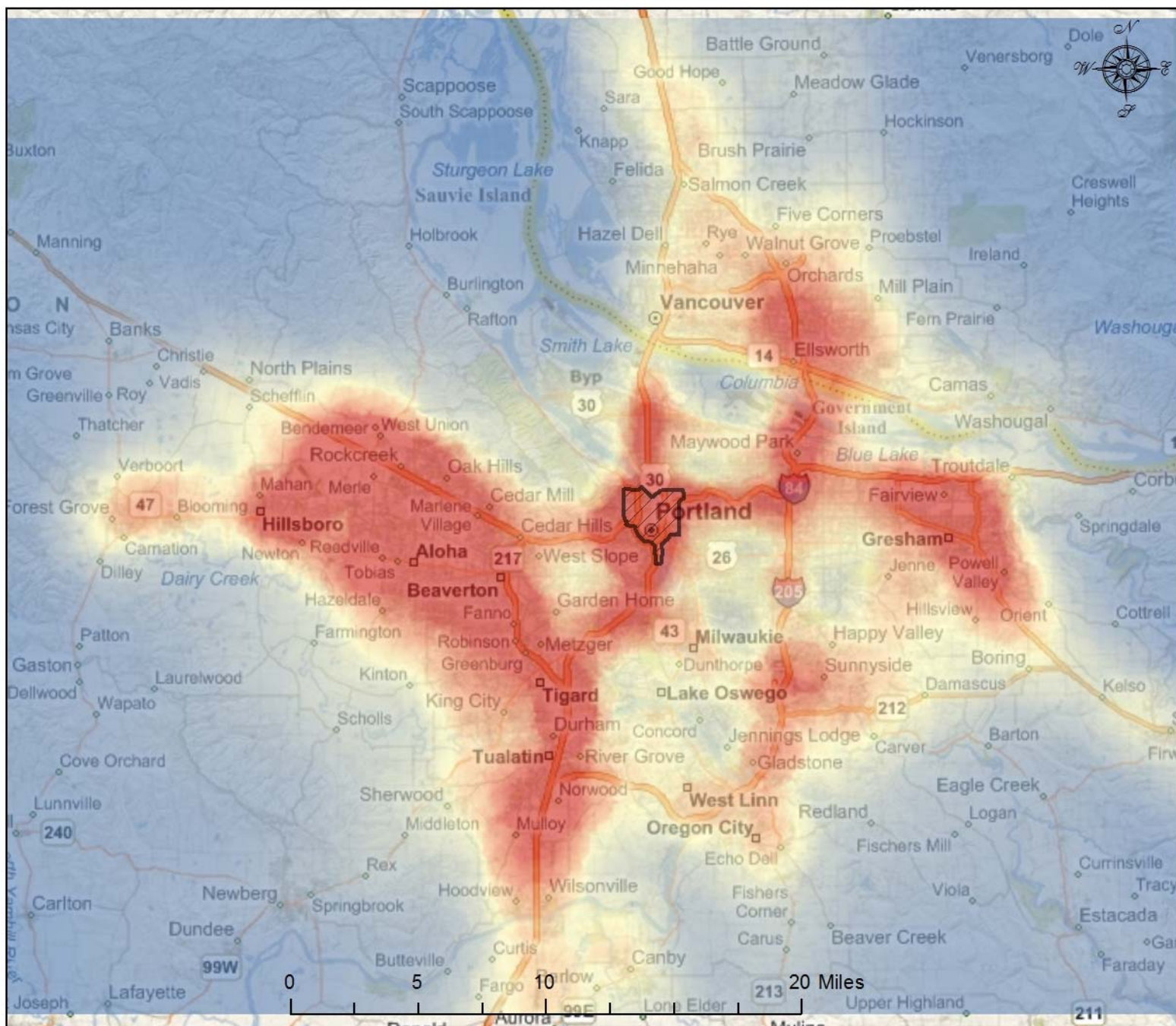


State of Oregon  
Department of  
Environmental  
Quality

Times above ABC



*Note*  
ABC = Ambient Benchmark Concentrations  
PATS air toxics from on-road mobile source:  
acetaldehyde, acrolein,  
1,3-butadiene, formaldehyde,  
naphthalene, benzene,  
diesel PM, ethylbenzene,  
arsenic, chromium VI,  
manganese, nickel,  
15 - PAH



# PATS air toxics: Cumulative benchmark exceedances from on-road mobile emissions

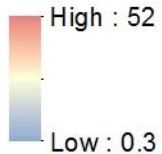
## Portland Air Toxics Solutions



**DEQ**

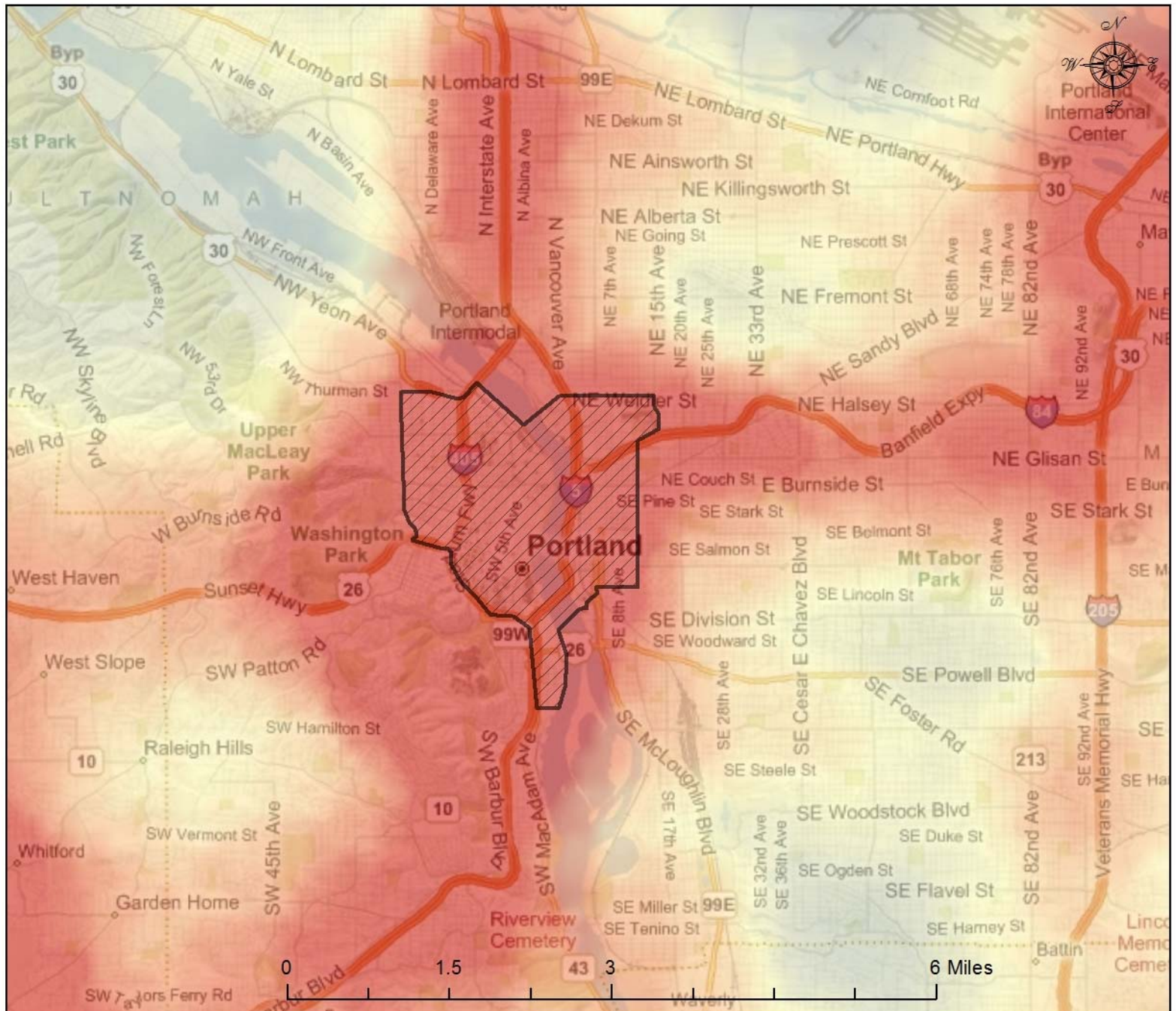
State of Oregon  
Department of  
Environmental  
Quality

Times above ABC



Bike Share Service Area

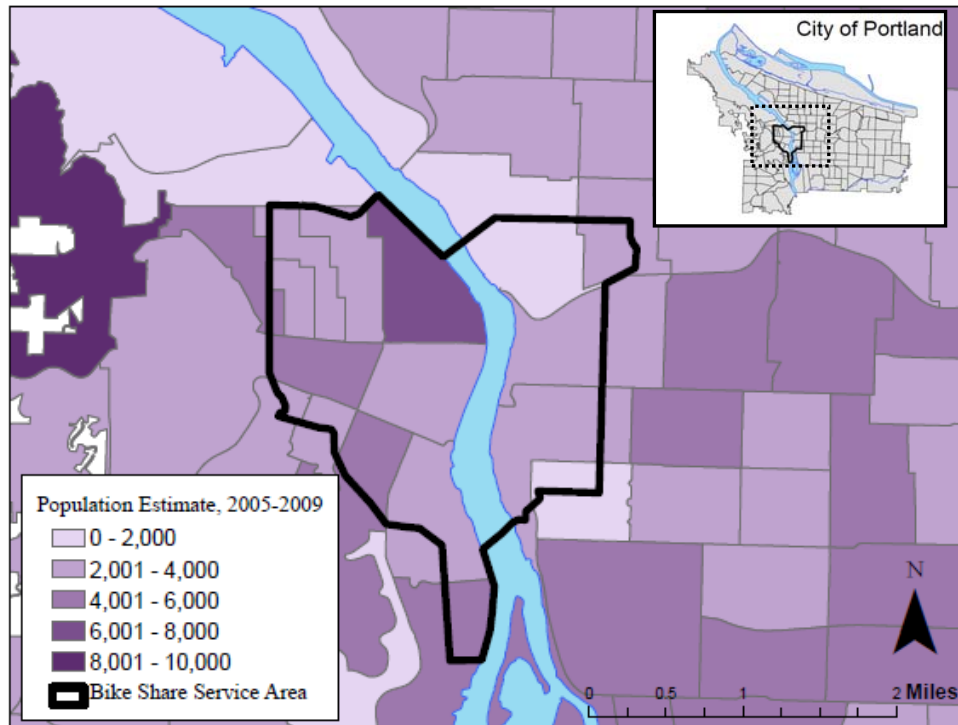
Note  
ABC = Ambient Benchmark Concentrations  
PATS air toxics from on-road mobile source:  
acetaldehyde, acrolein, 1,3-butadiene, formaldehyde, naphthalene, benzene, diesel PM, ethylbenzene, arsenic, chromium VI, manganese, nickel, 15 - PAH



# Appendix G. Central City Population & Employment Density

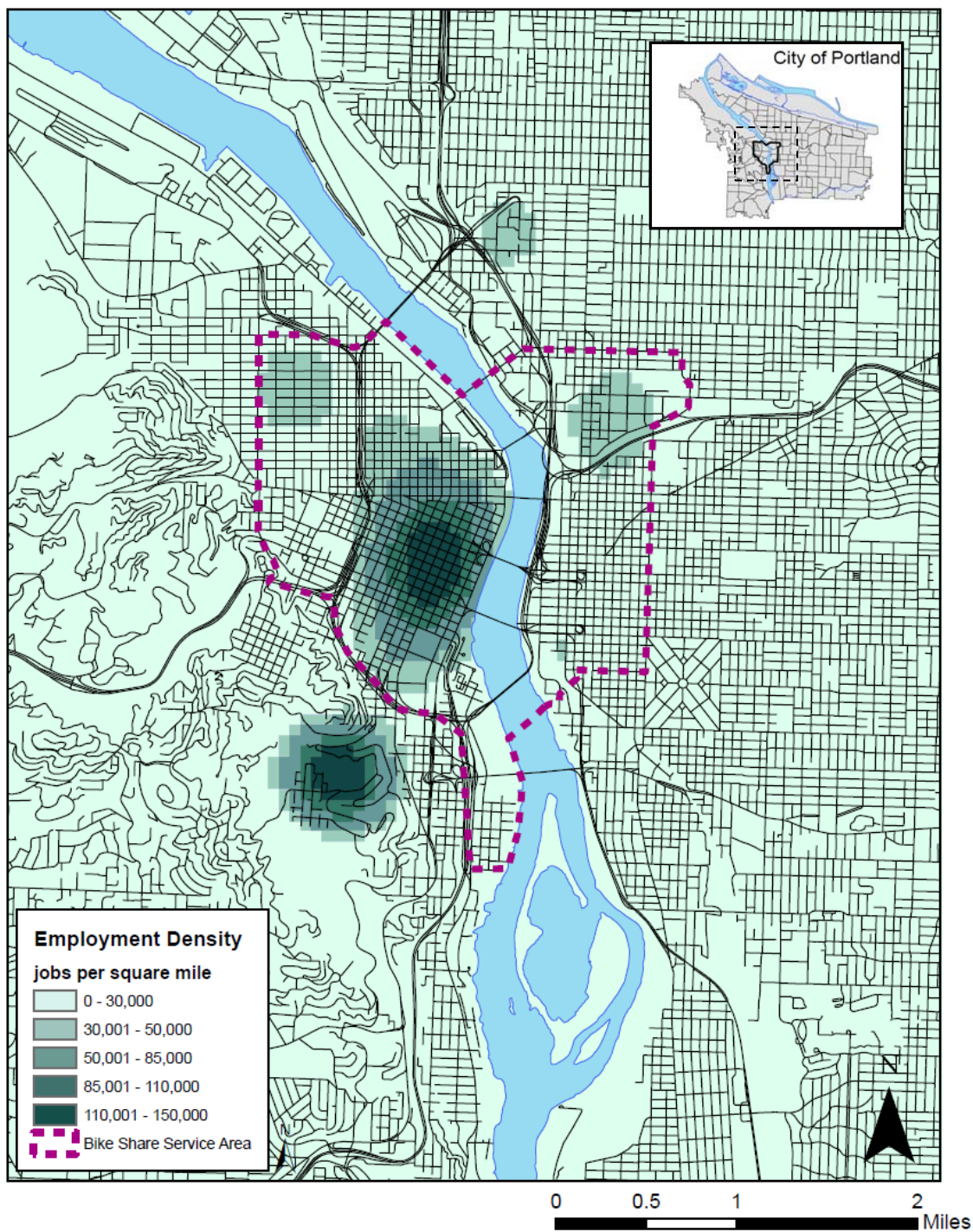
## Average Household Income within the Bikeshare Service Area

Average Household Income within the Bikeshare Service Area



Data Source: American Community Survey Estimates, 2005-2009

# Employment Density within Bikeshare Service Area



## **Appendix H. Evaluation & Characteristics of Other Bike Share Programs**

The City of Portland has evaluated bike share systems within the United States and abroad. Matrix 1 describes components of these bike share and which components would be preferred for Portland's bike share program. Matrix 2 provides a summary of bike share systems throughout North America.

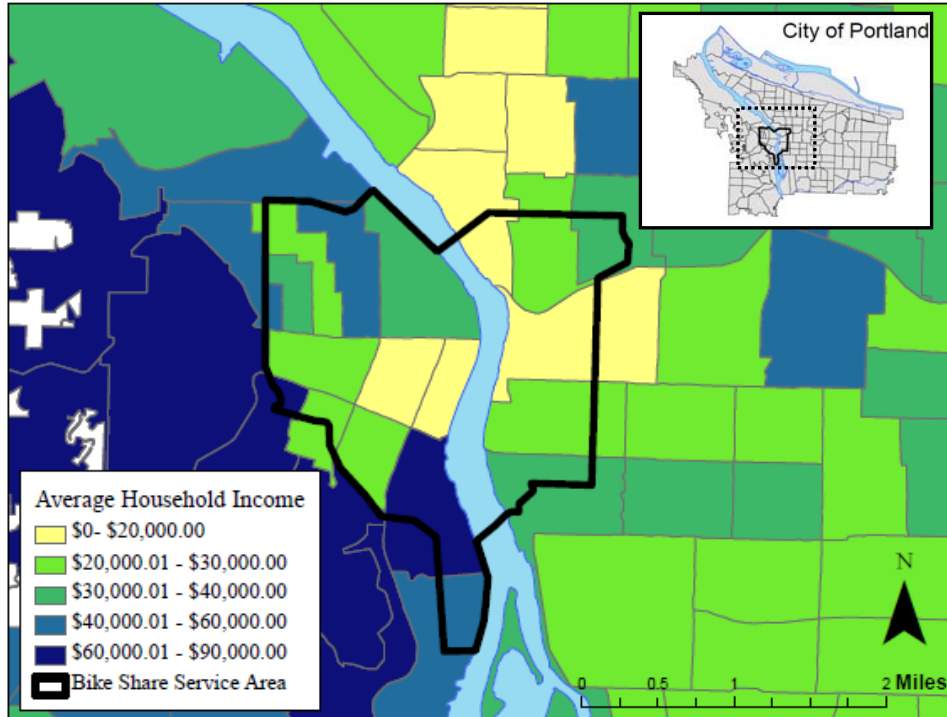
Component	Portland's Approach	Notes
Station location: Densely concentrated vs. spread expansively	Densely concentrated	Paris' Velib bike share planners noted that stations should be every 300 meters. Dense systems tend to increase bike utilization rates, whether the systems are large (e.g., Montreal 500 stations at 27 stations/sq mile with 2.5 trips/bike/day) or Dublin 37 stations at 15 stations/sq mile w/ 10 trips/bike/day). Conversely, Minneapolis system has about 9 stations/sq mile which allows more districts/neighborhoods access to the system but has a much lower utilization rate at roughly 1 trip/bike/day. Portland plans to mirror Montreal in station density. Effective utilization not only requires a density of station but a high density of uses within the service area to be successful. Portland has chosen to locate the vast majority of stations in the city's highest density districts related to employment, residential, commercial activity and tourist destinations.
Market analysis: Membership pricing plan	Undecided, but leaning toward lower cost structure	Montreal's Bixi has generated the most bike sharing trips (3.3 million in its first 10 months) in North America, yet paradoxically has the highest cost (\$78 US) for an annual membership. Dublin has the world's highest utilization rate and has a very low cost for annual membership (\$16 US). PBOT has projected similar levels of membership revenue for each pricing model given the projected higher membership uptake with a low price point, but there are concerns about the cost of operating a system with a very high utilization rate and customer dissatisfaction due to uncertainty of bike availability. Conversely, a low price point extends access to the widest range of users.
Market analysis: Who is the audience?	Commuters, students, business travelers and tourists	Large North American and European systems (Minneapolis, Paris, Lyon, etc.) have consistently found commute (to work and school) and work-related trips to comprise the majority of bike sharing trips. Business travelers and tourists are a significant portion of the total market (~40% of trips in Minneapolis) and provide a lucrative revenue stream; while over 95% of trips by annual members are less than 30 minutes (Montreal, Minneapolis and DC/Arlington) and thus do not generate rider fees, tourists and travelers are more likely to view rider fees associated w/ longer trips as nominal.
Infrastructure improvements	Yes	Portland believes a successful bike sharing system is predicated on having at least a basic level of bike infrastructure to facilitate comfortable and safe bicycling by novice users. A decade ago, Paris was known as one of western Europe's worst cities for cycling. Before implementing Velib, Paris added nearly 125 miles of bicycle facilities. Portland has over 300 miles of bike facilities and the Central City provides a variety of bike lanes, bike paths, neighborhood greenways and lower traffic streets. All of these are complimented by traffic signal timing that keeps traffic speeds in the CBD at 12 mph and allows cyclists to keep with traffic in nearly all travel lanes. The proposed cycling improvements will include signage and road treatments to direct less experienced cyclists to lower trafficked streets, encourage bicyclists to "take the lane," and lessen contact with road hazards such as streetcar and light rail tracks.

Component	Portland's Approach	Notes
Baskets: Yes or No?	Capacity to carry light cargo required, method is open.	The two major North American bike sharing companies in 2010 were Bixi and Bcycle who took different approaches to cargo carrying capacity. Bcycle's basket provides convenience and prevents uncontained items from spilling while also providing additional real estate for sponsor attribution (logos). The baskets also double as a trash receptacle for inconsiderate passersby and require maintenance to maintain system attractiveness. Conversely, Bixi provides an open-toothed carrying area with a bungee-type cord that allows for a wider range of dimensions of light cargo but loose contents require the user to have a bag/box to contain them. It provides very little additional real estate for sponsorship attribution.
Helmets: Require, encourage, or ignore?	Encourage, not require	There are several reasons Portland will not require users to wear helmets: improbability of distribution, helmet safety, sanitation, and inconvenience to users. Melbourne, Australia is the only city of 230 worldwide with bike sharing systems to require bike sharing users to wear helmets and it is only generating 70 trips/day on its 600 bike system, one of the lowest trip rates for a bike share system of that size. Helmet distribution through vending machines would not only be expensive, but raises serious questions about the structural integrity of these collectively used helmets. A helmet dropped several times can lose its efficacy and there is no feasible way to assess the helmet's safety. Hygiene (imagine a helmet used by 5 different individuals on a hot summer day) is also a great concern. Melbourne has partnered with 7-Eleven to offer \$5 helmets that can be returned for \$3 and are sanitized between uses, which PBOT will explore. Like our nationally recognized Portland SmartTrips programs, Portland will encourage helmet use but not require it.
Ownership model: Public and/or private?	Open to various business plans	In nearly all North American bike sharing systems, local governments have played a very active role - both financially and with in-kind support - regardless of whether they own the system, and Portland feels comfortable with each model. Minneapolis' Nice Ride system is owned by the Nice Ride nonprofit corporation but seed funding (\$397,000) was provided by the City and supported their \$1.75 million Bike/Walk Twin Cities grant in their first year. Similarly, the nonprofit Denver Bike Sharing owns and operates its system but received \$1 million from the City of Denver gift from the Democratic National Committee for hosting the 2008 convention) and had 1 FTE staff on loan. The District of Columbia's DOT owns its bike sharing system and, with Arlington County, contracts the operation of the system to a private consultant, Alta Bicycle Sharing.

	<b>Number of Bikes</b>	<b>Roll out</b>	<b>Vendor</b>	<b>Operator</b>
Boston	610	2011	Bixi	Alta Bicycle Share
Boulder	200	2011	Bcycle	Boulder Bike Sharing
Broward County, FL	200	<i>Slated for summer 2011</i>	Bcycle	Nice Ride
Chattanooga	~300	<i>Slated for 2011-12</i>	Not selected	Outdoor Chattanooga
Chicago	100	Since 2010	Bcycle	Bike and Roll
DC/Arlington	1200	Since 2008/2010	Bixi	Alta Bicycle Share
Denver	500	Since 2009	Bcycle	Denver Bike Sharing
Des Moines	18	Since 2010	Bcycle	Des Moines Bicycle Collective
Kailua (Honolulu)	12	2011	Bcycle	Hawaii Bcycle
Madison	350	2011	Bcycle	Bcycle
Mexico City	1200	2010	Clear Channel	Unknown
Miami Beach	1000	2011	DecoBikes	DecoBikes
Minneapolis	600	Since 2009	Bixi	Nice Ride
Montreal	5000	Since 2009	Bixi	Public Bikes System
New York City	10,000	2012	Not selected	
Ottawa	100	2011	Bixi	National Capital Commission
San Antonio	140	2011	Bcycle	San Antonio Bcycle
SF Bay Area	1000	<i>Slated for 2012</i>	Not selected	
Toronto	1000	2011	Bixi	Unknown

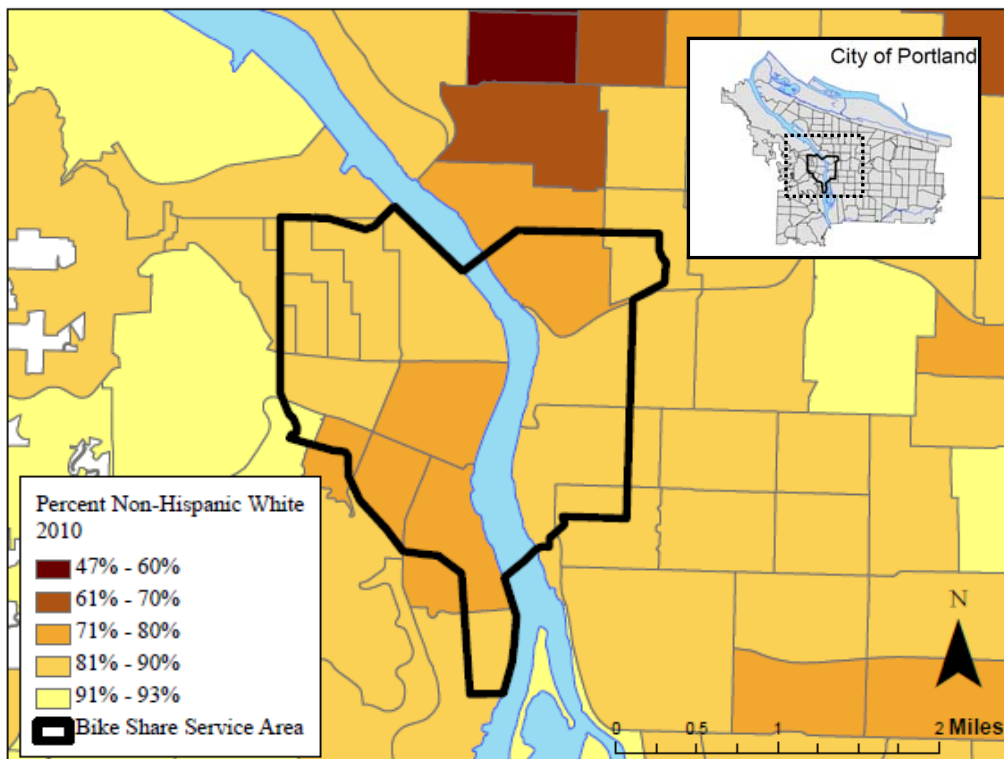
## Appendix I. Income and Demographic Information

### Average Household Income within the Bikeshare Service Area



Data Source: American Community Survey, 2005-2009

### Communities of Color within the Bikeshare Service Area



Data Source: U.S. Census, 2010

## Appendix J. Proposed Infrastructure

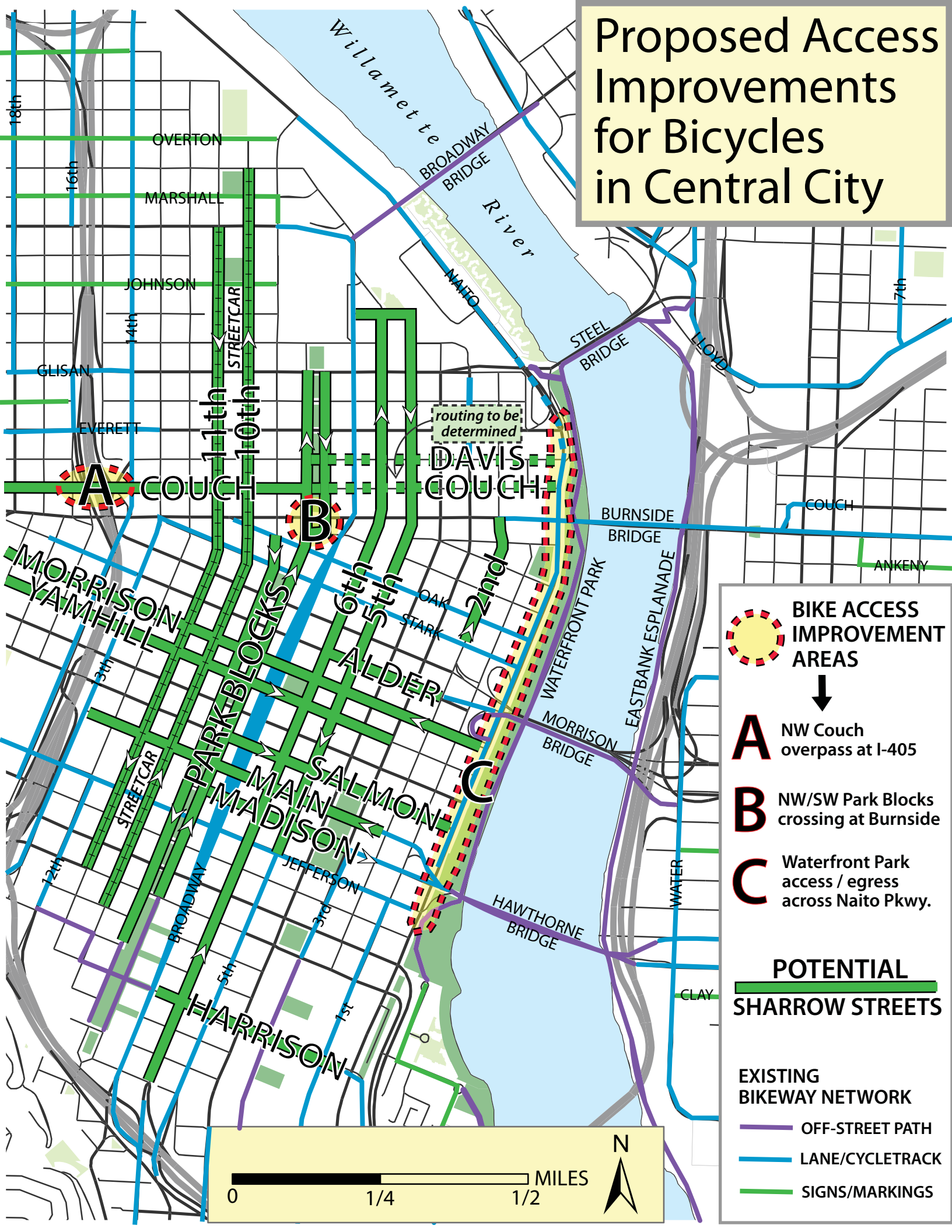
The attached map describes the proposed bicycle infrastructure that would complement a bike share system in Portland's central city. The majority of the improvements would be on-road markings (mostly 'sharrows' – see picture) to increase access between the different parts of the Westside Central City (Central Business District, Old Town, Chinatown, West End, Pearl District and South Waterfront), improve access to the Willamette River bridges, and clarify ingress and egress to/from Waterfront Park.



The proposed markings encourage bicyclists to use lower traffic streets to navigate the Central City. For streets with streetcar and/or light rail tracks (10<sup>th</sup> & 11<sup>th</sup>), markings communicate that bicyclists should use a lane other than the one with tracks and are intended to avoid the hazard of the tracks. In addition, short segments of higher volume roadways are marked to provide visible connections to bridges, existing bikeways, and off-street paths. In total, we propose just over 13 centerline miles of shared lane markings, as shown on the attached map.

The east side of the Central City will not include any markings because the current bikeway networks are sufficient to handle expected demand. In addition, the current density of destinations on the east side is not the same as in the west side of the Central City.

# Proposed Access Improvements for Bicycles in Central City




 BIKE ACCESS IMPROVEMENT AREAS

- A** NW Couch overpass at I-405
- B** NW/SW Park Blocks crossing at Burnside
- C** Waterfront Park access / egress across Naito Pkwy.

 POTENTIAL SHARROW STREETS

EXISTING BIKEWAY NETWORK

-  OFF-STREET PATH
-  LANE/CYCLETRACK
-  SIGNS/MARKINGS

