



PETER STEINBRUECK

SSNAP REPORT 2014

SEATTLE SUSTAINABLE NEIGHBORHOODS ASSESSMENT PROJECT

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Diane Sugimura, Director
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September 26, 2014

Dear Director Sugimura,

Pursuant to DPD contract No. DC14U005, I am pleased to provide you with the Seattle Sustainable Neighborhoods Project (SSNAP) report. Research for the SSNAP report was conducted by the Steinbrueck Urban Strategies project team during the period March 1, 2014 to August 31, 2014.

It has been said, "We don't measure what really matters." The SSNAP project is a data driven study of the 20 year, 1994-2014 Comprehensive Plan to measure results and achievements of the plan through the lens of the city's Urban Village Strategy. The strategy was adopted in the benchmark year 1994 as the planning framework for directing urban growth and public investment into 32 designated urban villages. We find that the strategy has been largely successful in channeling most of the city's jobs and housing growth into designated urban villages. As a pilot study, the SSNAP project examined 10 representative urban villages distributed throughout the city, ranging in scale from the Downtown urban center to Rainier Beach residential urban village.

A number of cities in the U.S. use citywide and regional data as a means to benchmark and track results of urban policy and public investment over time, and more generally to inform community members on progress. What is unique about the SSNAP study is that it measures outcomes at the subarea/neighborhood level through a series of 22 sustainability indicators, which in many cases reveal wide disparities in outcomes between Seattle's neighborhoods and citywide averaged results. These findings are detailed in the report, along with analysis of each indicator and recommendations for the future. One of the biggest challenges encountered in the study was in the data collection process itself—including inconsistencies in tracking, data years, spatial parameters, lack of transparency, and lack of public access. Open data systems are essential to transparency, public accountability and innovation.

The SSNAP methodology, which uses a durable set of neighborhood level indicators, can be a powerful tool for policy makers and planners in charting a more equitable, prosperous and sustainable future. We hope you will find this report informative and its recommendations useful to the city's current planning effort, Seattle 2035, for successfully accommodating growth over the next 20 years.

Thank you for making this study possible.

Sincerely,

A handwritten signature in blue ink that reads "Peter Steinbrueck". The signature is written in a cursive, flowing style.

Peter Steinbrueck, FAIA

ACKNOWLEDGEMENTS

The SSNAP team gratefully acknowledges and thanks the City of Seattle Mayor's Office and Department of Planning and Development for providing direction, support, and resources that made this project possible. The SSNAP team would also like to thank the Department of Neighborhoods, Seattle City Light, Seattle Department of Transportation, Seattle Public Utilities, City of Seattle Budget Office, Office of Arts and Culture, Office for Education, Seattle Parks and Recreation, Seattle Police Department, Seattle Public Schools, King County Metro, Public Health Seattle and King County, Puget Sound Regional Council, Washington Employment Security Department, Washington Office of Superintendent of Public Instruction, Washington State Farmers Market Association, Pike Place Market Preservation and Development Authority, Neighborhood Farmers Market Alliance, Seattle Farmers Market Association, and the University of Washington Urban Ecology Research Laboratory for providing data and assistance through the course of the project. Without the support of these agencies, organizations, and their staff, this project would not have been possible.

A Special Thanks to the Following Individuals:

City of Seattle Project Manager

Tom Hauger, Manager, Comprehensive and Regional Planning, City of Seattle Department of Planning and Development

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Academic Support

Dr. Marina Alberti, University of Washington, Professor, Department of Urban Design and Planning, College of Built Environments, and the Urban Ecology Research Laboratory for the enduring support, research guidance and data analysis advice.

Dean Howard Frumkin, DrPH, MPH, MD, University of Washington, School of Public Health, for the preliminary research guidance, and for sharing research best practices and expertise on community and environmental health indicators.

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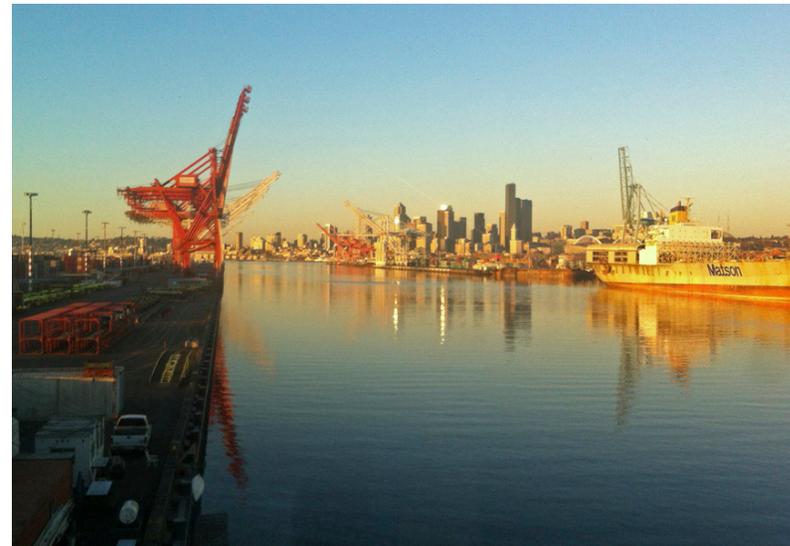
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REPORT SUMMARY

“We don’t measure what really matters.” – Robert Kennedy

“Seattle’s unique neighborhoods are what make our city great. Neighborhoods experiencing rapid growth and change should have access to the tools to plan for it, and the resources and amenities necessary to support it.” – Mayor Ed Murray

Neighborhoods are the building blocks of great cities, providing a connection to people and place most intimately linked to day to day life. The concept of urban sustainability has emerged as a strategic vision for enhancing the cities in which we live. The evolution of neighborhood level data collection, engagement, and planning signifies an opportunity to inform and refine the way cities approach planning and development.

The Seattle Sustainable Neighborhoods Assessment Project (SSNAP) is a data driven pilot study to measure local trends, and to assess achievements and results of Seattle’s 1994-2014, 20-year Comprehensive Plan: Toward a Sustainable Seattle, and the city’s Urban Village Strategy for guiding growth. This project seeks to answer the following questions that contribute to the emerging community conversations about the relationship between neighborhoods and cities in the context of urban planning and sustainability:

1) What is the role of neighborhoods in advancing urban sustainability?

2) How can neighborhood sustainability indicators inform comprehensive city planning?

3) With much more urban growth on the horizon, how can the city best plan for and accommodate future growth in a way that is just, equitable, healthy, prosperous, and sustainable?

The Urban Village Strategy intends to direct housing and employment growth into 30 designated urban villages throughout the city.

PURPOSE AND PROCESS

1. Evaluate the achievements of the 1994 – 2014 Seattle Comprehensive Plan and Urban Village Strategy
2. Develop a durable methodology to measure quality of life, sustainability, and growth of Seattle’s neighborhood based urban villages through a set of key indicators organized into four groups
3. Test the methodology by collecting empirical data from 10 urban village study areas that provide a representative sampling of the city
4. Assess urban village performance achievements and areas for improvement
5. Evaluate best practices for refining and advancing neighborhood and citywide planning, data collection systems, and sustainability indicators

SSNAP SUSTAINABILITY INDICATOR OUTCOME GROUPS

- A. Resource Use and Conservation
- B. Healthy Communities
- C. Open Space and Development
- D. Shared Prosperity and Opportunity

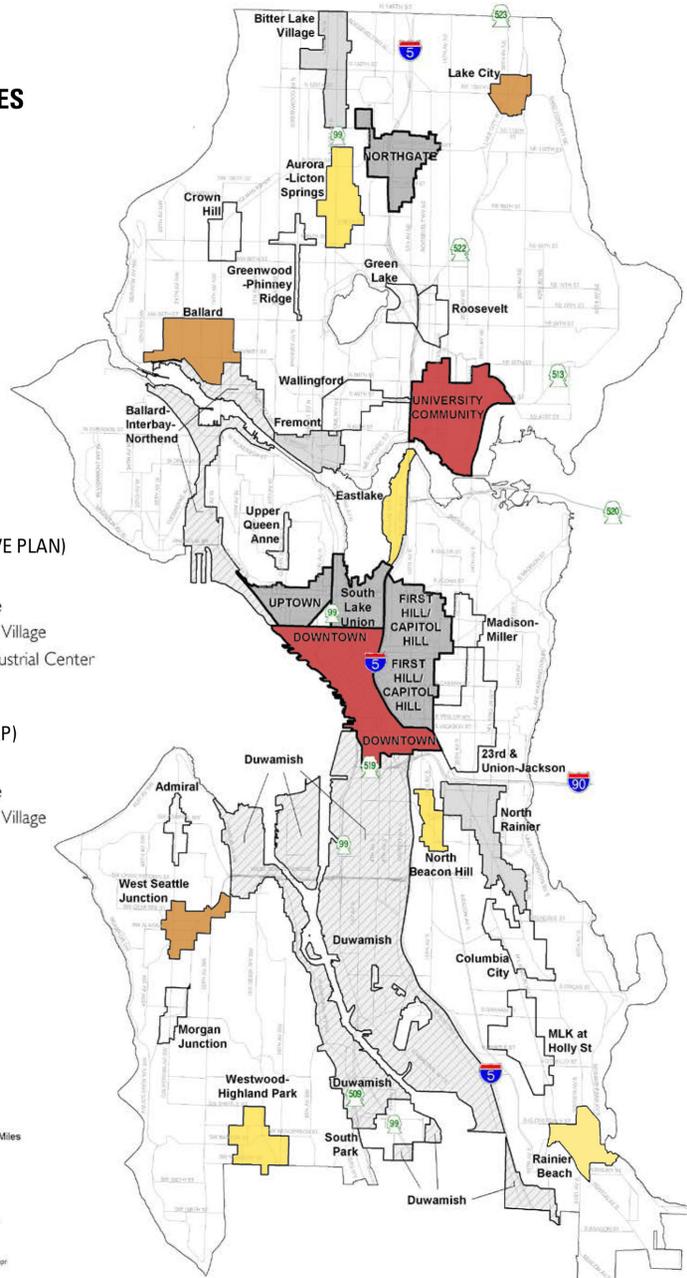
SEATTLE URBAN VILLAGES

URBAN VILLAGES (1994 COMPREHENSIVE PLAN)

-  Urban Center
-  Hub Urban Village
-  Residential Urban Village
-  Manufacturing/Industrial Center

URBAN VILLAGES (SELECTED FOR SSNAP)

-  Urban Center
-  Hub Urban Village
-  Residential Urban Village



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ACHIEVEMENTS OF THE 1994 – 2014 SEATTLE COMPREHENSIVE PLAN: Toward a Sustainable Seattle

Planning for Growth

- The Urban Village Strategy is working - the plan's highest achievement: between 1994-2014, 75% of Seattle's total residential and employment growth has been directed into targeted urban villages through intentional city planning, as intended.
- The transportation system continues to evolve toward a seamless multi-modal system by providing alternatives that reduce car dependence. With significant increases in transit ridership in nearly all urban villages, the system is working to accommodate growth by helping to decrease car dependency.
- Environmental Stewardship as reflected through strong conservation programs is working successfully to nurture the city's natural environment, reduce landfill waste, and curtail consumption of energy and water.

OPPORTUNITIES FOR IMPROVEMENT

- Social equity has not been achieved throughout the city. Seattle is not meeting primary goals for housing affordability across all urban villages, and some city neighborhoods are under-represented in opportunity, education, arts, incomes, and shared prosperity.
- Total 20-year employment growth was significantly less by over 74,000 jobs than projected, and more than half of the city's residents work outside of Seattle, creating a jobs/housing imbalance and an increased transportation burden.
- City investment in urban villages receiving disproportionate share of urban growth has been uneven, lacking strategic focus.

SSNAP NEIGHBORHOOD SUSTAINABILITY INDICATORS

INDICATORS

1. Transit Ridership
2. Vehicle Traffic Screenline Counts
3. Residential Energy Use
4. Residential Water Use
5. Municipal Landfill Waste
6. Historic Landmarks

A. RESOURCES USE AND CONSERVATION

The six indicators in this group address a fundamental element of environmental stewardship—using resources more efficiently. Each indicator expresses an environmental resource impacted by neighborhoods and growth.

INDICATOR FINDINGS

- Metro Transit Ridership, as measured by annual weekday bus boardings, is working to accommodate growth by helping to decrease car dependency. With a volume of riders now exceeding 300,000 per day in Seattle, it is a lifeline to Seattle’s transportation and mobility system. Eight of the 10 urban village study areas saw a significant increase in average weekday boardings per person per acre between 1994 and 2014, particularly in urban villages with highest growth, except for Downtown.
- Traffic Counts at arterials within or near most of the urban villages show traffic volumes within acceptable limits of volume to capacity. The exceptions are the city’s high through traffic corridors, including Aurora-Licton Springs, Downtown, and the University Community, where peak hour traffic volumes reveal heavy congestion close to or exceeding capacity.
- Residential Energy Use per capita decreased by 17% from 1993 to 2010.
- Residential Water Consumption per capita long-term trend shows an overall decrease across 8 of the 10 urban village study areas.

- Residential Landfill Waste citywide per capita has decreased from annual .27 tons per capita in 1990 to .19 tons per capita in 2010, a 42% reduction in solid waste.
- Designated Historic Landmarks in Seattle have increased by 180 historic landmarks over the past 20 years (from 166 in 1994 to 346 in 2014). Landmarks are unevenly distributed throughout the SSNAP urban village study areas. The Downtown Urban Center has the highest concentration of landmarks (84) representing approximately 24% of the citywide total.

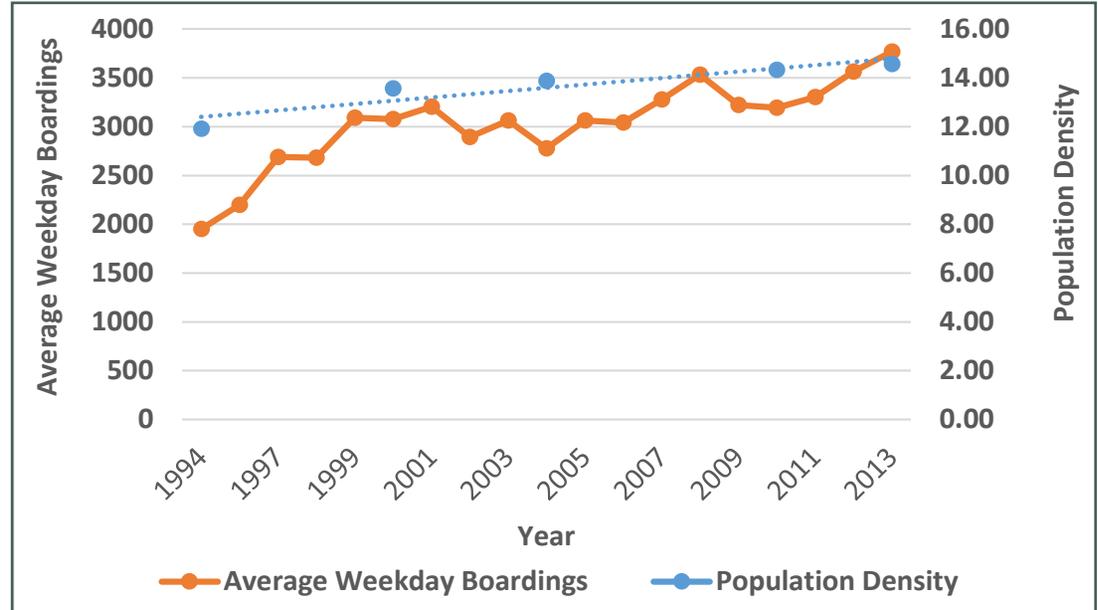


Figure 1. Average weekday boardings (1994-2013) and population density (1994-2013) for the Rainier Beach residential urban village

B. HEALTHY COMMUNITIES

The six indicators in this group work together to encapsulate vital elements of a healthy community; safety, social cohesion, cultural experience, access to wholesome food, safety, health and wellbeing.

INDICATORS

1. 911 Crime Related Calls
2. Arts and Culture Access
3. Farmers Markets
4. Community Gardens
5. Low Birth Weight
6. Life Expectancy

INDICATOR FINDINGS

- 911 Crime Related Calls (vice, violent, and property related) per 1,000 residents were down by varying numbers in every urban village between the period 1994 -2014. In 2013, numbers of calls were highest in Downtown, Rainier Beach, and Aurora-Licton Springs, and lowest in Ballard and West Seattle Junction.
- Arts and Culture Access is unevenly distributed between urban villages, with Downtown providing by far the highest number of venues and public opportunities to experience arts and culture.
- Farmers Markets are increasingly popular, and expanding throughout the city. The farmers markets within the urban village study areas include approximately 460 farmers and vendors across 7 market locations, significant growth in number and variety of goods offered since 1994.
- P-Patch Community Gardens are in high demand everywhere, and in limited supply. The Department of Neighborhoods community gardens within the urban village study areas include approximately 4 acres and 315 plots, with an average wait time of almost 2 years.
- Low Birth Weight disparities are surprisingly high, irregular between urban villages, and with a worrisome upward trend upward in many of the urban villages. The two urban villages with the greatest increases in frequency of low birth weight between 1998 and 2012 were Lake City (3.7% to 5.96%, with a peak of 8% in 2005) and Ballard (4.4% to 7.5%, increasing steadily).
- Life Expectancy at birth has increased in all of the urban villages since 1999-2001, dramatically in some areas, including Downtown and Rainier Beach. Less positive, in 2010-2012 Life Expectancy varied by as much as five years between urban villages, with Eastlake highest, at 84.8 years, and Downtown the lowest at 79 years.

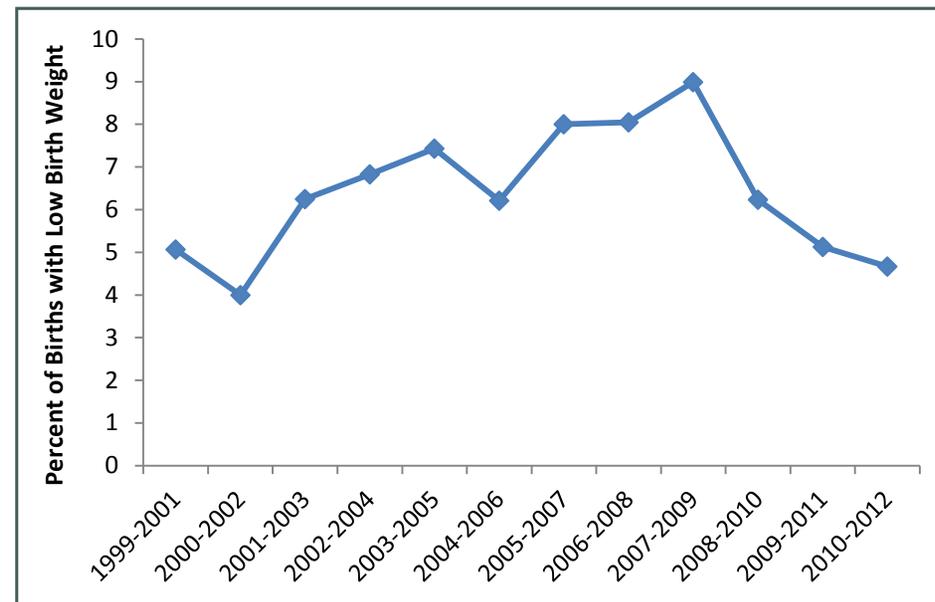


Figure 2. Three year rolling averages of percent of births with low birth weight in the Aurora-Licton Springs urban village (1999-2012)

C. OPEN SPACE AND DEVELOPMENT

The four indicators in this group address four basic implications of concentrated growth and development on land use in the urban environment.

INDICATORS

1. Area of Parks and Open Space
2. Proximity to Parks and Open Space
3. Tree Canopy Cover
4. Percentage of Impervious Surface

INDICATOR FINDINGS

- Parks Area for most urban villages is located outside of the urban village, but typically within one quarter mile of the urban village boundary. Four urban villages, including Ballard, University Community, West Seattle Junction, and Westwood-Highland Park lack sufficient internal park space area (1 acre per 1000 residents) to meet residents' needs.
- Proximity to Parks and Open Space for residents within a quarter-mile is provided for all the urban villages except for Westwood-Highland Park, Aurora-Licton Springs, and Ballard.
- Tree Canopy Coverage is complicated to assess over time due to measuring and statistical challenges. Canopy cover has increased within all urban villages in the study except Lake City, which has seen a small decrease. Ballard leads tree canopy coverage improvements with an increase of about 7% over the last 20 years.

- Impervious Surface percentages within the urban villages, where intensity of development is greatest, is higher than other areas of the city. Only negligible changes have occurred with small increases and decreases between urban villages over time.

*Impervious surfaces include any surface that is impenetrable.

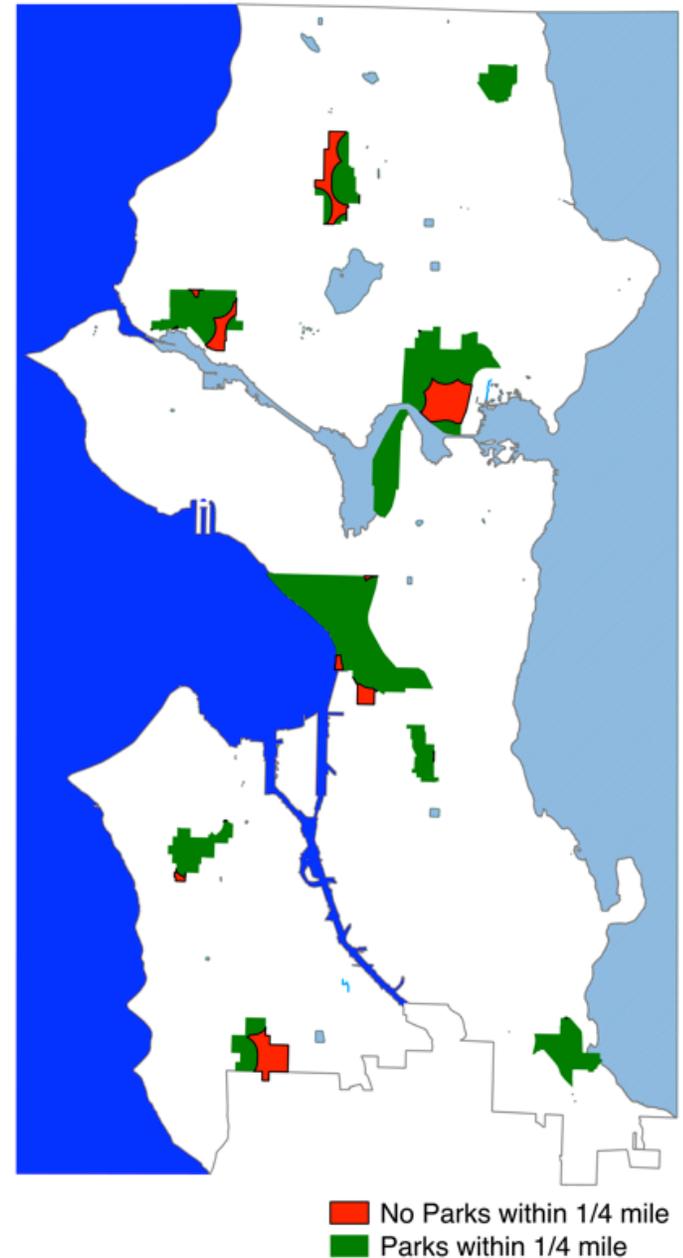


Figure 3. Proximity to Parks and Open Space map showing the area within each of the 10 urban village study areas that is within 1/4 mile of parks and open spaces, based on current City of Seattle Department of Parks and Recreation GIS data.

D. SHARED PROSPERITY AND OPPORTUNITY

The six indicators together evaluate outcomes of in allocation of resources and services among individuals and communities to assess prosperity and equity between the city's urban villages.

INDICATOR FINDINGS

- City Investment in Infrastructure varies widely across all the urban villages. For example, public investments in infrastructure and facilities in Downtown and Rainier Beach per capita have been the highest among all the urban villages between 2005 and 2014, and nearly 10 times what public investments have been made in Ballard and the University Community.
- Neighborhood Matching Fund award levels vary widely between urban villages and the city neighborhood districts, and do not appear to correlate in any way with population growth, geographic distribution, or level of community involvement. For example, Ballard (representing the Ballard Hub urban village) received only \$129,347 in Matching Funds between 1994 and 2014, while the Southeast neighborhood district (representing the Rainier Beach urban village) received \$7,430,810 over the same period.
- Academic Performance measured by fourth grade reading standardized test results show dramatic improvement in nearly every urban village in the study. Most strikingly, Aurora-Licton Springs and Lake City elementary schools have seen more than 50% increase in the number of students meeting the statewide standard. On the other hand, Rainier Beach saw only an 8% improvement in test scores over the 20 year period.
- Unemployment rates between 2000 and 2012 among urban villages show wide disparities. For example, for the most recent data (2008- 2012 ACS) unemployment in Rainier Beach (12.3%) is nearly three times higher than unemployment in West Seattle Junction (4.5%). Five of ten urban villages in the study show higher unemployment rates than the citywide average.
- Poverty rates range widely amongst the SSNAP urban villages between the 2000 to 2012 data years. At the high end, Rainier Beach had a 2012 ACS poverty rate three times higher (24.5%) than low end, West Seattle Junction (7.9%). Unemployment and poverty rates appear to correlate consistently among the urban villages over time in the study. Four of the urban villages in 2012 had higher poverty rates than the citywide average.

INDICATORS

1. City Investment in Infrastructure and Capital Facilities
 2. Neighborhood Matching Fund
 3. Academic Performance
 4. Unemployment
 5. Poverty
 6. Housing Burden
- Housing Cost Burden (defined as households spending more than 30% of their income on their combined housing costs) is moderate to high in every urban village in the study, though not equally carried across all the SSNAP urban villages. Between 37% and 62% of all households in the study areas are spending more than 30% of their income on housing. Rainier Beach, University Community, Downtown, and Lake City rank on the higher end (higher housing cost burden), with Eastlake, Ballard, and West Seattle on the lower end (with lower housing cost burden) relative to all the urban villages in the study.



DATA COLLECTION FINDINGS

1. Comprehensive planning, to be effective must be actionable and the results transparent - policies and goals must be implementable, tracked closely, with measurable outcomes reported publicly within a reasonable length of time.
2. Strategic subarea data collection is critical to improve city planning and allocation of resources.
3. The most notable data collection challenges encountered were in access to data, and in inconsistencies in geographic/spatial scale.
4. Understanding people, places, and the key role communities have in contributing to improved health, quality of life, and prosperity of cities is essential.
5. Further research is needed to better understand causal factors, their relationships to the urban village indicator results and to innovate effective solutions for the future.
6. The Department of Planning and Development lacks the resources and authority to fully implement a citywide data collection, benchmarking tracking system. This will require strong leadership, cooperation and coordination among all city departments responsible for delivering on the city's long-term comprehensive plan goals.

QUICK FIXES

1. Select and benchmark a durable set of key indicators to be included in Seattle 2035 that track neighborhood/urban village and citywide performance consistently and systematically against Comprehensive Plan goals and policies.
2. Expand, and improve the content and accessibility of an open source database. Consider an independent non profit organization to collect, manage, and provide public access to data.
3. Report neighborhood level outcomes regularly to the public.

LONG TERM STRATEGIC GOALS

1. Design and institutionalize an inter-departmental data collection system linked to key sustainability indicators, 2035 Comprehensive Plan, and the Urban Village Strategy.
2. Conduct annual or biennial urban village performance reports for key indicators to enhance the dependability and accuracy of data and availability of information for analysis.
3. Adopt a six year (3 biennial budget cycles) Urban Village Strategic Investment Plan across all departments.
4. Undertake a study similar to SSNAP, of Seattle's two designated Manufacturing and Industrial Centers – Ballard and Duwamish.

CONCLUSION

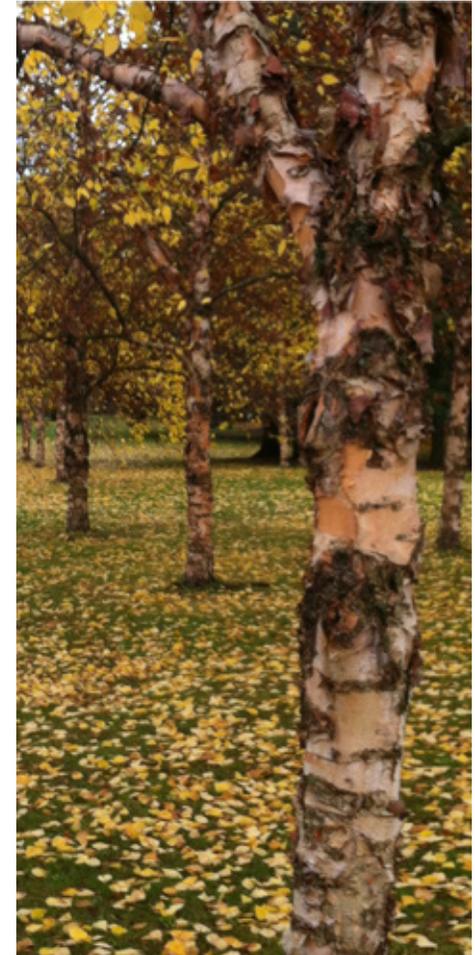
The use of community indicators has great potential value in improving tracking and accountability, and informing outcomes. Subarea indicators can serve to identify problems not revealed at larger scales, including disparities between neighborhoods, and to help policymakers set priorities and track results. Additionally, transparency and open source data is critical to comprehensive planning, community engagement, and innovating effective solutions. We hope the information and findings contained in this report will lead to more probing questions and additional research, and ultimately improve the city's ability to meet the needs of all neighborhoods, as part of a growing thriving city, more equitably, and sustainably.

OPEN QUESTIONS FOR THE FUTURE

"The best way to predict the future is to plan for it." - Peter Drucker

- 1. What today, is our shared vision for the city of tomorrow, and how can we best accomplish it?**
- 2. As an urban innovator, can Seattle establish a new paradigm for what it means to be a truly sustainable city?**
- 3. Real progress toward a sustainable city can only be achieved through shared prosperity, community, and social equity—moving forward, how can it be assured?**

STUDY LIMITATIONS: SSNAP is a pilot study of limited scope, and relies primarily on empirical data available for the benchmark year 1994 to 2014. It was not within the project scope to cover all Seattle's urban villages, manufacturing and industrial centers, and other geographic areas of the city. The study did not attempt to assess goals, priorities and outcomes of the city's Neighborhood Plans adopted in the late 1990's. Wherever possible, we sought to collect the most reliable and accurate data, sourced from multiple public agencies and city departments. The scope did not include a performance review of land use code, zoning, quality of urban design, architecture, or design review. Opinion research, resident surveys, and anecdotal information, which can provide additional understanding about perceptions and outcomes as compared to evidence-based data, was not within the scope of this study.





1. INTRODUCTION

Project Scope and Description

In March 2014 Steinbrueck Urban Strategies was tasked with two primary study objectives:

- 1) Develop and test a durable methodology to measure quality of life, sustainability, and growth of Seattle's neighborhood-based Urban Villages, and
- 2) Evaluate the achievements of the 1994-2014 Seattle Comprehensive Plan and Urban Village Strategy through a set of key indicators.

What is the SSNAP?

The Seattle Sustainable Neighborhoods Assessment Project is a data driven pilot study for the City of Seattle conducted by Steinbrueck Urban Strategies to measure progress, and to assess achievements and results of Seattle's 1994-2014, 20-year Comprehensive Plan: Toward a Sustainable Seattle and Urban Village Strategy framework. Following a literature review, research into comparable studies and best practices by other cities in the U.S. and Canada, a set of 22 sustainability indicators was developed. Available data from the city and other local public agencies was collected for 10 representative Urban Villages distributed throughout the city. The findings and recommendations contained in this final report are intended to inform the city's next 20-year comprehensive plan, Seattle 2035.



The SSNAP study was divided into three phases.

Phase I – Establishing the Study's Parameters and Methodology

1. Establish a working definition of "sustainability," and seek a deeper understanding of how Seattle currently approaches this issue.
2. Examine the City of Seattle 1994-2014 Comprehensive Plan, Toward a Sustainable Seattle, and established growth policies, along with goal-setting, benchmarks, targets and projections, with particular emphasis on urban villages and neighborhoods.
3. Research best practices for city sustainability and community indicators, neighborhood assessments used by cities in the U.S. and Canada, including precedent studies, reports, current literature, and academic research.
4. Identify the range of empirical data and currently available data sources relevant to citywide and neighborhood level outcomes.



5. Review neighborhood level related work, such as the Capital Hill Eco District project, LEED for Neighborhoods and the STAR Communities Rating System.
6. Use established indicator criteria to select indicators that will demonstrate progress related to Comprehensive Plan benchmarks, goals and policies and are consistent with guiding principles of urban sustainability, including: environmental; resources; energy and waste; transportation; public safety; health; community; cultural; and economic measures.
7. Explore benchmarking tools such as GIS mapping technology, indexing software, evaluation and rating systems, community assessment tool kits, and visualization tools.



Phase II – Data Collection and Analysis

1. Determine spatial criteria and selection of a limited number (10) of representative subareas of the city ranging in size, scale, and distribution throughout the city.
2. Collect discrete aggregate data for each urban village (or in some cases an approximation of the urban village boundaries) from the various data sources identified in Phase I.
3. Process, tabulate, and compile data into legible graphic form
4. Analyze indicator data to identify trends over-time and compare performance across the urban villages.
5. Examine neighborhoods based on characteristics, such as their Comprehensive Plan designation, size, location, and other demographics, to determine whether certain factors correlate to the levels of progress.
6. Consider evaluative characteristics for review such as grassroots approaches by individual

neighborhoods toward trying to achieve more sustainable communities.

7. Research neighborhood level data collection, tracking, and reporting systems used by cities throughout the United States and compare other cities' methods and approaches to Seattle's.
8. Provide an analysis of how Seattle measures, indexes, and tracks progress at the sub area level compared to model cities.

Phase III – Findings and Final Report

Prepare a report documenting what was learned from our methodology, the data collection process, and results of the indicators. Document what these findings reveal and how they inform future data collection and monitoring, the role of community members, the Urban Village Strategy, and the sustainability achievements in Seattle over the past 20 years of planning for growth and the next 20 years.

Study Limitations

SSNAP is a pilot study of limited scope, and relies primarily on empirical data available for the benchmark year 1994 to 2014. It was not within the project scope to cover all Seattle's urban villages, manufacturing and industrial centers, and other geographic areas of the city. The study did not attempt to assess goals, priorities and outcomes of the city's Neighborhood Plans adopted in the late 1990s. Wherever possible, we sought to collect the best possible verifiable data, sourced from multiple organizations and city departments. The scope did not include a performance review of land use code or zoning. Nor did the study consider quality of urban design and the architecture of new development. Opinion research, resident surveys, and anecdotal information, which can provide additional understanding about perceptions and outcomes as compared to evidence-based data, was not within in the scope of this study.

Seattle Profile 1994 - 2014

A Time of Growth, Prosperity and Change



Seattle is blessed with a beautiful natural setting and mild climate. It's considered by many to be one of the best places on earth to live. Like many other cities, Seattle has entered a time of rapid urban growth. With over 640,000 people, Seattle is one of the fastest-growing major cities in the nation. Over the last 20 years, Seattle has seen one of the biggest construction booms in its 160-year history, with towers rising in the urban core, and full-block apartment developments transforming urban village neighborhoods like Ballard and West Seattle Junction. Infrastructure to support new residents and workers is growing too – with miles of new bike lanes, trails, pedestrian improvements, dozens of green buildings, libraries, fire stations, concert halls, tunnels, Rapid Ride, transit stations, tracks for Link light rail and streetcars, parks, ball fields, and playgrounds.

With the rapid growth of new rental housing through many parts of the city ranging from micro-units, townhouses, large full block mid-rise buildings, to downtown high rises street parking becomes a premium, traffic congestion increases, and for some longtime residents preserving neighborhood character is a continuing concern.

In housing affordability, Seattle ranks 17th least affordable among the nation's 25 largest cities. Home ownership rose briefly during the early to mid- 2000s but most of those gains were erased with the economic down turn of the Great Recession. Homeownership is at its lowest point since 1940, with more renters (52.7%) than owner occupied homes (47.3%)

in 2012. Renter occupied units have been increasing as a share of total housing stock since the 1960s, and just over half (51.9%) of Seattle's housing is now renter occupied. Seattle's average household size is 2.06 persons, and households with children continues to slowly decline (now at less than 18%).

Seattle is ranked as one of the best educated cities in North America, with 56.5% of the city's population over age 25 holding a bachelor's degree. Median household income for the Seattle in 2012 was \$63,470, the fifth highest in the nation. Still, 13.2% of Seattle's residents live with income below the poverty line (U.S. Census). Seattle ranks number two among metropolitan regions in the U.S. with highest wage and salary growth, with an 8.1% increase between years 2009–2012.

Despite two economic recession periods (2001 and 2007), forecasters expect sustained growth in the Seattle area. Solid employment trends continue in life sciences, healthcare, maritime, tourism, aerospace and manufacturing, education, financial and real estate services, and online retailing. In 2013 Seattle was considered by Fast Company, as "home to lots of sustainability innovation," and "quality hub for startups." In 2012 Seattle's entrepreneurial ecosystem was ranked fourth in the world by the Global Startup Ecosystem Index. In 2014 the international cruise industry named the Port of Seattle "Port of the Year." The Gates Foundation, the world's largest philanthropic organization, establishes Seattle as the global humanitarian hub.



The “big picture” story of the last 20 years in Seattle is one of growth, increasing wealth and prosperity, physical change, and changing demographics. There is increasing cultural and racial diversity, and a friendlier LGBTQ city (ranked “third most gay friendly city” Nerd Wallet in 2013). At the same time, there are fewer families with children, growing numbers of low-wage workers, persistent wage disparity for women, and stark income inequality, especially in Seattle’s communities of color.

Racial diversity is on the rise, and so is gentrification in some older neighborhoods. The Central District, historically home to Seattle’s black community, saw the percentage of black households drop from over 50% in 1990 to 21% by 2010 (U.S. Census). Property values and housing costs continue to rise, squeezing out low-wage workers – a worrisome trend suggesting the suburbanization of poverty (see Garr, Kneebone, *Suburbanization of Poverty: Trends in Metropolitan America, 2000 - 2008* Brookings). In Transportation, Seattle is one of only five among the 50 most populous cities in the U.S. where the majority of workers chose public transit, carpooling, walking, bicycling or other means traveling to work other than by car alone. Yet Seattle continues to be transportation challenged, ranking only 14th, for transportation efficiency, behind Dallas and Atlanta.

With new policies, initiatives and programs, Seattle’s transportation system continues to grow and evolve. As getting around by car becomes more challenging, the city is becoming more multi-modal, sup-

ported by large public investments in light rail, street cars, bicycle, and pedestrian improvements. There is a growing interest in safer neighborhood streets connecting people and places, whether by foot, bike, stroller, car, or wheelchair is reflected by the broad-based Seattle Neighborhood Greenways movement, now with 19 neighborhoods across the city represented. Transportation planning in Seattle now places greater emphasis on accommodating all travel modes through the city’s Complete Streets policy (balancing vehicular, transit, bike, and pedestrian modes). However, Metro Transit, which carries an estimated 300,000 riders per day in Seattle, faces a 17% service cut, and public transportation is still far from seamless or sufficient as a primary travel mode for many.

The Trust for Public Lands in 2013 ranked Seattle the 10th best city in the U.S. for its park system. Approximately 11% of the city’s land area is park land, and according to the Trust, there is a 92% chance there is a park within a 10 minute walk from where you live. The parks system includes over 6200 acres of land, 485 buildings, 450 parks, and 22 miles of boulevards. The recent voter approved Seattle Parks District, a permanent new dedicated source for funding, will augment acquisition, maintenance and improvements to the city’s parks system.

Seattle’s enduring interest in environmental sustainability is evident in its managed growth practices, strong climate policies, commitment to renewable energies, conservation goal-setting, and waste reduction and recycling programs, green building portfo-

lio, environmental advocacy and innovative practices, and community involvement. The measurable results in many areas of Seattle’s environmental achievement over the past 20 years has been nothing short of astonishing.

According to the U.S. Census Bureau’s Longitudinal Employer-Household Dynamics (LEHD) study for 2011, 38.2% (106,443) of Seattle’s in-area labor force commute to primary jobs outside of Seattle. Conversely, 61.8% (172,123) of Seattle’s in-area labor force live and work in Seattle. Of the workers employed in Seattle (primary jobs), 62.0% (281,161) commute from outside of the city.* Looking to the future, by 2035 Seattle is expected to add 120,000 more people (or about 60,000 new households) and 115,000 jobs within a tightly constrained land area of 84 square miles. Seattle’s ability to successfully accommodate future growth in a way that is equitable, prosperous, and sustainable, will require continued strong leadership, visionary planning, urban innovation, and engaged communities.

References:

http://www.seattle.gov/economicdevelopment/press_newsRankings.htm

<http://quickfacts.census.gov/qfd/states/53/5363000.html>

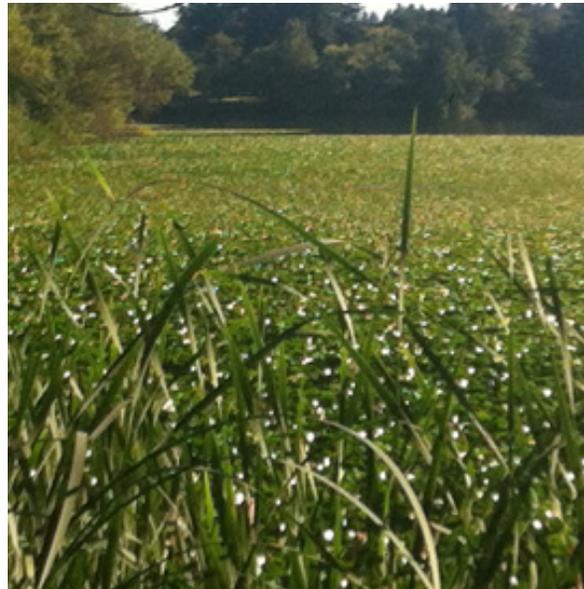
*Similar data in the American Community Survey table Place of Work for Workers 16 Years and Over indicates a slightly higher percentage of Seattle residents living and working in the city.

Acronyms, Terms and Definitions

ACRONYMS

- CCF** 100 cubic feet
- CIC** Community Indicators Consortium
- CIP** Capital Improvement Program
- DoN** Department of Neighborhoods
- DPD** Department of Planning and Development
- GHG** Greenhouse Gas Emissions
- GMA** Growth Management Act
- kWh** Kilowatt hour
- M&I** Manufacturing and Industrial Center
- NMF** Neighborhood Matching Fund
- NNIP** National Neighborhood Indicators Project
- PSRC** Puget Sound Regional Council
- SCL** Seattle City Light
- SPD** Seattle Police Department
- SPU** Seattle Public Utilities
- SSNAP** Seattle Sustainable Neighborhoods Assessment Project

- WAGDA** Washington State Geospatial Data Archive
- UV** Urban Village
- V/C** Volume-to-Capacity ratio is an indicator of demand for roads compared to the supply for roads
- VMT** Vehicle Miles Traveled



TERMS AND DEFINITIONS

American Community Survey (ACS) is an ongoing survey that provides data every year -- giving communities the current information they need to plan investments and services (census.gov).

Benchmark Standard or reference point for comparison used to measure and track performance and assess progress.

Comprehensive Plan, Toward a Sustainable Seattle, is a 20-year vision and roadmap for Seattle's future. Our plan guides City decisions on where to build new jobs and houses, how to improve our transportation system, and where to make capital investments such as utilities, sidewalks, and libraries. Our Comprehensive Plan is the framework for most of Seattle's big-picture decisions on how to grow while preserving and improving our neighborhoods (Department of Planning and Development).

Concurrency the city must plan for financing the infrastructure necessary to support any new development, using both public funds and development fees, as required by the Growth Management Act (Seattle Comprehensive Plan)

Geographic Information Systems (GIS) is a computer system for capturing, storing, checking, and displaying data related to positions on Earth's surface. GIS can show many different kinds of data on one map. This enables people to more easily see,

analyze, and understand patterns and relationships (National Geographic Encyclopedia).

Growth Management Act (GMA) Washington State Legislature passed the GMA (RCW 36.70A) to guide local jurisdictions in land use decisions. The GMA orders planning for future growth by developing comprehensive plans and development regulations, including critical areas ordinances, to meet its intent and requirements. The goals of GMA include concentrating urban development to reduce sprawl, providing a range of affordable housing, ensuring that transportation infrastructure is coordinated between jurisdictions, and assuring property rights (ecy.gov).

Indicator “Indicators ... are presentation of measurements. They are bits of information that summarize the characteristics of systems or highlight what is happening in a system. Indicators simplify complex phenomena, and make it possible to gauge the general status of a system to inform action.” — Peter Berry (2002) Ottawa 20/20 Indicator Workbook.

Land Use Code is developed by the Seattle Department of Planning and Development planners to regulate the use of land in Seattle. The Land Use Code amendment process is designed to ensure that changes to existing regulations benefit the public while meeting the City’s design standards.

Metric A standard of measurement.

Orthophotography An aerial photograph.

P-Patch is the name given to community gardens that are managed by the Seattle Department of Neighborhoods P-Patch Community Gardening Program. The name, P-Patch, originated from its first community garden, Picardo Farm (Department of Neighborhoods).

State Environmental Policy Act (SEPA) provides a way to identify possible environmental impacts that may result from governmental decisions. These decisions may be related to issuing permits for private projects, constructing public facilities, or adopting regulations, policies, or plans (State of Washington Department of Ecology).

Neighborhood Plans aim to identify actions recommended by neighborhoods to ensure that they will continue to thrive and improve as Seattle grows over the next 20 years in ways that meet our commitments under the State’s Growth Management Act.

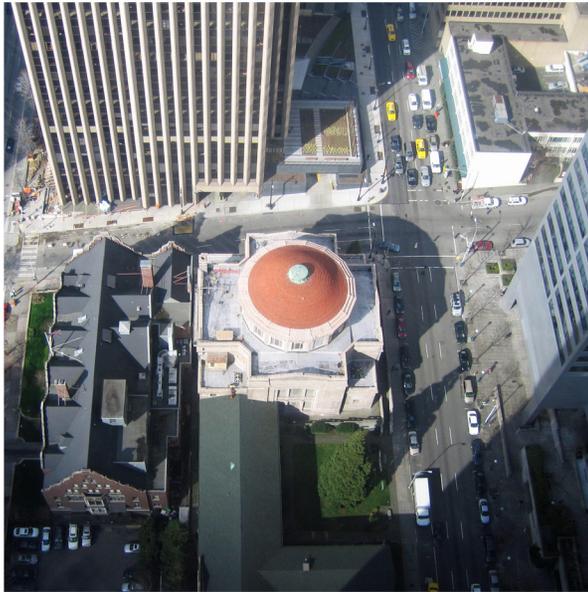
Screenline is a line drawn between two areas of the transportation model’s study area where traffic movement (volume) data can be collected on the roads that cross the screenline (PSRC).

U.S. Census is the official source of statistical data tracking operated under the U.S. Census Bureau (census.gov)

Zoning governs the use and development of land in Seattle. Zoning districts specify a category of uses (e.g., single-family residential, multifamily residential, commercial, industrial, etc.) and are applied by ordinance (Seattle Department of Planning and Development).



SEATTLE SUSTAINABLE NEIGHBORHOODS ASSESSMENT PROJECT



2. CITY PLANS AND DEFINITIONS

1994-2014 Comprehensive Plan Overview and Background

With the passage of the Growth Management Act (GMA, RCW 36.70A), in 1990, the Washington State Legislature sought to create a method for comprehensive land use planning involving communities, counties, cities, and the private sector that would prevent uncoordinated and unplanned growth. The legislature found that this type of uncontrolled growth posed a threat to the environment, sustainable economic development, and the health, safety, and high quality of life enjoyed by residents of Washington State. To address this threat, the GMA requires cities and counties of a certain size and growth rate, to adopt coordinated comprehensive plans and development regulations. Such plans and regulations are guided by 14 goals that include specific elements relating to land uses, transportation, housing, economic development, capital facilities, natural resources, and utilities.

1990-1992 Growth Management Act (GMA)

Concurrency is one of the 14 goals identified in the Growth Management Act (GMA – RCW 36.70A.20), and an important land use policy used by local governments. Concurrency means that “the city must have a plan for financing the infrastructure necessary to support any new development, using both public funds and development fees, as required by the GMA. The financing plan must be in place before construction can occur. The infrastructure must be in place within six years of the development having occurred” (2000 Comprehensive Plan).

Important to note also, that under GMA (RCW 36.70A.020 (13)) full concurrency is not mandated to occur simultaneously with development, and applies only to transportation facilities. Local governments are authorized to establish concurrency requirements in other areas such as schools, parks, and public services within constitutional limits (Thomas M. Walsh

and Roger A. Pearce, The Concurrency Requirement of the Washington State Growth Management Act, 16 Seattle U. L. Rev. 1025 1993).

King County Countywide Planning Policies

Countywide Planning Policies (CPPs) are adopted and ratified by cities to address growth management issues in King County. The CPPs provide a countywide vision and serve as a framework for each jurisdiction to develop its own comprehensive plan, which, under GMA, must be consistent with the overall vision for the future of King County.

City of Seattle Comprehensive Plan

The 1994 – 2024 Seattle Comprehensive Plan, Toward a Sustainable Seattle, was reviewed in depth to identify citywide goals and policies that inform sustainability goals, and align with our indicators. Each of the Neighborhood Plans were reviewed

Summary of the growth and change of the plan over the past 20 years.

1994	2014
7 Elements	11 Elements
118 Pages	360 Pages
Appendices	Appendices
151 Pages	155 Pages
269 Pages Total	515 pages total

and evaluated and recurring goals and policies noted that were consistent across all neighborhoods and that informed trends in Seattle neighborhood planning. Consistent, recurring goals revealed areas of importance and emphasis ascribed to Seattle’s neighborhoods.

Comprehensive planning is required under Washington state law by the Growth Management Act (GMA) in order to guide regional growth and coordinate land use and transportation goals and policies with King County and other jurisdictions. The plan is updated annually, and in 2004 the city completed full 10-year review of the plan. The Seattle Planning Commission in its citizen advisory role has stewardship responsibility for Seattle’s Comprehensive Plan.

The Seattle Comprehensive Plan has been amended and added to since its inception in 1994. The city of Seattle has made a deliberative and thorough effort to be inclusive and complete in the scope of the plan and the level of information it includes. Moving forward with the next edition of the Comprehensive Plan, the city of Seattle has an invaluable opportunity to refine and improve the plan for the upcoming 20 years.

1994-2014 Comprehensive Plan Policies and Definitions

The vision behind the Plan was informed through many public debates and community discussions that preceded its adoption in 1994. Four “core Seattle values” emerged, which guided development of the plan and are fundamental to its inception. Together, these four core values are the ultimate measure of the plan’s sustainability achievement. They are:

- Community
- Social equity
- Economic opportunity and security
- Environmental stewardship

The Urban Village Strategy

The Urban Village Strategy has become a nationwide model for planning comprehensively, and for guiding and managing urban growth for a sustainable future. This approach directs growth strategically into established mixed-use neighborhoods, and is intended “to maximize benefit of public investments in infrastructure and services to promote collaboration with private interests and community to achieve mutual benefits” (Seattle Comprehensive Plan).

Specific overarching goals of the urban village strategy are to:

- Support growth in housing and jobs
- Strengthen neighborhoods
- Create compact business districts where transit can best serve
- Protect single family neighborhoods
- Provide efficient use of the city resources and public investments

A sustainable urban ecosystem, maintaining our community health, quality of life, viability and self-sufficiency, requires intentional thinking, planning, strategizing, and acting in a way that is inclusive across the delivery systems that serves all people and communities equitably. This mechanism should guide and support growth, and aims to concentrate development.

The Urban Village Strategy incorporates the consideration of long-term planning aimed to cultivate durable, resilient, and long-lasting neighborhoods and communities.

It recognizes the existing character of the city’s established, distinctive and well-formed neighborhoods, and identifies four categories of urban villages of different scale, uses, and level of activity where much of the city’s jobs and housing growth are intended to be directed. The goals and policies governing urban villages were outlined in the 1994 Comprehensive Plan.

Urban centers are the city’s densest urban neighborhoods. The 1994 Comprehensive Plan established five urban centers as regional centers in locations with a diverse mix of housing, businesses and employment, with transportation facilities that support and have direct access to a regional high capacity transit system. In the 2004 Comprehensive Plan update, South Lake Union was added to the list of urban centers, making a total of six in Seattle. Larger urban centers such as Downtown and Capitol Hill are further divided into urban center villages.

Hub urban villages are areas zoned for and providing a concentration of housing, services, and employment at some density, but at lower densities than those found in urban centers. These neighborhoods, such as Ballard, Lake City, and West Seattle Junction, serve communities outside the larger more centrally located urban centers. They may have a strategic location in relation to local and regional transit connections, and have at least one-third of the land area zoned for employment and/or mixed use. Provision of public open spaces in the immediate vicinity, and accessibility to major open spaces in the general area are expected. Hub villages are further characterized as having sufficient under-developed land and capacity to accommodate substantially more growth.

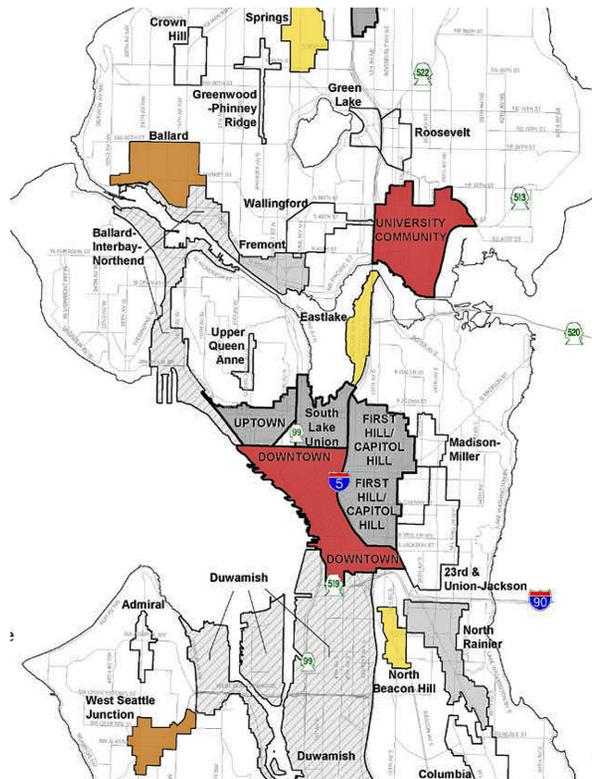
Residential urban villages are smaller neighborhood centers that are compact, primarily residential in character, support transit ridership, provide a range of housing choices, limited employment, and neighborhood-oriented businesses and services.

Manufacturing and industrial centers are areas set aside for primarily industrial uses. Regional Manufacturing/Industrial Centers are areas legally defined as having statewide importance under GMA. While targeted for manufacturing/industrial job growth, these areas are not considered well-suited for housing or extensive commercial activity. Seattle’s two primary manufacturing/industrial centers are Duwamish and Ballard/Interbay.

Areas outside of urban villages are low density zones with a residential character. Limited amounts of development are allowed, consistent with their established low-rise single-family character and zoning. The comprehensive plan policies protect single-family areas of the city outside urban villages and disallow up-zoning of single-family areas unless they are brought into an urban village boundary through the neighborhood planning process. Over 69 % of the city’s developable land area is zoned exclusively for single family use, and may not be up-zoned to greater densities under current land use policy and zoning regulation.

Neighborhood Plans

Extract from the urban villages map



The comprehensive plan directs growth to areas zoned for it, with zoning changes made only after consulting with the affected neighborhood. As a way to coordinate neighborhood and citywide goals, neighborhoods were integrated into the planning process for accommodating growth. In turn, neighborhoods would receive public investments in transportation, infrastructure improvements, and amenities. A neighborhood plan validation process ensued in the late 1990s, representing thousands of hours of volunteer effort allowing neighborhood residents and community organizations to develop content, goals, policies, and priorities for the individual neighborhood plans, with coordination and staff support from the city. It was recognized that “the City’s decision to allow neighborhoods to do their own planning through the neighborhood Planning Program represented a [fundamental shift] in the way the City had conducted planning in the past, by moving the focus of control from a central planning function toward neighborhoods, from city staff to volunteer community members.” (Neighborhood Planning Program Evaluation, 1996).

Completion of the five-year neighborhood planning process resulted in:

- Inclusion of neighborhood plan policies and goals into the Comprehensive plan
- Recognition of each plan by a city council resolution
- Adoption of a work plan matrix for implementation of specific neighborhood plan priorities to be considered in decision-making and resource allocation by the city (“Neighborhood Planning and Vision of the City Update,” League of Women Voters, November, 2001)

The Department of Neighborhoods developed a team responsible for overseeing neighborhood plan goals and policy implementation. However, variabil-

ity and inconsistency of the neighborhood planning structure and priorities posed challenges for tracking the action items corresponding to goals identified in the neighborhood plans and corresponding matrices. Today, each plan reveals unique organization and structure, providing a valuable snapshot of past conditions, goals, and priorities for enhancing the neighborhood and surrounding community.

Zoning and Land Use Regulation

The Seattle Land Use Code contains five zone groups that regulate development in the city. They are Single Family Residential, Multifamily, Commercial, Industrial, and Downtown. There are a number of specific zones within each group, and most can be placed anywhere in the city where broad functional and locational criteria exist to support those zones. The underlying regulations in Seattle’s land use code are not isolated, stand-alone provisions. All land use regulation must be consistent with the applicable planning and land use polices in the comprehensive plan.

Seattle 2035

The city is now moving forward with environmental review (Environmental Impact Statement), and extensive community conversations about how Seattle should grow over the next 20 years and accommodate a projected 120,000 more people and 115,000 new jobs during that period. From these events, discussions, and ideas, the city will formulate a community inspired plan. Formal adoption of the new comprehensive plan is required by June 2015.

3. SSNAP RESEARCH METHODOLOGY AND INDICATOR SELECTION

Sustainability Research

To prepare for our data-driven neighborhood sustainability assessment, we established through surveys, literature review, and other research, a working definition of “sustainability,” and sought a deeper understanding of how Seattle currently views and approaches issues of sustainability. Other city sustainability reports (see Appendix D: Sources and References) were reviewed to inform trends in how sustainability is communicated, reported on, and advanced. This research helped to answer the questions:

- How do other cities define and approach sustainability?
- What language is used when reporting on city sustainability efforts?

Preliminary review of precedent studies helped to reveal best practices and set the stage for sustainability reporting in the context of city planning. We assessed elements of the 1994-2024 Comprehensive Plan: Toward a Sustainable Seattle – its evolution, organization, framework and policies to glean what sustainability means for Seattle city planning specifically.

We also gathered information about sustainability goals from numerous local websites providing diverse perspectives of Seattle neighborhood and community groups, non-profit organizations, business representatives, planners, environmentalists, and social activists. Mission statements, stated goals, and current projects provided insight into what people care about when it comes to their community, and what issues are of importance in the city of Seattle. This research also shed light on the ways we in Seattle go about advocating, initiating

action, and motivating change.

What is a “Sustainable City?”

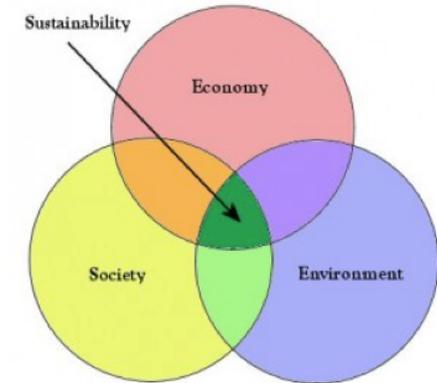
The most often sourced definition of “sustainable development” is from the 1987 Brundtland Commission’s report, *Our Common Future*, which defines sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. This is a useful definition to carry forward, combined with our locally expressed values. However, since Brundtland over 25 years ago, the term “sustainability,” suffers from indiscriminate and excessive use – synonymous with everything “green,” for instance.

The comprehensive plan approaches “sustainability” according to the original concept, where its pillars are community, social equity, environmental stewardship, and prosperity.

For purposes of the SSNAP study we sought to develop a working definition for “sustainability” reflective of these enduring core values—people, planet, and prosperity.

The 1994 Seattle Comprehensive Plan, *Toward a Sustainable Seattle*, states that sustainability is the common-sense (shared) notion that the health of our environment, our economy, our human health, well-being, and “our community as a whole, are not only closely linked, but dependent on one another.”

The plan describes a city as a system of many parts



S. Mann, *Computing for Sustainability* (2009)

requiring inputs (materials and human) and outputs (from material waste to economic opportunity). Neighborhoods are the most basic spatial increment of this system. Each unique neighborhood contributes to the system’s efficiency and functionality, possessing fundamental processes that interact to provide individuals with services and resources for daily life. The relative sustainability of a city is determined by the way in which resources are used, i.e., energy, water, land, civic commitment, and human potential.

“Communities exhibit all of the characteristics of a system (cyclical dynamics, stocks, flows, equilibrium, etc.); the insights offered by system dynamics can help us understand persistent community problems. Systems analysis can also point to effective strategies for meeting our needs in new sustainable ways”

G. Hallsmith, *The Key to Sustainable Cities* (2003)

The plan's Urban Village Strategy approach to managing growth and development consistent with the provisions of the state's 1992 Growth Management Act, aims to "deliver services more equitably, pursue a development pattern that is environmentally and economically sound, and provide a better means of managing growth and change through collaboration with the community in planning for the future of these areas." This strategy acts as a method for coordinating/matching growth with the unique and vibrant character of Seattle's neighborhoods, utilizing Seattle's neighborhoods, or urban villages, as the venue for sustainable development.

SSNAP Sustainability Survey

To probe the question "what does sustainability mean to you?" a survey was conducted through e-mail and telephone interviews. The list of contacts comprised a diverse cross-section of individuals from sectors of sustainability thinking and practice, including business and corporate, non-profit, academia and community leaders. Limited context was given to minimize bias in their answering the following questions:

- In the simplest terms, how do you define sustainability?
- In a few sentences, how would you say Seattle best expresses its approach to advancing sustainability?

E-mail survey questionnaires were sent to 90 contacts beginning March 2014, and followed by a reminder e-mail within 3 weeks. Responses were received from 27 out of the 90 contacts via e-mail and/or phone interview. Interviewees were asked to state if they agreed to be cited in this report, which allows us to list some of their answers.

What does "sustainability" mean to you?

"Working to sustain the character of our community and its legacy of industrial innovation."
– Larry J. Reid, Georgetown Merchants Association

"A lens that is applied to decision making for land development, purchasing, waste management, energy consumption or any use of resources."
– Chris Wilke, Puget Sound Keepers

"The management of environmental, social and economic needs/impacts. And how this all relates to place, time (long/short term), and experience."
– Sustainable West Seattle Board

"An organic system that supports itself, using resources efficiently and does not negatively take away from the whole; rather it contributes to a continuous positive cycle."
– Lisa Quinn, Feet First

"The ability of this generation to thrive and prosper, without compromising or sacrificing future generations – doing better so that other people can do/be better."
– Kevin Wilhelm, Sustainable Business Consulting

"Working in the community sectors...meeting people where they are."
– Becca Fong, Seattle Tilth

"Sustainability is mastering the balance of inclusivity... sustainability requires courage. Sustainability is both the masculine and the feminine in harmony. It is a natural source for guidance in creating exciting design that is original to its own surroundings."
– Christine Lea, Cascade Community Activist

"Being able to use a resource in such a way that the resource is not depleted, but nurtured and maintained."
– Chas Redmond, Sustainable West Seattle

Sustainability...

- Is perceived by some to be an ambiguous, vague, jargon and over-used term, and meaningless in the absence of clear context and real metrics for measuring performance
- Emphasizes inclusiveness, and the importance of social equity, justice, and the fair distribution of services/resources
- Brings time into the conversation, incorporating short term goals and long term vision into strategic decision making and planning
- Requires meaningful connections to daily life, passions and interests
- Challenges us to work towards a closed loop system model for using and consuming finite resources that stimulate daily life and economic productivity
- Necessitates context and the use of strong metrics and tracking to push beyond aspirational goals
- Large-scale impact requires more than policy statements—requires active (and willing) community participation, for example: curbside recycling, lawn watering



SSNAP Guiding Principles of Sustainability

RESILIENCY

The ability for a community to absorb change, maintain life systems and functionality and spring back to a fully functional state: nature as our guide.

SHARED PROSPERITY & OPPORTUNITY

Ensure equal and fair access to basic needs and services, so that all individuals can succeed and participate as members of the community.

PRESERVATION & ENHANCEMENT OF THE NATURAL ENVIRONMENT

Cherish and protect natural ecosystems and resources in the neighborhoods in which we live. Reduce and eliminate sources of pollution.

LIVING WITHIN MEANS

Make choices that result in efficient, wise use of resources: consume mindfully to eliminate waste.

COMMUNITY & SOCIAL COHESION

Build strong positive relationships and connections to and between communities, and enhance quality of life and wellbeing through meaningful social interaction and the celebration of culture, diversity, and uniqueness of place.

COMMUNITY HEALTH & HAPPINESS

Ensure the physical, mental and social strength and wellbeing of all people and communities.

Approach

Seattle is progressive in ideas, aspirations, and goals, but timid in the implementation, and often experiences duplication of efforts – lacking effective and efficient coordination.

From the preliminary review we find that Seattle’s sustainability values are what we might expect: they are intimately connected to our culture, sense of place and “genus loci”, geography, natural environment, historical significance, economic position, people and communities as well as a strong global awareness of future challenges to people and planet.

Seattle is highly aspirational in its ambition, and visionary in outlook. It is part of our cultural DNA to take action and advocate for change. Personal connections and a deep commitment give rise to community groups, non-profits, programs, and neighborhood organizations that innovate and collaborate, creating solutions for making neighborhoods, communities, Seattle, and the world, better. (See Sanders, “Seattle and the Roots of Urban Sustainability”). For the purposes of this study, we then compiled a summary set of guiding principles reflecting Seattle values and universal sustainability principles.

Selection of Indicators

Extensive research of community rating systems, precedent studies and reports, sub area evaluation frameworks, assessment strategies, and reporting tools from other counties, cities, and communities was conducted to compile a comprehensive and thorough collection of community indicators. National neighborhood/community indicator organizations such as the National Neighborhood Indicators Partnership (NNIP) and the Community Indicators Consortium (CIC) provided a hub of current resources for discovering neighborhood/community indicator efforts nationally and internationally.

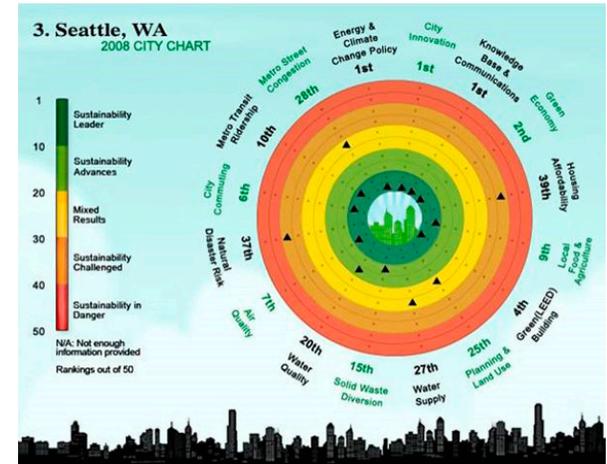
The non profit organization Sustainable Seattle pioneered the first ever sustainability indicator project in 1993. Comprehensive review of Sustainable Seattle's effort and other past indicator projects and precedent studies informed best practices and lessons learned for selecting an effective and workable set of sub area indicators.

Lessons Learned

- Gaps in data availability, especially at the neighborhood scale
- Extensive indicators lists were overwhelming—value lost because too much was being measured
- Indicators that require extensive community outreach, field data collection, and/or surveys are harder to implement for repetition in future years

Best Practices

- Guiding principles establish a foundation and highlight the valuable components of the assessment within the context of community livability and sustainability, and the city, county, or region the report is covering
- Clear goals and vision establish distinctive meaning, value, and purpose
- Indicators that inform multiple outcomes are more meaningful and exemplify interdependent relationships between multiple factors, situations, decisions, processes, and systems
- Neighborhood demographics provide context for evaluating indicator results across sub areas
- Repetition on a consistent time interval improved quality of reports. Information must be concise and data complete for changes over time to be evaluated with greater certainty and significance (e.g. San Mateo County Sustainability Report).



Selection Criteria

After exhaustive and comparative review, indicators were evaluated and selected based on the following criteria:

- Measurable
- Simple
- Robust
- Credible
- Enduring
- Actionable
- Informative for multiple outcomes
- Applicable to neighborhood scale

Each indicator was critically assessed to determine outcomes and rationale for context, meaning, and value. Indicators were then paired to specific Seattle Comprehensive Plan goals and policies to ensure relevance and importance to Seattle's collective vision for guiding growth through its Urban Villages Strategy.

SSNAP INDICATORS

“Define a simple sensible set of indicators that could be used by non-experts, with no specialized skills or tools, drawing from readily available information.”

Traditional Neighborhood Design (TND) Rating Standards, Version 2.2 (2005).

A. Resource Use and Conservation				
Label	SSNAP Indicator	Symbol	Metric	Data Source
A1	Transit Ridership		Annual average weekday boardings as a factor of population density	King County Metro
A2	Vehicle Traffic Screenline Counts		Screenline traffic counts volume to capacity (V/C) ratio	Seattle Department of Transportation
A3	Residential Energy Use		Annual residential kWh energy sales per capita	Seattle City Light
A4	Residential Water Consumption		Annual residential water consumption per capita (100 cubic feet)	Seattle Public Utilities
A5	Residential Landfill Waste		Annual residential tons of garbage to landfill per capita	Seattle Public Utilities
A6	Historic Landmarks		Count of designated historic landmarks	Department of Neighborhoods

B. Healthy Communities				
Label	SSNAP Indicator	Symbol	Metric	Data Source
B1	Crime-Related 911 Calls		Crime related 911 calls per 1,000 people	Seattle Police Department
B2	Access to Arts and Culture		Count of public art sites and cultural spaces	Office for Arts and Culture
B3	Farmers Markets		Count of farmers markets	Seattle Farmers Market Association Neighborhood Farmers Market Alliance Pike Place Market PDA
B4	Community Gardens		Count of community garden	Department of Neighborhoods
B5	Low Birth Weight		Percent of births with birth weight below 2,500 grams	Public Health Seattle & King County
B6	Life Expectancy		Years a newborn can expect to live if the current age-specific death rates stay the same for his/her life	Public Health Seattle & King County

The 22 SSNAP indicators are presented in section 4 of this report (“Data Analysis”). The organization of the indicators follows four main groupings:

- A) Resource Use and Conservation
- B) Healthy Communities
- C) Open Space and Development
- D) Shared Prosperity and Opportunity

Each indicator analysis section includes the outcome group, desired outcomes, responsible agency, determined associated policies and metric goals, format of data, data collection methods, data years, indicator figure, and data analysis write up, including data limitations. The intention of our analysis is to provide our data as an open source for others to explore, interpret and question.

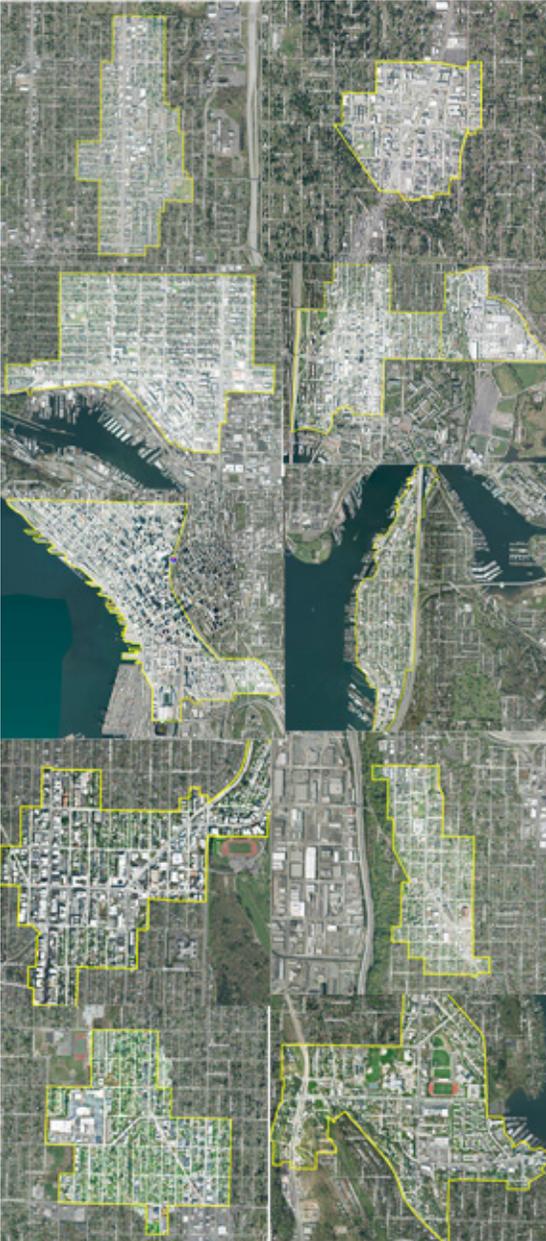
We did not attempt to speculate about systems of cause-and-effect related to the indicators.

Rather, the information and findings contained in this report should lead to more probing questions, additional research, and ultimately improve our ability to more equitably and sustainably meet the needs of all Seattle neighborhoods.

C. Open Space and Development				
Label	SSNAP Indicator	Symbol	Metric	Data Source
C1	Area of Parks and Open Space		Acres of parks and open space per 1,000 households	Seattle Parks and Recreation
C2	Proximity to Parks and Open Space		Percentage of population within one quarter mile from parks and open space	Seattle Parks and Recreation
C3	Tree Canopy Coverage		Percentage of tree canopy coverage	City of Seattle 1993 Orthophotography (WAGDA) and Google Earth
C4	Impervious Surfaces		Percentage of impervious surface	UERL Categorical Raster (1995, 2002) and National Land Cover Database Categorical Raster (2001,2011)

D. Shared Prosperity and Opportunity				
Label	SSNAP Indicator	Symbol	Metric	Data Source
D1	City Investments in Infrastructure and Capital Facilities		Capital Improvement Program (CIP) appropriations per capita	City of Seattle Budget Office
D2	Neighborhood Matching Fund		Neighborhood Matching Fund awarded amount	Department of Neighborhoods
D3	Academic Performance		Percent passing fourth grade reading standardized test in Seattle Public Schools	Washington State Office of the Superintendent of Public Instruction
D4	Unemployment Rate		Percent unemployed	U.S. Census Bureau
D5	Poverty Rate		Percent living in poverty	U.S. Census Bureau
D6	Housing Cost Burden		Percent of households spending over 30% of household income on housing	U.S. Census Bureau

Selection of Urban Villages



The Seattle Comprehensive Plan designates 32 urban villages where there is an established high concentration of multiple uses and infrastructure supporting jobs, residents, and shops and services. Each Urban Village falls into one of four categories, including 6 Urban Centers, 6 Hub Urban Villages, 18 Residential Urban Villages, and 2 Manufacturing/Industrial Centers (MICs). We note that many of the original Urban Village boundaries have been adjusted and/or changed in size since the 1994 plan was adopted.

As was discussed early in the scoping process, M&I centers are not included in the SSNAP study because they are predominately industrial use and not targeted for mixed uses and residential growth.

The first step in the data collection process was to determine the spatial criteria and selection of a limited number (10) of representative subareas of the city. The number of subareas to examine was intentionally held to a minimum in order to manage the data collection process, and test the methodology and analytic tools.

Our initial goal was to select set of villages reflective of the city's diverse communities, with wide geographic distribution, and varying urban morphology. At the same time, we recognized that including some villages with similar demographic characteristics could reveal significantly different outcomes and influences.

The next step was to evaluate each Urban Village against eight criteria: urban village classification, size and scale; geographic distribution; population density; ethnic diversity; household income; predominant housing type (renter/owner occupied); growth rate in jobs and population. Our mapping and analysis resulted in the final selection of 10 Urban Villages:

Urban Centers:

University Community
Downtown

Hub Urban Villages:

West Seattle Junction
Ballard
Lake City

Residential Urban Villages:

Westwood-Highland Park
Rainier Beach
North Beacon Hill
Eastlake
Aurora-Licton Springs

For the purposes of this report, we excluded the University of Washington Campus from our assessment of the University Community urban center, except for in the case of transit ridership. Bus stops throughout the UW campus are included in the transit boarding data.

Data Collection Process and Challenges

The data mining discovery process sought to comprehensively and exhaustively identify all potential data sources for citywide and sub area data for our working list of indicators. Format, spatial scale, time frame, and metrics were recorded and inventoried to inform accessibility, as well as divulge gaps and limitations in available data. Organizations and departments were contacted to discuss specific data needs. The data source list was then narrowed down to a final list of data sources, contacts, and format. Discrete aggregate data was then collected for each urban village, (or in some cases an approximation of the urban village boundaries as best we could obtain) from the various data sources. Data was then processed, tabulated, and compiled into legible graphic form for analysis.

Data Collection Challenges

Availability and accessibility of past data:

Databases have changed and collection methods have evolved over the past twenty years with changing technology—from analogue to digital to GIS. Departments and agencies have transitioned to new database methods, complicating the accessibility of past databases that are no longer maintained or kept in an organized, useful form. For empirical studies such as SNNAP and longitudinal tracking, changes in format of databases can impact collection methodology, organization, and the specific information tracked.

Geographic scale:

Inconsistencies in the geographic/spatial area in which data is collected and tracked was acknowledged during Phase I and noted in Phase II as a large contributor to the delay of data delivery, and data processing and organization. Geographic inconsis-

tencies in available data complicated the comparability of sub area performance across multiple indicators. Also many Urban Villages themselves have had their boundaries changed, some dramatically.

Delays in delivery of data:

Some city departments and other agencies were slow to respond to our data requests, expressing concern over limited resource and pressing deadlines for other work programs. Departments also noted the time-intensive process required to pull the data in the form requested. In some instances, we had to be very persistent, with follow-ups and repeated check-ins in order to receive requested data.

Managing, organizing, and aggregating data to reflect Urban Village boundaries: Navigating and resolving inconsistencies in data across indicators once data was received proved to be a time intensive and challenging process.



Qualitative Evaluations

Urban village street walking and windshield surveys provided additional observable characteristics not found in quantitative data and a measure of the completeness of “essential services” and amenities existing within each urban village study area. Street surveys were conducted using an ‘essential uses’ checklist and supplemented by visual observation of look, feel, and general character of each area. Notes were recorded to document reasonable walk time from end to end of each Urban Village boundary through the core mixed-use areas. We recognize visual assessments and walking surveys relying on visual/experiential information can be regarded as subjective, however, experiential observations contribute to fuller understanding of the community assets and deficits not necessarily revealed in quantitative data. The street surveys are used to inform our visual and spatial understanding of the area, and to identify range of essential uses, services and amenities that exist and that residents need within the Urban Village study areas.

We also reviewed in depth studies of Seattle’s neighborhoods and Urban Villages, including League of Women Voters’ “Neighborhood Planning and Vision of the City Update,” (2001); Seattle Planning Commission’s “Status Check: Seattle Citizen’s Assess Their Communities & Neighborhood Plans,” (2009); and UW Department of Urban Design and Planning’s “Planning for Success: Seattle’s Neighborhood Plans,” (2008).

4. DATA ANALYSIS

The City of Seattle Comprehensive Plan established a goal for distributing an additional 50,000 to 60,000 households and 131,400 to 146,600 jobs among the urban villages and other areas of the city. The plan further called for distribution of growth and the establishment of specific growth targets for each urban village, and to guide the increases in density over the life of the plan, as a means of accomplishing the goals of the Urban Village Strategy.

The plan also called for monitoring development activity annually to identify conditions where rate of growth deviates from anticipated growth targets for each urban village and citywide. For the city's designated Urban Centers, the plan further established 20-year distribution targets for percent of expected jobs (65%) and household growth (45%) intended for the urban centers.

No targets were set for the residential urban villages or outside the urban villages.

It should be noted that citywide 20 year housing and job growth estimates are assigned to the cities through the Puget Sound Regional Council's regional growth planning process (Vision 2040).

Actual citywide employment growth over the 20 year period fell considerably short:

Of the 20-year growth estimate of 131,400 to 146,600 new jobs expected, only 56,500 new jobs were actually created (1995 – 2012).

This job growth represents about 43 % of the more conservative estimate of 131,400 jobs.

1994-2014 Growth Projections Distribution of Jobs and Households

"A strong and stable economy offers long-term economic opportunity and social equity to its residents and is an essential part of a successful city. Fostering a vibrant economy is a critical goal of our Comprehensive Plan and, by directing services and facilities to areas that support job growth, aligns with our urban village strategy." –Seattle 2035 Roadmap (<http://2035.seattle.gov/category/seattle2035/>).

The 1994 Comprehensive Plan Goals for the Distribution of Households and Jobs

G31 Distribute the additional 50,000 - 60,000 households (52,500 - 63,000 dwelling units) and 131,400 - 146,600 jobs called for in this plan among the various areas of the city as follows:

Land Use Figure 7
GROWTH TARGETS

DISTRIBUTION OF GROWTH INSIDE AND OUTSIDE CENTERS AND VILLAGES

Category	% of Citywide Residential Growth	% of Citywide Employment Growth
Urban Centers	45% (22,500 - 26,700 hshlds)	65% (85,410 - 95,500 jobs)
Manufacturing/Industrial Centers	No housing target	10% (13,140 - 14,660 jobs)
Urban Villages	30% (15,000 - 18,000 hshlds)	No Target for Residential Urban villages Hub Urban Villages Only: 15% (19,700 - 21,990 jobs)
Remainder of City	25% (12,500 - 15,300 hshlds)	No Specific Target
Totals	50,000 - 60,000 hshlds	131,400 - 146,600 jobs

Table 4.1. Summary of growth targets for residential and employment growth, inside and outside urban centers and villages.

Source: 1994 City of Seattle Comprehensive Plan

	Target New Jobs	Target Percentage of Employment Growth	Actual Number of Jobs Added	Actual Percent of Total Employment Growth
Urban Centers	85,410	65%	37,036	65.4%
Hub Urban Villages	19,700-21,990	15%	2,680	4.7%
Residential Urban Villages	N/A	N/A	4,048	7.2%
Industrial Centers	13,140-14,660	10%	1,409	2.5%
Outside Villages	No Specific Target	No Specific Target	11,421	20.2%
Total	131,400-146,600		56,594	

Table 4.2. Overview comparison of target new jobs, target percent distribution, actual added jobs, and actual percent distribution across the urban village categories.

Source: 1994 Comprehensive Plan and the Employment Growth Report, prepared by Seattle Department of Planning and Development

Employment Growth and Distribution

The distribution of jobs in the Urban Centers, with the absorption of 65% of the citywide total, was accurately predicted. The actual result was 65.4% new jobs within the Urban Centers. Outside the urban villages and Manufacturing/Industrial Centers, 20.2% (11,421) new jobs were created in the last 20 years. The 20.2% increase in jobs outside the urban village and Manufacturing/Industrial Centers was more than double the expected distribution, though no target was set for those areas.

Surprisingly, three urban center villages, Capitol Hill, Downtown Commercial Core, and University District Northwest and the Uptown urban center experienced a net loss of jobs over the 20-year period. South Lake Union, which was not designated an Urban Center until 2004, nevertheless took 38.6% (14,319 jobs) of all new urban center jobs in the city. Much of this occurred in the 2000's, during an unprecedented building boom where over 5 million square feet of new, mostly, commercial buildings was added.

City planners predicted with some accuracy the distribution of jobs across urban villages. However, job growth and business expansion in the city, took a beating with the economic downturn in 2000. In just two years during the dot.com collapse from March 2000 - March 2002, Seattle lost 31,082 of its covered employment, a 6.1% decline (*Economic Update, Seattle Finance Department, 2003*). Seattle is no stranger to boom bust cycles, most notably the "Boeing Bust" of the late 1960s when Seattle was dominated by just a few industries, and Boeing shed more than 60,000 workers. Economic downturns are inevitable. The city's current planning effort, Seattle 2035, the city's planning effort now underway for the next 20 years, anticipates a robust job growth of over 115,000 new jobs, a 23 % increase over today.

Does Seattle's business climate match Seattle's attraction as a place to live? Does the city have the tools to achieve a better balance between job growth and housing? Will Seattle's spirit of optimism, enterprise and diversified economy buttress it against the kind of massive job losses seen in recent past? These are critical questions for policy-makers to consider.

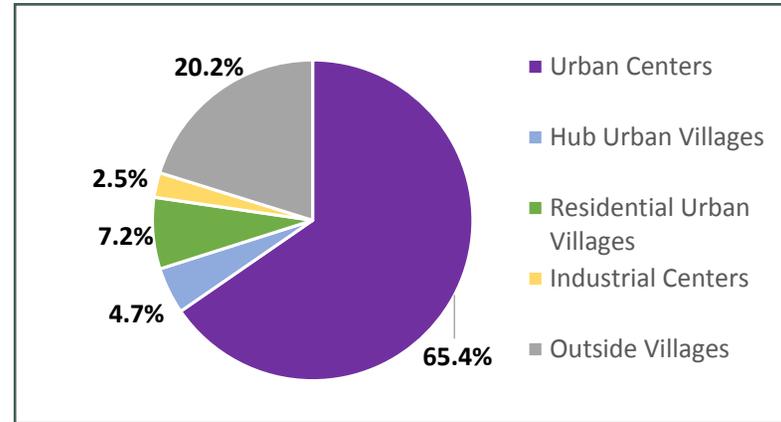
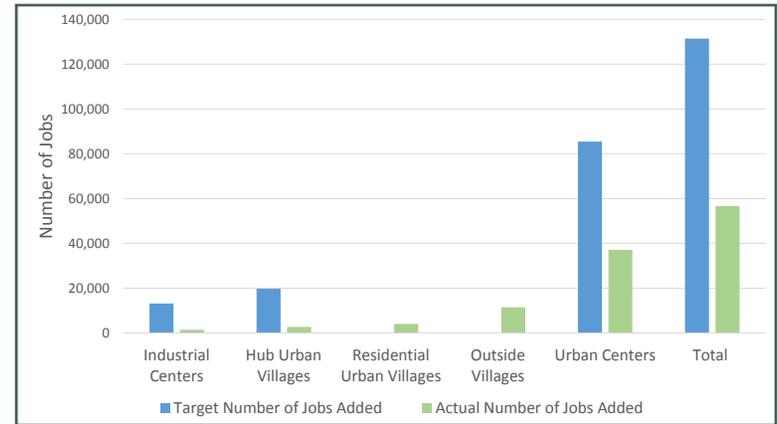


Figure 4.1. Comparison of job targets to actual number of jobs added for the urban centers, urban villages, and outside of the villages.

Figure 4.2. Actual percent distribution of jobs added between 1995 and 2012.

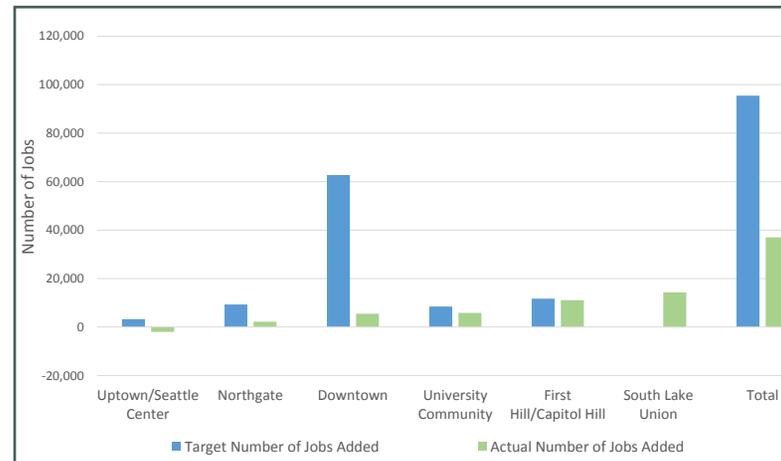


Figure 4.3. Comparison of job targets to actual number of jobs added in the urban centers.

South Lake Union was established as an urban center in 2004 so did not have a target set in the 1994 Comprehensive Plan. The Uptown/Seattle Center urban center lost jobs.

The City's Targets and Actual Residential Growth over 20 Years (1994 – 2014)

The city's actual growth of new housing units from 1994 to 2014 was astonishingly close to targets set in the 1994 Comprehensive Plan. In total, 60,524 new housing units were produced throughout the entire city. In addition, of the 60,524 new housing units built, 74.7% were directed within the city's urban villages. More specifically, the Urban Centers were predicted to accommodate 45% of citywide residential growth, and over the past 20 years, 43% of new units distributed to the urban centers.

Housing Growth and Distribution

The distribution of new housing units added by individual urban village is where the actual growth deviates from the city's projected targets. The residential growth targets for each of the urban villages were updated and changed during the 2004 Comprehensive Plan update process. The new numbers and revisions to the targets for distribution among urban villages have created a perception that absorbing a disproportionate share of citywide growth has unduly impacted some neighborhoods.

The 20-year results diverged widely from the original and updated targets for distribution, leaving a perception for some observers that the planning missed the mark, and certain urban villages have absorbed far more than their share of the targeted growth. In fact, some urban villages have received very little growth, especially in comparison to established growth targets.

	Target New Housing	Target Percentage of Housing Growth	Actual New Housing Units Added	Actual Percent of Total Housing Growth
Urban Centers	22,500-26,700	45%	25,873	43%
Hub urban villages & Residential urban villages	15,000-18,000	30%	19,029	32%
Industrial Centers	No Target	No Target	(37)	N/A
Outside Villages	12,500-15,300	25%	14,834	25%
Total	50,000-60,000		59,699	

Table 4.3. Overview comparison of target new housing units, target percent distribution, actual housing units added, and actual percent distribution across urban village categories.

Source: 1994 Comprehensive Plan, Seattle Department of Planning and Development Permit Data

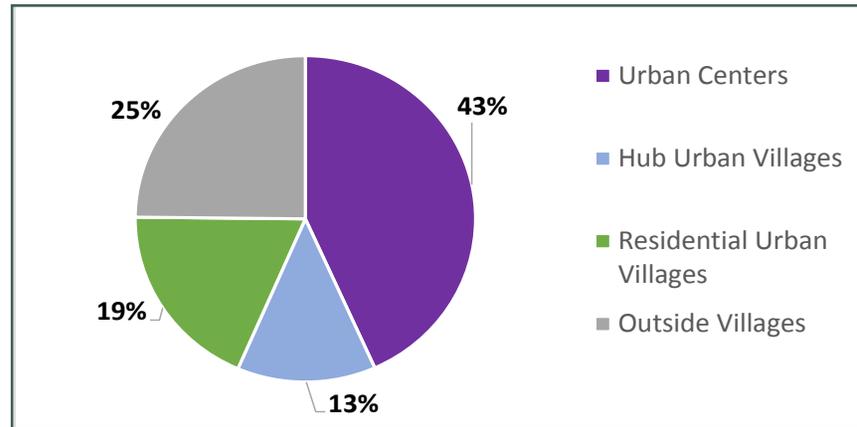


Figure 4.4. Actual percent distribution of housing units added.

Source: Seattle Department of Planning and Development Permit Data

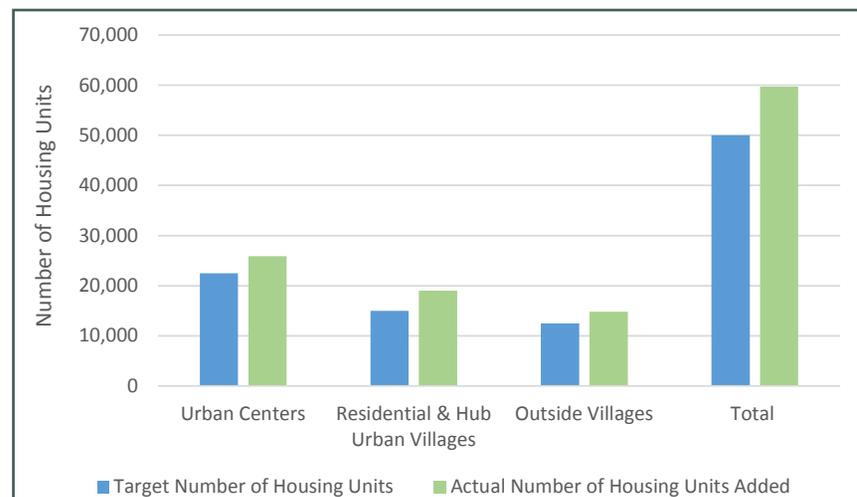


Figure 4.5. Comparison of housing growth targets and actual housing units added (1995 - July 2014).

Source: Seattle Department of Planning and Development Permit Data

Balancing Jobs and Housing

The 1994 Seattle Comprehensive Plan did not establish a ratio for balancing jobs with household growth but the 2005 Seattle Comprehensive Plan sets a goal (UVG7) for accommodating the city's current and future housing needs in balance with job growth, so that by 2024 there is a citywide ratio of 1.8 jobs per household maintained. The current jobs to housing ratio for the city of Seattle is 1.5 (see figure below). The plan goal (UVG20) for most of the city's urban centers, where employment is concentrated, is for achieving a ratio of jobs per household of approximately four jobs per household.

The period 1994 - 2012, which saw an influx of new households and far fewer new jobs, shifted the jobs per household downward, from a ratio of 1.71 jobs per household in 1994, to 1.56 jobs per household in 2012. By these numbers then, if Seattle is to achieve the jobs-to-housing balance called for in the comprehensive plan, and the desired citywide ratio is 1.8 jobs per household by 2035, the city will need to add 180,000 more to jobs balance the 60,000 new households projected.

Regional growth management implies that there be a good balance between the number of jobs and households provided within cities or employment centers. It brings people and the places of work into closer proximity to reduce commutes, transportation burdens, and ultimately to curb sprawl.

The 2011 U.S. Census Bureau's Longitudinal Employer-Household Dynamics (LEHD) finds that 38.2% (106,443) of Seattle's in-area labor force commute to primary jobs outside of Seattle. Conversely, 61.8% (172,123) of Seattle's in-area labor force live and work in Seattle. Of the workers employed in Seattle (primary jobs), 62.0% (281,161) commute from outside of the city. (See Appendix B Table B.1)

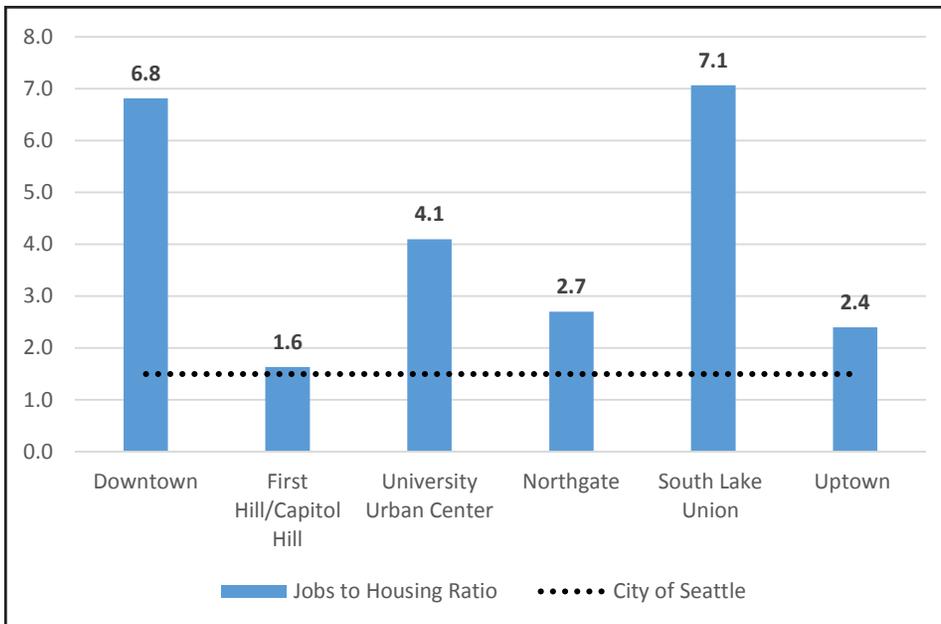


Figure 4.6. Jobs to housing ratio in the urban centers and the city of Seattle for 2010.

Source: Washington State Employment Security Department and Puget Sound Regional Council Covered Employment Report (2010) and 2010 Census

The Seattle 2035 plan projects 115,000 new jobs and approximately 60,000 new housing units. This outcome, if achieved, would establish by 2035 a ratio of approximately 1.6 jobs per household—well short of the city's policy goal for adequately balancing the number of jobs and households. To achieve the plan goal of 1.8 jobs per household, 180,000 new jobs would need to be added over the next 20 years, 65,000 more jobs than are projected to be added. Frequent and reliable transit service in corridors between urban villages and job centers can help to offset the imbalances.



Findings and Policy Implications

The Urban Village Strategy makes clear that robust job growth is not just expected, but must be fostered. How can the city reverse the growing imbalance between job and household growth in Seattle? Will increasing numbers of people make Seattle their lifestyle choice and home, and yet work outside city? The policy considerations for Seattle 2035 are to either: 1) curtail growth of new households; 2) dramatically increase job growth (given the record of the past 20 years, this would appear to be a very difficult proposition), or 3) let things fly, and deal with consequences in the future.

The notion of curtailing new household growth may be appealing to residents in some areas of the city feeling their neighborhoods afflicted by new development and rapid growth, but the idea of restricting development is anathema to others concerned with jobs, the local economy and housing affordability in Seattle.

The Urban Village Strategy of setting growth distribution targets at the macro level between urban centers and villages, and limiting growth in single-family zoned areas outside the urban villages has proven highly successful as a distribution method at the macro level over the past 20-year plan period. This distribution has been achieved largely through Seattle's effective planning policies and zoning regulations. Less successful has been the city's intention, by setting growth targets for each urban village, to try and equitably channel growth by measured amounts

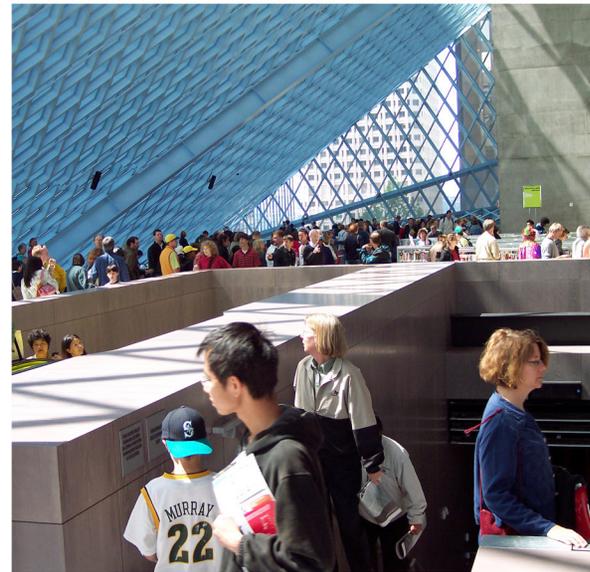
to various urban villages based on a determination of development potential and zoned capacity.

The uneven distribution of residential growth over the past 20 years (1994 - 2014) across all urban villages in the city reflects many factors influencing demand, such as market trends and location, incomes, neighborhood quality and character, changing demographics and lifestyle preferences, home prices, perceptions about public safety, quality of schools, and access to transit.

It is a given that, once the underlying zoning for an area has been established, market forces take over and will largely determine the rate of growth and where it occurs. Construction permits cannot be denied if an urban village reaches or exceeds its intended growth target over a period of time. Growth targets were not intended to set upper limits on growth, another possible misconception.

It may be best to discontinue the practice of apportioning a share of the city's growth to each of the urban villages individually. Instead, efforts should be focused on the overarching Urban Village Strategy goals of channeling growth to urban centers and villages collectively. Tracking results and assessing progress of channeling growth will help support the intent of the Urban Village Strategy "to maximize the benefit of public investments in infrastructure and services to promote collaboration with private interests and community to achieve mutual benefits" (Seattle Comprehensive Plan Urban Village Element).





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4. DATA ANALYSIS

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Urban Villages Neighborhood Profiles

DOWNTOWN

Downtown is lively, rich, and diverse in character, and home to many well-heeled as well as worn-soled urban dwellers. With the highest concentration of jobs in the region, Downtown's employment population of 201,899 (2012) represents 42% of all Seattle jobs. The Downtown urban center comprises five urban center villages: Denny Triangle, Commercial Core, Pioneer Square, Belltown (formerly Denny Regrade) and Chinatown/International District. It is the state's largest urban retail destination, and music/theater/arts/food and cultural mecca. Downtown also has a high concentration of homeless people, very low income residents, and social service agencies.

Despite its many steep hills, downtown is considered the "most walkable" district in Seattle. Within 5 minutes, people can walk to as many as 70 restaurants, bars and cafes in downtown. Biking downtown is a challenge. But a new cycle track planned for Second Avenue should significantly improve bicycle safety through the central business district.

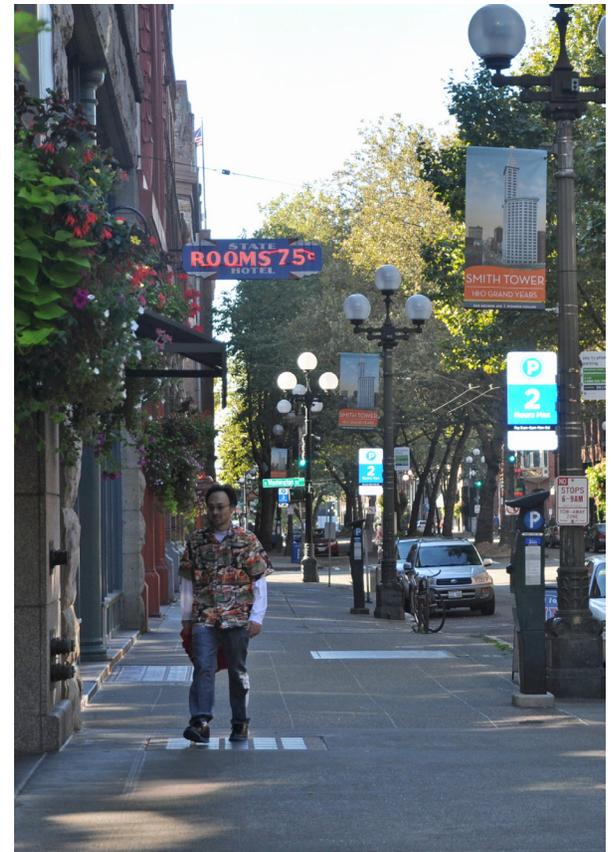
Belltown, downtown's residential annex, is the fastest growing urban neighborhood in the city, and is the densest population in the state. Many of the city's transit routes pass through downtown where connections to most areas of the city and beyond can be made. Westlake Mall is the heart of the retail core, where Nordstrom's flagship department store along with dozens of other local retailers and national outlets are located. There are about 775 restaurants, bars, and coffee shops in downtown.

Downtown boasts three historic districts, including Pike Place Market, Pioneer Square and Chinatown/International District. Seattle's famous Pike Place Market, situated on an overlook above Elliott Bay in the Commercial Core is the nation's "oldest, continuously operated farmer's market" (since 1909). The market is the state's number one visitor destination, popular with both locals and tourists alike, drawing an estimated 10 million visitors annually.

Pioneer Square, a national historic district, is Seattle's oldest downtown neighborhood. As a result of the 1889 Great Fire, Pioneer Square, highly walkable, with an array of small shops, cafes and pubs, boasts a well preserved multi-block set of distinguished late 19th century buildings of stone and brick (built immediately after the fire). With Stadium Place, the long awaited redevelopment of the old Kingdome north lot into a "modern community where you live, work and play without the need to leave the neighborhood," (<http://www.northlotdevelopment.com/overview.html>) and the recent announcement of Weyerhaeuser's plans to move its headquarter to Pioneer Square, Seattle's original business district and historic town center is rebounding from an extended period of economic stagnation.

Just east of Pioneer Square is another of Seattle's oldest centrally located neighborhoods, Chinatown/International District. The culturally rich historic district where Chinese, Southeast Asians, Filipino, Vietnamese, and Japanese Americans work and reside together, offers a unique mix of specialty shops, Asian

groceries and restaurants, boutique hotels, galleries, small parks and heritage sites. Summertime Night Market, annual festivals and cultural events including Dragon Fest, and the Lunar New Year Celebration, are popular attractions for many thousands of locals and visitors alike.



UNIVERSITY COMMUNITY

The University Community is a designated urban center under the city's comprehensive plan. The University Community consists of three urban center villages: the University District, Ravenna, and the University of Washington Campus. Located on a rise above Portage Bay, the University Community is bounded the University of Washington (UW) campus and Union Bay to the east, Interstate 5 freeway to the west, and Cowen/Ravenna parks to the north. The University Community is served by two distinctive commercial/retail zones, "the Ave", which serves as student-centered pedestrian zone offering an array of retail services, bars, and fast food dining options, and Roosevelt Way NE, which is a more auto-oriented commercial strip. Modest one and two story older single family houses line the Roosevelt corridor with many converted to low rent boarding houses for college students.

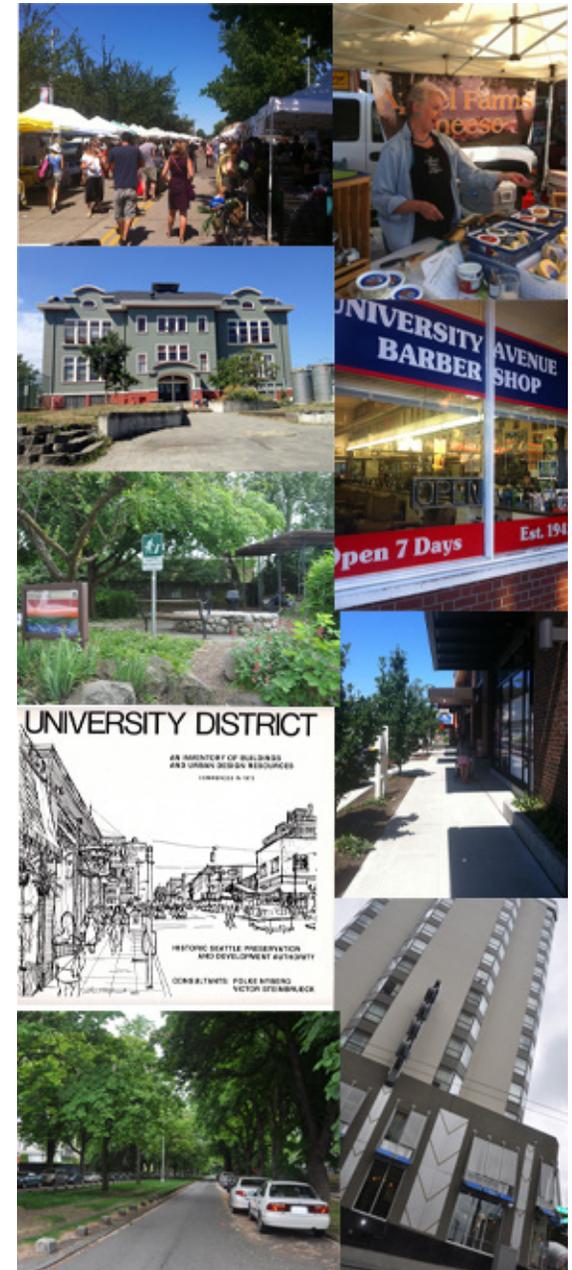
Just north of the UW campus are the sorority and fraternity houses of Greek row. The imposing facades are architecturally eclectic and dominated by red brick. Seventeenth Avenue connects to Ravenna Boulevard, a wide, tree-lined with grassy center median that is a part of the Olmsted legacy boulevards and parks system. A departure from the otherwise lower scale of the University Community are three high rise towers of different ages, the University Plaza condominiums, UW Tower (formerly Safeco offices) and Hotel Decca (formerly Meany tower). East of the University District and below is Union Bay, and the ever expanding University Village shopping mall, a popular retail destination with a wide variety of restaurants, coffee houses, shops, and boutiques catering to Laurelhurst and oth-

er surrounding single family neighborhoods. To the north, University Park and Ravenna neighborhoods transition into lower density, predominately older single-family homes and attractively landscaped gardens.

University Heights Community Center, a former elementary school, serves as is the University District's community gathering place and little "town hall." Over 200 community-based groups are based, and the facilities and grounds and draw over 225,000 visitors per year. Recently, Seattle Parks and Recreation purchased a portion of the south lot of University Heights to create a multi-use public space, including plaza for public performances, festivals and events, rain gardens, a P-Patch and other amenities. University District Farmers Market, recently moved from the University Heights parking lot to the Ave, is open Saturdays year round. The hugely popular farmers market provides a venue for more than 60 growers and producers, along with locally sourced processed foods, and arts and crafts, all from within the state.

The University Community is highly walkable, bikable, and well served by transit. The future Link Light Rail station at 43rd Northeast and Brooklyn is expected to draw up to 12,000 daily riders and as a transportation hub, will undoubtedly establish a new and lively focus for transit centered activity and development.

*The SSNAP report excludes the University of Washington Campus from the analysis in all cases except tree canopy and impervious surface data.



WEST SEATTLE JUNCTION

Fauntleroy Way West serves as gateway to Alaska Junction and the West Seattle hub urban village, framed by new and very large full block apartment buildings, with an entry node looking much like Ballard at Market and 15th Avenue NW. The “Junction,” considered to be the heart of West Seattle, sits high atop the West Seattle peninsula, geographically remote and cut off from other parts of the city by steep terrain and water bodies. The character of the Junction is insular, giving West Seattle, itself a collection of diverse neighborhoods, unique identity as a town within a city. West Seattle, like Ballard was originally incorporated in 1902 as its own municipality. It was annexed to the City of Seattle in 1907.

The Junction business district, “where it’s at!” offers a wide variety of small specialty shops and dining opportunities, where just about every need, from clothing, jewelry, groceries, health and electronics, to cafes and pubs can be found within a short walking distance. Arts West Playhouse and Gallery provides West Seattle with an exceptional arts and cultural venue that is centrally located within the walkable core.

The Junction and other neighboring parts are graced with stunning territorial, mountain, and city skyline views prominent from many east-west street corridors and high end residential view properties along 41st Ave SW. The 1975 Urban Resources Survey of the Alki/Admiral neighborhood (includes California Avenue and the Junction) lists dozens of architecturally significant, and possibly historic buildings and residences of varying ages and style. The Junction’s walkability is compromised in some areas by high speed traffic, although daily errands are easily accomplished by foot as distances are short between shops and services. On a sunny day, sidewalks are lively and active, with large numbers of pedestrians, sitters, and outdoor diners.



BALLARD

The Ballard hub urban village is bordered by the Lake Washington Ship Canal and Salmon Bay. Its topography is low sloped to flat. Once an independent town, Ballard still retains the look and feel of a compact, small city. Its Scandinavian heritage is commemorated each year with May 17th Norwegian Constitution Day Festival at Bergen Place Park. Market Street and Ballard Avenue between 24th and 15th Avenues Northeast form a compact, walkable town center. Ballard’s gentle terrain and compactness make getting around on bike or foot relatively easy, although the “Missing Link” to the popular Burke-Gilman trail through the Salmon Bay maritime industrial corridor remains unresolved.

The Ballard Avenue Historic District recalls “Old Ballard,” with red brick commercial buildings, shops, seamen’s taverns, and modest itinerate worker apartments dating to the late 19th century. With a bar on nearly every block, and hugely popular Sunday Farmers Market, Ballard Avenue has seen an urban renaissance, and is a popular nightspot for young hipsters and old timers alike.

In just 10 years, the population of the Ballard Hub Urban Village has increased by 24% between 2000 and 2010. With growth and new development has come many improvements. Market Street, Ballard’s central business district, offers a wide variety of small shops, bars cafes, and services, and bustles day and night with people and activity. The additions of a new public library, community center and full block park just north of Market Street is the new town center, contributing to Ballard’s high livability quotient.

LAKE CITY

Despite its rapid growth, Ballard still retains some of its gritty working class character, with an active commercial fishing and maritime industrial zone along Shilshole Avenue and the shores of Salmon Bay. While Ballard’s core redevelopment has achieved many of the Ballard neighborhood plan goals, Ballard residents are concerned about increasing traffic congestion, limited parking, public safety, scale and character of new buildings, and housing affordability.

In Seattle’s far northeast region, the Lake City hub urban village is centered along the State Route 522 highway corridor and Thornton Creek watershed between two prominent hills. Lake City includes a clustering of several smaller surrounding neighborhoods of Victory Heights, Meadowbrook, Cedar Park, and Olympic Hills which are more residential in character. In 2006, the Lake City branch library was expanded and re-opened. The bustling Lake City business district has an older working class feel, with full array of small shops, cafes, neighborhood bars, auto dealerships, and professional services. Newer infill of multi-family development of larger scale is occurring, which is altering the low rise character and scale, and creating more density. According to Seattle Planning Commission’s Status Check (2009), along with growth, Lake City residents support more attention given to compatibility of design with neighborhood character, crime prevention, and more “green infrastructure,” including mini-parks, trails and trees. Improved intra-city transit service is also a high priority of residents.

The pedestrian zone is fairly compact, inviting (though linear, like most neighborhood business districts in Seattle), and centered at 125th and Lake City Way. Fred Meyer on the outskirts of the business district, provides the largest source for full service groceries and other household needs. Lake City Park, at the heart of Lake City was recently refurbished as a paved plaza with limited amenities for public enjoyment. Trees and landscaping have yet to mature, but should eventually provide welcome relief to hard paved plaza. Lake City has a pleasing variety of public art displayed in the parks, median strips, and sidewalk paving. Lake City Way is curiously both auto-oriented and pedestrian friendly, with a walkable pedestrian core, and only a few mini-strip malls. The ever popular Dick’s Drive-in reflects the era of the automobile. The walking experience overall has a friendly, small scale “Main Street” quality in regards to streetscape amenities, public art, people and activity, green landscaping, and safe crossings. At times fast speeds along SR 522 can pose traffic congestion issues and high traffic speeds can create safety concerns for pedestrians and bicyclists.



WESTWOOD-HIGHLAND PARK

Located near White Center in the far southwestern part of Seattle are the neighborhoods of Westwood and Highland Park. The two neighborhoods have a different look and feel. Highland Park has at its center a multi-cultural, highly walkable business district with a wide array of independent small businesses, ethnic groceries and cafes, butcher shops, small restaurants, and services. Nearby, is a contrasting shopping experience—the Westwood Village Mall, a large, regional shopping destination with national chain big box retail, boutiques, cafes, art, landscaping and attractive outdoor public spaces. Large single family residential areas divide the two neighborhood business districts, as does the hilly terrain to the west.

To the northwest, is the Southwest Teen Life Center and adjoining playfields, and southwest is Roxhill Elementary School, Roxhill Park (headwaters of Longfellow Creek), playfield, and skate park, not far and just across the city line, is a large casino complex.

The tallest landmark in Westwood is Westwood Heights, a senior housing complex owned and managed by Seattle Housing Authority. The properties were formerly the decaying and problem-beset Roxbury House and Village. In 1998, Seattle Housing Authority redeveloped the properties under a federal Hope VI grant to revitalize the neighborhood and create a safer more attractive environment.

Highland Park, in the south Delridge valley, is a diverse blue-collar community with a unique multicultural vibe. Edging upto White Center, homes are modest and affordable, with close proximity to Boeing, Downtown Seattle, and SeaTac airport, making the neighborhood attractive to young working class families. Adding to the attraction is the 81-acre Westcrest Park featuring a playground, picnic area, and miles of hiking trails.



RAINIER BEACH

The Rainier Beach neighborhood is diverse, multi-cultural, and family oriented with a high level of community pride and activism. Its natural setting, spectacular parks, and views of Mt. Rainier are its unique physical assets. Despite many changes since the 1990s, it remains one of the few Seattle neighborhoods where gentrification has yet to reach, with development occurring more slowly than other parts of the city. Homeownership remains low, new businesses slow to incubate, and with multi-family housing being developed mostly outside the urban village near or on major arterials.

Kubota Garden, a public park located just outside the urban village, is a regional attraction and hidden treasure of 20 acres of beautifully landscaped gardens combining Northwest native plantings with Japanese inspired design. Other notable parks and recreational areas include Be'er Sheva, Lakeridge/Deadhorse Canyon Natural Area, and Fred Hutchinson Playground. Rainier Beach has a small, somewhat scattered historic business district at Rainer Avenue S., S. 57th Street, and Seward Park Avenue intersect, where there is a variety of “mom and pop” shops and services. Two large full service chain supermarkets just outside the commercial core are the dominate shopping centers. Rainier Beach residents in a 2012 update to the 1999 neighborhood plan, expressed a desire to see more of a range of shops, restaurants, and services, with an improved, transit connected pedestrian shopping experience. “Pearls” of Rainier Beach identified by residents are Beach Square, the historic Business District, the light rail station, and Rose Street.

Beach Square is the civic core where public facilities clustered near the business district include the Rainier Beach Branch library, community center, high

NORTH BEACON HILL

school, performing arts center, and Dunlap Elementary school. The Rainer Beach Light Rail Station at MLK Jr. Way S. and S. Henderson, is the neighborhood’s major gateway, yet it is distant from, and somewhat disconnected from the business district, and there has been little new private development surrounding the station. Rose Street at Rainier Avenue S. shows promise as “a stand out community node,” where there is a growing concentration of diverse cultures, including an Ethiopian Community Center, small ethnic businesses, and Buddhist monastery.



North Beacon Hill is seeing a big resurgence. The landmark 16-story Pacific Tower, former home to Amazon.com and the Pac Medical and Veterans Medical Centers sits prominently above the urban core, overlooking Downtown Seattle, and at night glows with light as a beacon on the hill. Of note, the American Planning Association (APA) named Beacon Hill in 2012 one of 30 Great Places in America for its fine, sustainable neighborhood qualities, multi-modal transportation, urban design, community involvement, aesthetics and physical character—quite an accolade!

“Spend some time on Seattle’s Beacon Hill and you’ll find a dynamic and engaged community where your neighbors are just as likely to be Chinese, Japanese, or Vietnamese as they are to be black, white, or Hispanic. This diversity is exemplified by North Beacon Hill, a neighborhood-scaled commercial node with stores providing goods for many cultures and restaurants serving Asian, Hispanic, and other ethnic foods and where nearly three-fourths of residents are people of color, almost half are foreign born, and 60% speak a language other than English at home, according to 2000 census data. Modest housing, nearby jobs, a streetcar to Downtown Seattle, and restrictive covenants in other parts of the city all helped to draw immigrants and people of color, especially Asian-Americans, to Beacon Hill in the 1950s.” (APA, 2012, Connects, “30 Great Places”).

Beacon Avenue is the main traffic corridor that runs the length of Beacon Hill, and through the BH residential urban village. Many changes are coming to North Beacon, in part as a result of the new Link light rail Station at its center, where there is a concentration of businesses, library, community center, grocery markets, and infill development. Together El Centro de le Raza, ST Beacon Station, and Library create sense of town center with short pleasant walking distances between small shops, restaurants, services, and park. Roberto Maestas Festival Street, was named in honor of Roberto Maestas, El Centro de la Raza (Center for People all Races” founder and prominent Seattle civil rights leader.



EASTLAKE

The Eastlake urban village serves as a busy traffic corridor with strong edges bordered by I-5 freeway, connecting the University District through Eastlake, to the Cascade neighborhood and South Lake Union. The compact Eastlake neighborhood rises steeply above the banks of Lake Union, providing many residences along the hillside with panoramic views of the lake, city skyline, and Olympics. The former red brick Seward Elementary school stands atop the hillside as a local landmark, and has become TOPS, an alternative K-8 public school open to students from all over the city.

Eastlake neighborhood combines a mix of older and newer apartment buildings, condominiums, townhouses, floating homes, and along Eastlake Avenue East, the community “main street” are located a variety of inviting small shops, bars, cafes, bakeries, offices and a few professional services. The Eastlake Zoo is a popular ‘60s era neighborhood tavern. Although the sidewalks are narrow in most areas, the walking experience in the core pedestrian zone is pleasant and active, with a variety of small scale buildings and storefronts of different eras. Small shops and businesses are more concentrated at Eastlake and Lynn Street. At the north and south ends of Eastlake Avenue East, the pedestrian zone feels more stretched out and discontinuous.

The Eastlake community is graced with a multitude of small to large parks, ranging the central commons of Rogers Playfield, to a string of lovely mini-street end and viewpoint parks, a hillside P-Patch garden. The Cheshiahud Loop Trail recalls Seattle’s native past along the shores of Lake Union. The trail is still in development, and lakeshore access is not continuous.

AURORA-LICTON SPRINGS

The Licton Springs neighborhood, sandwiched between busy Aurora Avenue North on the west, and Interstate 5 on the east, transitions from low-rise multi-family to into single family residential and is served by the Aurora Avenue business district. Licton Springs has its origins in what was once part of a natural system of spring, bogs, and marshes where abundant mineral waters and reddish mud provided a place of healing and spiritual importance to the local Lushootseed-speaking Salish Indians. Today, Licton Springs Park is the center of this family oriented community, offering a beautiful natural setting for strolling, play, and picnicking. Indian Heritage School at Wilson Pacific, with spectacular wall murals by Indian artist Andrew Morrison, continues the native presence in the neighborhood.

Aurora North (SR 99) is the closest shopping district to Licton Springs community, and is a busy, high speed traffic corridor lacking adequate pedestrian amenities, and deteriorated and/or impassable sidewalks, safe crossings and ADA compliant sidewalks. Most goods and services are not available within easy walking distance, nor is walking between long auto-oriented blocks a pleasant experience. However, a limited variety of retail shops and services is available at Oak Tree Plaza shopping mall, including a cinema, and Asian-oriented grocery. Various goods and services in the Aurora corridor include auto supplies, equipment rentals, adult entertainment, marijuana dispensaries, hair and nail salons, fitness center, movie theatre, gas stations and several fast food outlets. The Oak Tree Plaza is a family gathering place for summer festivals. The Aurora-Licton Springs urban village does not have a community center, library, full service bank, or health center. On the northern edge, Washelli Cemetery provides a large collection of significant trees, and vast areas of grassy open space, but with limited public use.



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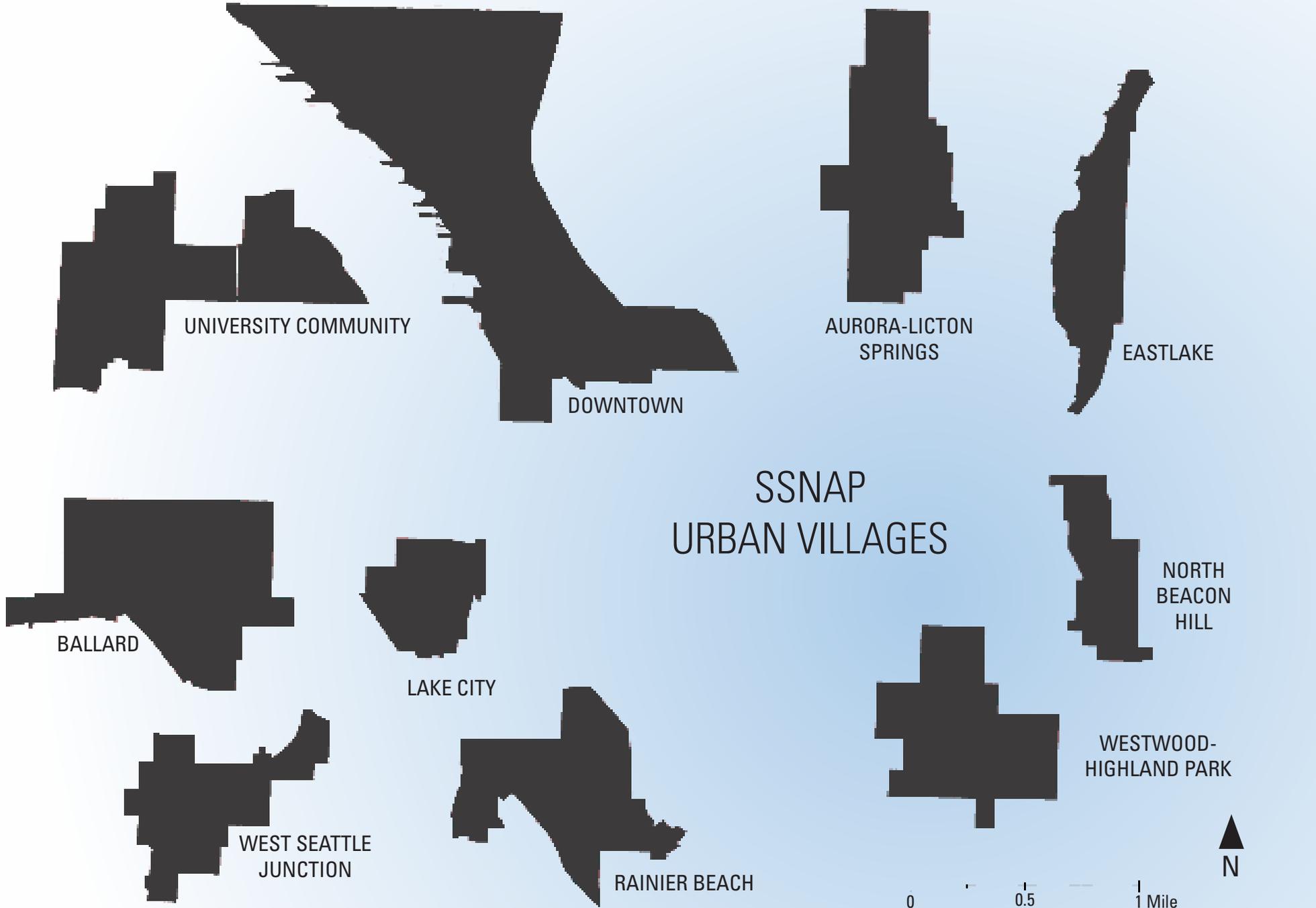
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4. DATA ANALYSIS

5

6

7



Urban Village Demographics

Demographic data is represented in the following figures for each urban village area. City of Seattle numbers are included where applicable to reveal the urban village demographics within the context of the city of Seattle as a whole. An understanding of demographic trends is vital to developing the social context in which the indicators themselves exist.

Note that most demographic data for the city and urban villages shows only a few data points over the entire period studied; this means that any fluctuations in the gaps are not recorded, and may play a role in the dynamics of the indicators.

Demographic data is sourced from the U.S. Census Bureau and was compiled for each urban village area by the City of Seattle Department of Planning and Development. Changes within the measurement instruments (the Decennial Census and American Community Survey) means that we are restricted to current data in some instances.

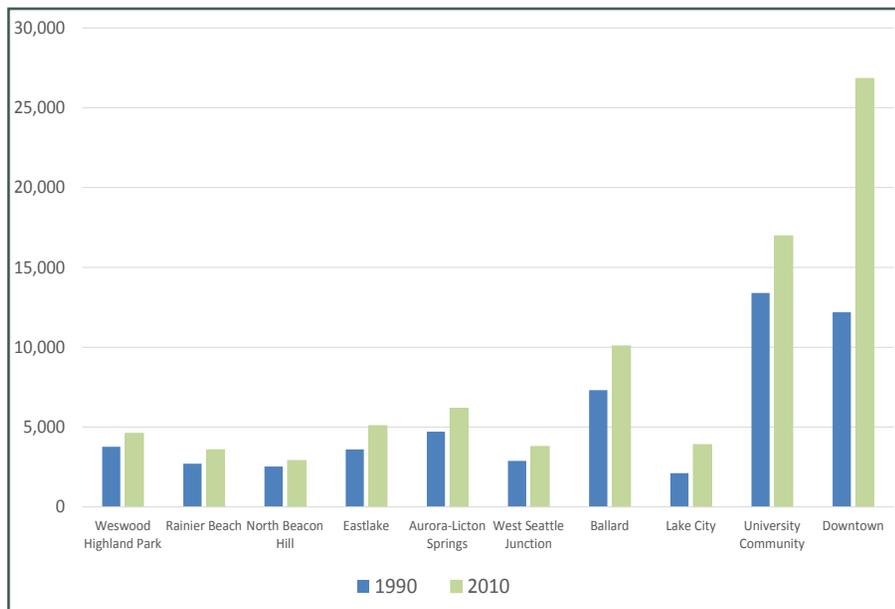


Figure 4.7. Urban village population

Data prepared by the City of Seattle Department of Planning and Development from the U.S. Census Bureau Decennial census 100% Count Data for 1990 and 2010



Figure 4.8. Urban village population density

Data prepared by the City of Seattle Department of Planning and Development from the U.S. Census Bureau Decennial census 100% Count Data for 1990 and 2010

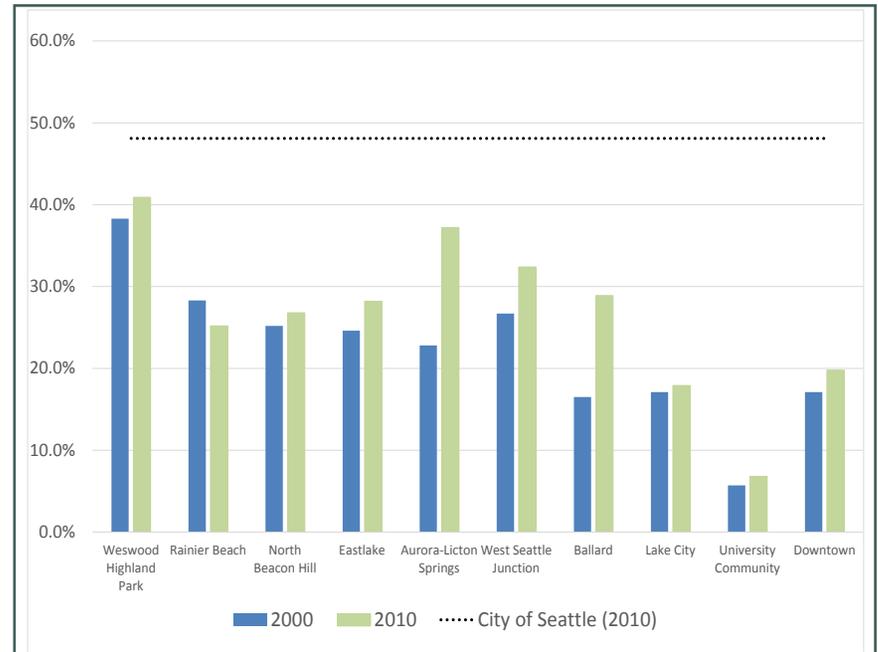
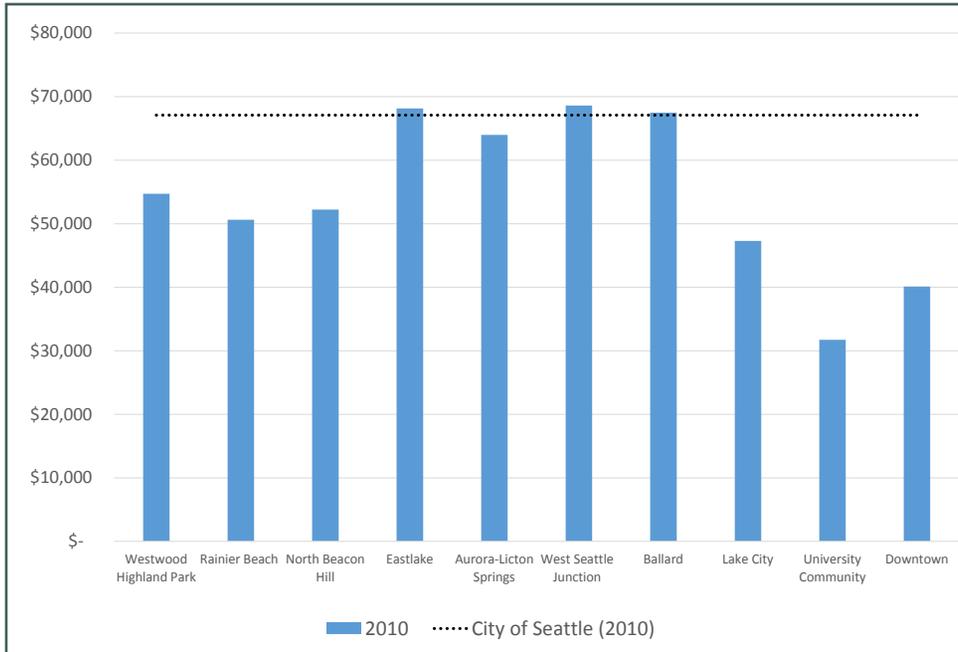


Figure 4.9. Median household income

Data for census tracts corresponding to the 10 urban Village assessment areas, and for the City of Seattle. Data is sourced from the 2008-2012 American Community Survey 5-Year Estimates

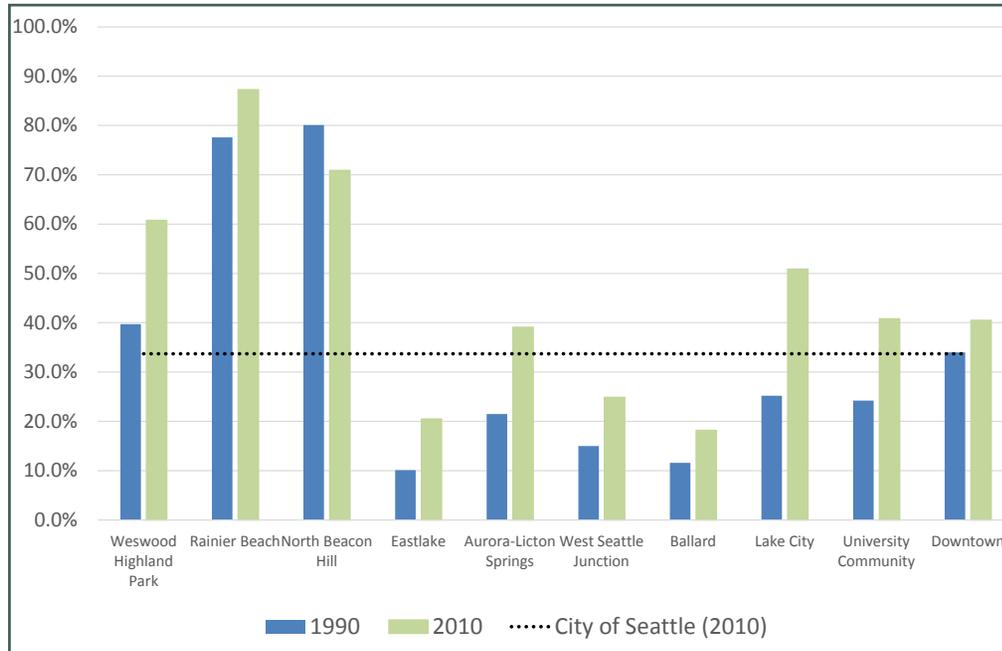


Figure 4.10. Percent owner-occupied properties

Data prepared by the City of Seattle Department of Planning and Development from the U.S. Census Bureau.

Figure 4.11. Percent persons of color

Data prepared by the City of Seattle Department of Planning and Development from the U.S. Census Bureau. Persons of color data includes people of Hispanic or Latino ethnicity and/or race other than White alone (for 1990: and/or other than white).

Changes in the structure and methods of the Decennial Census may affect comparability of 1990 and later Census data.

Indicator Data Notes

The starting point for the data mining process was the Seattle.gov and department websites with the intent to **evaluate the accessibility and ease of data collection** for Seattle's designated urban villages. The SSNAP indicators attempt to rely on publicly available data that does not require extensive time or expertise to compile.

Population data for the urban villages is sourced from the U.S. Census and aggregated by the Department of Planning and Development for the years 1990, 2000 and 2010 for Seattle's urban villages. Population estimates for intermediate years were calculated by assuming stable growth in population overtime.

Indicator Analysis Organization

Each indicator contains several groupings of information:

- **Outcome Group:** Four outcome groups; Resource Use and Conservation, Healthy Communities, Open Space and Development, and Shared Prosperity and Opportunity. Each indicator is assigned to one of the four outcome groups. The following data analysis section is organized by the outcome groups
- **Desired Outcomes:** The list of desired outcomes identifies specific positive outcomes of each indicator
- **Responsible Agency:** the agency, organization, or department that oversees performance for the specific indicator
- **Format:** Basic organization and type
- **Data Source/Collection Methods:** Where and how data was collected and organized
- **Data Years:** Years of data represented
- **Associated Policies:** Related policies or goals

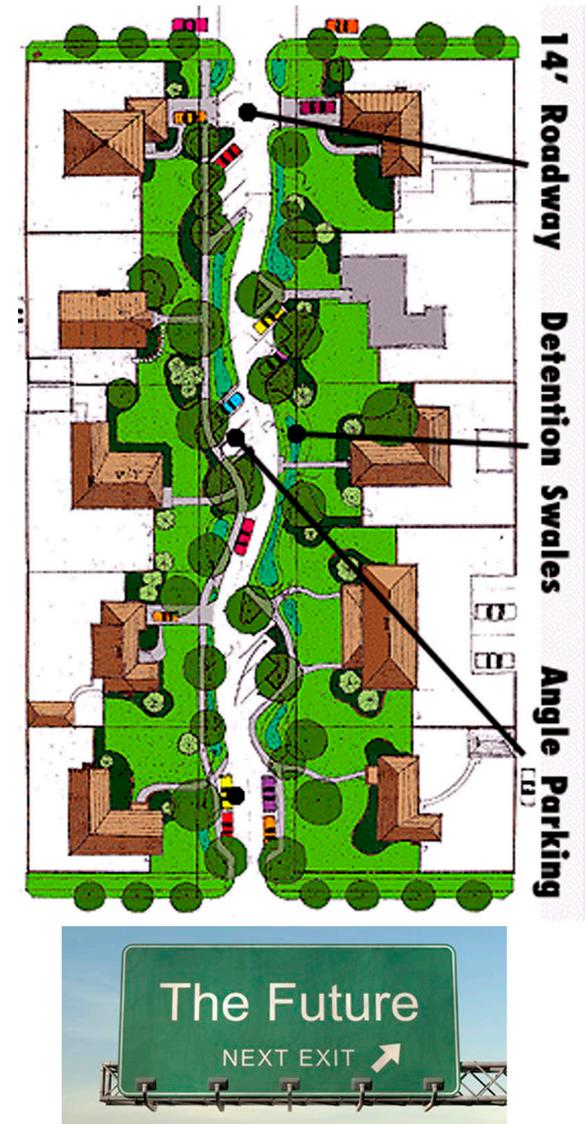
in the Seattle Comprehensive Plan or related planning documents

- **Metric Goals:** Any set goals and/or targets
- **Background Information:** Any supplementary information that provides context and informs interpretation of data analysis section
- **Data Analysis:** Analysis of data provided
- **Notes and Limitations:** Commentary and limitations provided by data source contacts
- **Recommendation:** Recommendations for the future based on data analysis

Data Years vary across indicators. For some indicators, 1994 data was not available. The SSNAP team obtained the earliest available data to be used as the benchmark for assessing trends over time.

Transit Ridership	Urban Village
Vehicle Traffic Screenline Counts	Urban Village
Residential Energy Use	Citywide
Residential Water Consumption	Urban Village
Residential Landfill Waste	Citywide
Historic Landmarks	Urban Village
Access to Arts and Culture	Urban Village
Farmers Markets	Urban Village
Community Gardens	Urban Village
Low Birth Weight	Census Tract
Life Expectancy	Census Tract
Area of Parks and Open Space	Urban Village
Proximity to Parks and Open Space	Urban Village
Tree Canopy Coverage	Urban Village
Impervious Surfaces	Urban Village
City Investments in Infrastructure and Capital Facilities	Urban Village
Neighborhood Matching Fund	Neighborhood District
Schools and Academic Performance	Urban Village/Surrounding Neighborhood
Unemployment Rate	Census Tract
Poverty Rate	Census Tract
Housing Cost Burden	Census Tract

Table 4.4. Geographic area of indicator data



[A]
RESOURCE USE AND
CONSERVATION

This group of indicators focuses on community resources understood as the inputs and outputs of urban livelihood. Car dependency is often identified as a critical problem in the metropolitan area, and reducing car traffic and increasing transit use are the main goals for the city and the county. This first section includes transit ridership and traffic congestion indica-

tors. Moreover, energy, waste, and water consumption patterns are analyzed as measures of resource use and conservation. Demolition and construction debris are also large contributors to waste generation, therefore, preserving historic sites indicates the ambition to make the best use out of existing resources and embodied energy.

[B]
HEALTHY COMMUNITIES

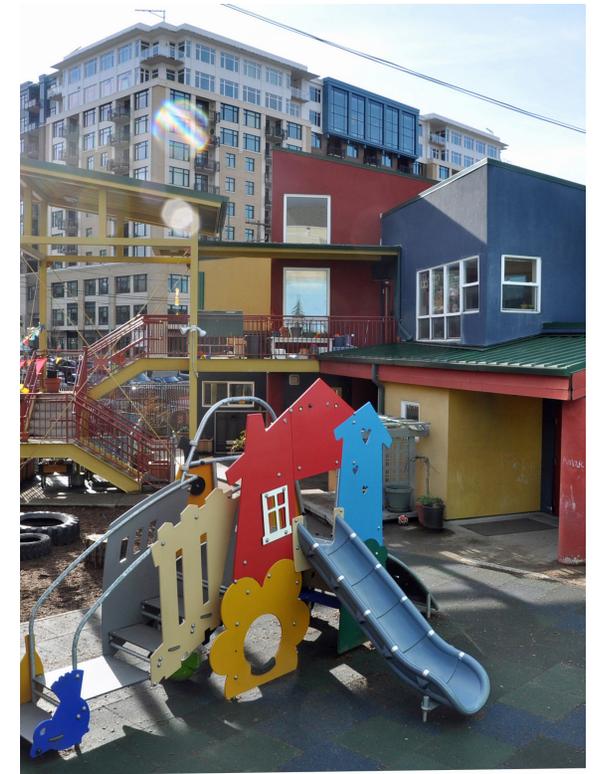
Healthy communities ensure public safety, cultivate community cohesion and connection, provide venues for positive social interaction, and perpetuate healthy lifestyle choices. The indicators included in this section characterize mental, emotional, and physical health for residents and the community as a whole.

[C]
OPEN SPACE
AND DEVELOPMENT

One of the main visions of the Seattle Comprehensive Plan and Urban Village Strategy is to direct and accommodate growth and development, while supporting, maintaining and enhancing quality of life in Seattle's neighborhoods. The open space and development indicators evaluate the trajectory of the city's densest areas to ensure that Seattle's parks, open space, and tree canopy are not threatened.

[D]
SHARED PROSPERITY
AND OPPORTUNITY

The city of Seattle strives to be not just a prosperous place filled with opportunity, but a place where prosperity and success are evenly shared among all residents. The foundation for community success is the fair equitable distribution of resources for services and infrastructure that support community needs. Financial stability, an education, and a place to live are



at the foundation for individual success. Cumulatively, the group D indicators evaluate how resources and services are allocated to individuals and community to assess the level of equity in Seattle.

[A] RESOURCE USE AND CONSERVATION



A1 TRANSIT RIDERSHIP

Desired Outcomes

- Mobility, access, and connectivity
- Reduced traffic congestion
- Pollution reduction
- Transit accessibility

Responsible Agency: King County Metro

Format

Average weekday (Mon-Fri) boardings per person per acre.

Data source/data collection methods: Average weekday boardings data is sourced from the King County Metro database and is representative of King County Metro bus routes ridership (see Appendix B for more information).

Average weekday boardings data was converted to average weekday boardings as a factor of population density and is represented in Figures 4.13 & 4.14. Average weekday boardings was divided by the popula-

tion density (people per acre) for each urban village. This shows change in average weekday boardings over time given change in urban village population density.

Figure 4.12 shows Downtown average weekday boardings and population density separately to demonstrate how the two variables interact overtime. The other urban village graphs showing average weekday boardings and population density separately are included in Appendix B.

The urban centers are shown on a separate graph (Figure 4.13) from the residential and hub urban villages (Figure 4.14) to account for the significant difference in scale of average weekday boardings in the urban centers compared to the hub urban villages and residential urban villages.

Data Years: 1994-2013

Associated Policies

King County Metro Vision for Public Transport:
Goal 2: Provide equitable opportunities for people from all areas of King County to access the public transportation system.

Goal 4: Environmental/greenhouse gas reduction

Metro Performance Measures:

- Population within a 1/4 mile walk transit station
- Increase Transit Mode by Market
- Reduce Per Capita VMT
- Increase Transit Mode Share

Seattle Comprehensive Plan:

T9: Designate a transit network to maintain and improve transit mobility and access compatible with transportation infrastructure and surrounding land uses.

T4: Provide sufficient transportation facilities and services to promote and accommodate the growth this Plan anticipates in urban centers, urban villages, and manufacturing/industrial centers while reducing reliance on single occupancy vehicles.

SDOT Transportation Strategic Plan (2005):

T5 Policy: Establish multi-modal hubs providing transfer points between transit modes in urban villages and urban center villages and urban centers.

SDOT Metrics & Performance Measures:

- “SDOT management and staff recognize the need to have, and report on, meaningful performance measures in order to communicate more effectively to the public, elected officials and agency partners...”
- Many of the SDOT’s current reporting measures are output measures—they indicate production, but do not chart progress towards an established goal.”
- “Improving the environment and supporting the urban village land use strategy are two main considerations that are addressed in many of the measures in each category. Some of the measures listed on the following pages are currently tracked and reported on, many are still in development ... Once the system is defined and a baseline established, SDOT will report on progress made towards meeting the target” (2005).
- 2020 Target: 14% reduction VMT (compared to 2008).



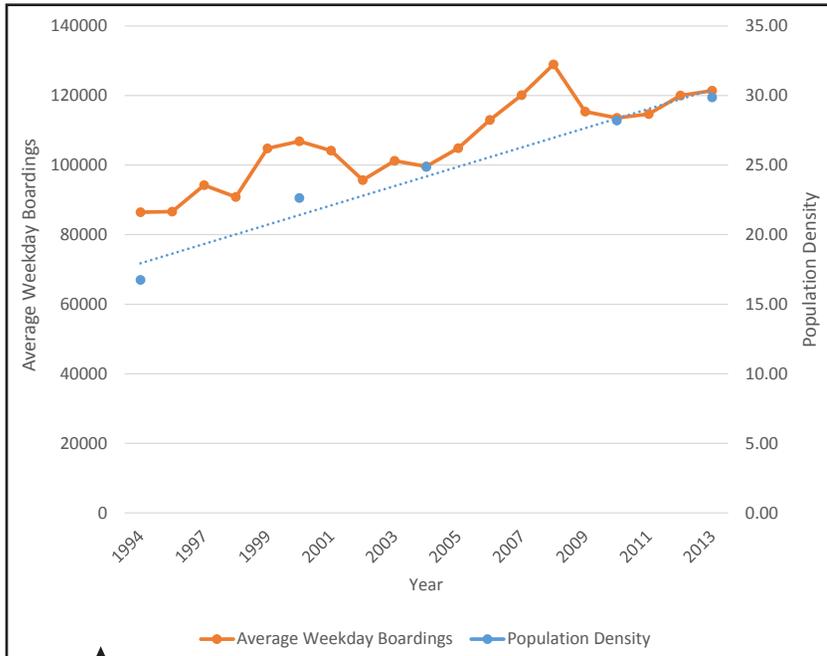


Figure 4.12. Downtown average weekday boardings and population density. Source: King County Metro

King County Metro identified 2005 as the most reliable benchmark year for comparison due to greater consistency in data collection methods between 2005 and 2014.

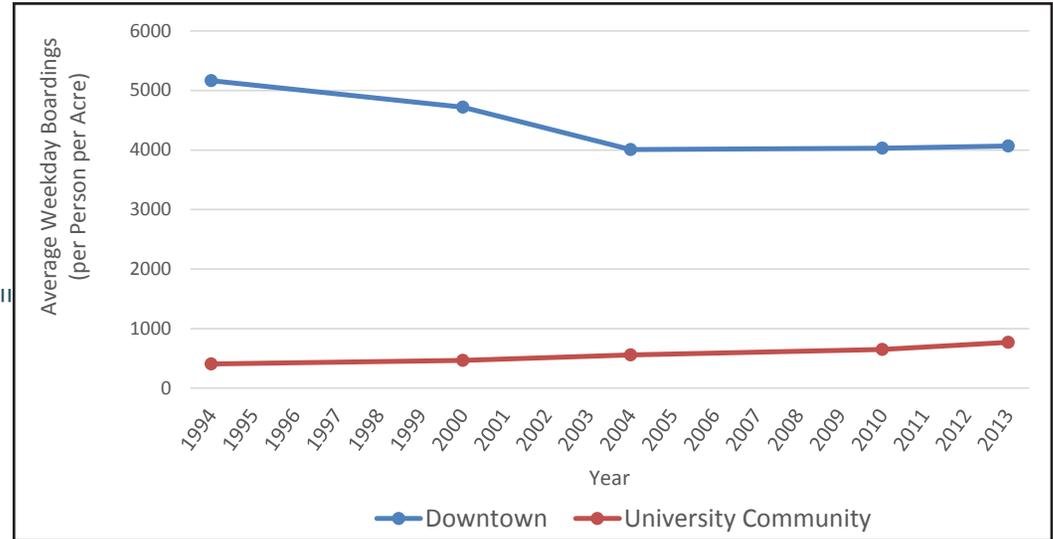


Figure 4.13. Average weekday boardings as a factor of population density for the Downtown and University Community Urban Centers. Source: King County Metro

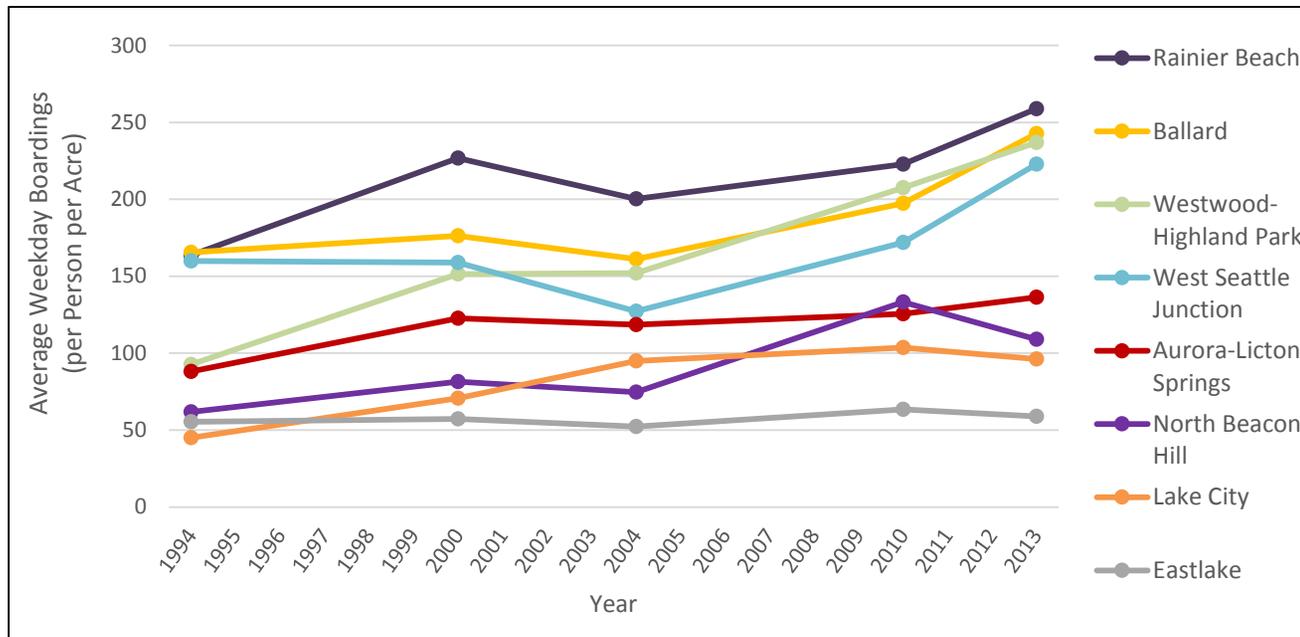


Figure 4.14. Average weekday boardings as a factor of population density for three hub urban villages; Ballard, Lake City, and West Seattle Junction and 5 residential urban villages; Aurora-Licton Springs, Westwood-Highland Park, Eastlake, North Beacon Hill and Rainier Beach

Source: King County Metro

Analysis

Annual boardings for the King County Metro service area are tracked consistently each year to measure transit ridership and evaluate progress towards doubling current ridership by 2040. Average weekday boardings data was separated into two figures due to the substantially higher ridership in the urban centers. Downtown ridership exceeds the University Community by a large margin as well. Peak ridership as a factor of population density in the University Community was approximately 770 boardings per person per acre. Comparatively, in 2013 Downtown experienced 4,065 boardings per person per acre. Weekday boardings have increased in all of the selected urban villages except for the Downtown and Eastlake urban villages. This indicates a steady, growing demand for bus service, and expanding of the ridership base within the city.

One of the missions of the urban village strategy is to direct population growth into designated urban village areas and to support growth by providing adequate and accessible services to these areas. Public transportation is critical to reducing dependence on single occupancy vehicles, reducing traffic congestion, and increasing mobility throughout the city, especially as population and employment density increases. In the 10 urban village study areas, both average weekday boardings and population density increased between 1994 and 2013. For the SSNAP transit ridership indicator, urban village average weekday boardings per person per acre for 1994, 2000, 2004, 2010 and 2013 was calculated to demonstrate a relationship between change in transit ridership and change in population density.

In Downtown Seattle, the overall rate at which population density has increased may account for why average weekday boardings as a factor of population

density has decreased. This suggests that increases in density Downtown are not contributing to dramatic increases in metro transit ridership. This may be partly due to the fact that the Downtown functions as a transit hub, with a large number of users that do not live in the urban village. The data provided also include only boardings on Metro-operated buses and Sound Transit Routes that Metro operates. Sound Transit Routes operated by Community Transit or Pierce Transit are not included in the data, neither are Link light rail or Sounder commuter trains. Alternative transit services such as the light rail may contribute to decreases in metro bus ridership.

Since 2004, there has been a very subtle increase in average weekly boardings per person per acre. In contrast to Downtown, all other urban village areas except for Eastlake have experienced an increase in average weekday boardings per person per acre between 1994 and 2013. Average weekday boardings per person per acre in Eastlake have remained relatively stable over the 20-year time period.

Rainier Beach has the highest average weekday boardings per person per acre of any of the residential or hub urban villages. This suggests Rainier Beach residents are more dependent on transit than in other areas. Eastlake has the lowest average weekday boardings per person per acre. This is likely due to the fact that Eastlake acts as a transit corridor for express routes from the University District to Downtown. During peak hours especially, express routes do not stop at any bus stop within the urban village boundaries, creating potential limitations for transit use by Eastlake residents. Overall, the trends are positive as transit boardings increase at a faster rate than population density. See Appendix B for individual urban village graphs showing raw average weekday boardings and population density (1993-2012).

A1 RECOMMENDATION

Fast, frequent and reliable transit access is a key component of the Urban Village Strategy. With future growth in population and employment in the urban villages, the Metro bus system will need to extend ridership service hours and routes throughout the city, and especially in heavy transportation corridors, to accommodate increased demand.

Notes/Limitations

It is important to note that this indicator does not inform the distribution or proportion of transportation modes. As population increases, it cannot be assumed that an increase in transit ridership suggests a decrease in the use of cars throughout the city.

The goal of the APC system is to collect between three and five observations from every scheduled trip, which certainly does not always occur. Trips with minimal to no valid APC data available make the data more prone to be skewed by non-typical observations. The accuracy of the data in providing information district- or system-wide will be much more accurate than a "slice" of the data which is more likely to be skewed by non-typical data. The APC system does not collect any data on subcontracted services. It is important to also note that the 1990 stop level data is less reliable. The Automatic Vehicle Location (AVL) system was less accurate causing some ridership data to be inaccurately attributed to stop numbers. A major rewrite of Metro's APC system occurred in 2005, increasing the reliability of data for recent years.



A2
VEHICLE TRAFFIC
SCREENLINE COUNTS

Desired Outcomes

- Community health
- Car dependency reduced
- Traffic congestion reduced
- Greenhouse gas emissions reduced

Responsible Agency: Seattle Department of Transportation (SDOT)

Format

GIS data

Data source/data collection methods:

SDOT Screen line location data tracks average daily traffic volume, average weekday traffic volume, 8 busiest hours of traffic, peak hour AM traffic volume, and peak hour PM traffic volume. Screen line locations are partially dictated by the Seattle Comprehensive Plan, some locations are included as part of annual flow count map, and some locations overlap with federal count locations.

Screenline GIS data were filtered to remove special traffic studies, aggregate studies, and non-surface street studies. The remaining studies were used to generate a Volume/Capacity ratio for the AM and PM peak hours during the study, following King County procedure (King County Benchmark Program). The V/C ratio is an indicator of demand for roads compared to the supply for roads. A capacity of 1,000 cars per hour per lane was used to calculate the ratio. The data was summarized and plotted in R 3.0.2.

Data Years: 2000, 2012

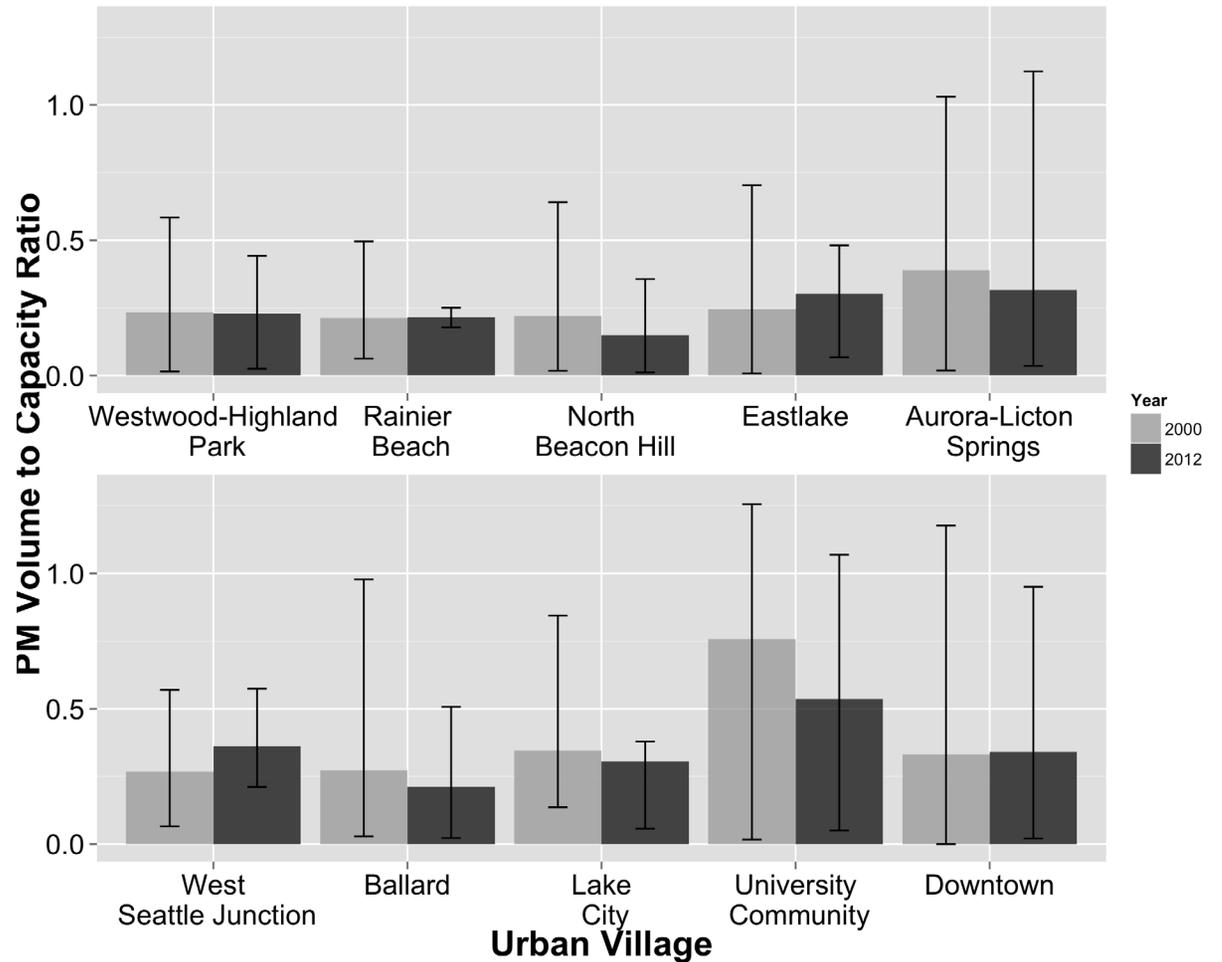


Figure 4.15. Volume-to-Capacity ratios for PM peak hours in the selected urban villages for the year 2000 (top) and 2012 (bottom). The height of the bar represents the average V/C ratio, while the whiskers indicate the minimum and maximum V/C ratios observed in the urban village. See Appendix B Table B2 for number of screenlines used to produce the data for each urban village.

Source: Seattle Department of Transportation (SDOT)

Associated Policies

Seattle Comprehensive Plan:

T4: Provide sufficient transportation facilities and services to accommodate anticipated growth...reducing reliance on single occupancy vehicles.

Analysis

High levels of congestion and traffic has been shown to have many negative impacts on health and well-being in the public (Levy et al., 2010; Künzli et al., 2000; Hennessy & Wiesenthal, 1999). The distribution of screenline data suggests a handful of major arterial roads experience severe congestion during peak hours. Traditional methods of dealing with congestion would be to increase capacity, however research shows that adding capacity eventually leads to more congestion as new roads fill back up (Litman, 2001).

Without additional data on mode choice, it is difficult to comment on whether or not the City is meeting its goal in terms of reducing reliance on single occupancy vehicles. However, some clear trends do appear in the data. The mean performance of surface streets in all of the urban villages is quite good, with only the University District crossing the 0.5 threshold into minimal congestion in the PM. The mean does not really represent the dynamic of traffic present, however, the range of the data has been included in the figure. Peak congestion values for most villages have decreased, with Aurora-Licton Springs the sole urban village to see max congestion increase. In contrast, the peak V/C ratio in Ballard has fallen from around 1 to around 0.5, a very large improvement.

The high peak values show clearly that the most congested streets in the high-traffic urban villages (Aurora-Licton Springs, Downtown, and the Univer-

A2 RECOMMENDATION

Consistent with the transportation policies and goals in the comprehensive plan, the city's preferred alternatives to increasing vehicle capacity should continue the emphasis on commute trip reduction and alternative travel modes, including public transit, car sharing, biking and walking.

sity District) are extremely congested, with values approaching (or even exceeding) one, while the least congested have essentially no traffic during the same period.

All other urban villages show a much narrower range, and peak values below 0.7 in 2012, with most at or below 0.5 volume-to-capacity (V/C). This suggests that much of the traffic congestion may be associated with major traffic corridors driven by commuters who are not residents in the urban village. This peak congestion may impact residents in a minor way, as they are able to shift to less congested streets once they are close to home.

Notes/Limitations

The V/C ratio was computed based on traffic counts at all screen lines within the urban village, which varied across the 10 urban village study areas. There was also many more screenlines in the 2000 data than in the 2012.

The data was not adjusted for seasonality nor changes in roads and/or lane configurations.

References

- Hennessy, D. A., & Wiesenthal, D. L. (1999). Traffic congestion, driver stress, and driver aggression. *Aggressive Behavior*, 25(6), 409–423.
- Künzli, N., Kaiser, R., Medina, S., Studnicka, M., Chanel, O., Filliger, P., Sommer, H. (2000). Public-health impact of outdoor and traffic-related air pollution: a European assessment. *Lancet*, 356(9232), 795–801
- Levy, J. I., Buonocore, J. J., & von Stackelberg, K. (2010). Evaluation of the public health impacts of traffic congestion: a health risk assessment. *Environmental Health : A Global Access Science Source*, 9(1), 65
- Litman, Todd. "Generated Traffic; Implications for Transport Planning." *ITE Journal* 71.4 (2001): 38-47. Web.





**A3
RESIDENTIAL
ENERGY USE**



Desired Outcomes

- Resource efficiency
- Consumption behavior
- Ecological footprint
- GHG emissions

Responsible Agency: Seattle City Light

Format

kWh Sales for Residential Standard and Residential Assisted per Capita for the city of Seattle

Data source/data collection methods: City of Seattle annual residential kWh energy sales was provided by Seattle City Light, and supplemented by residential kWh energy sales data by zip code+4 digit code for the years 1994 to 2013.

Data Years: 1993-2012

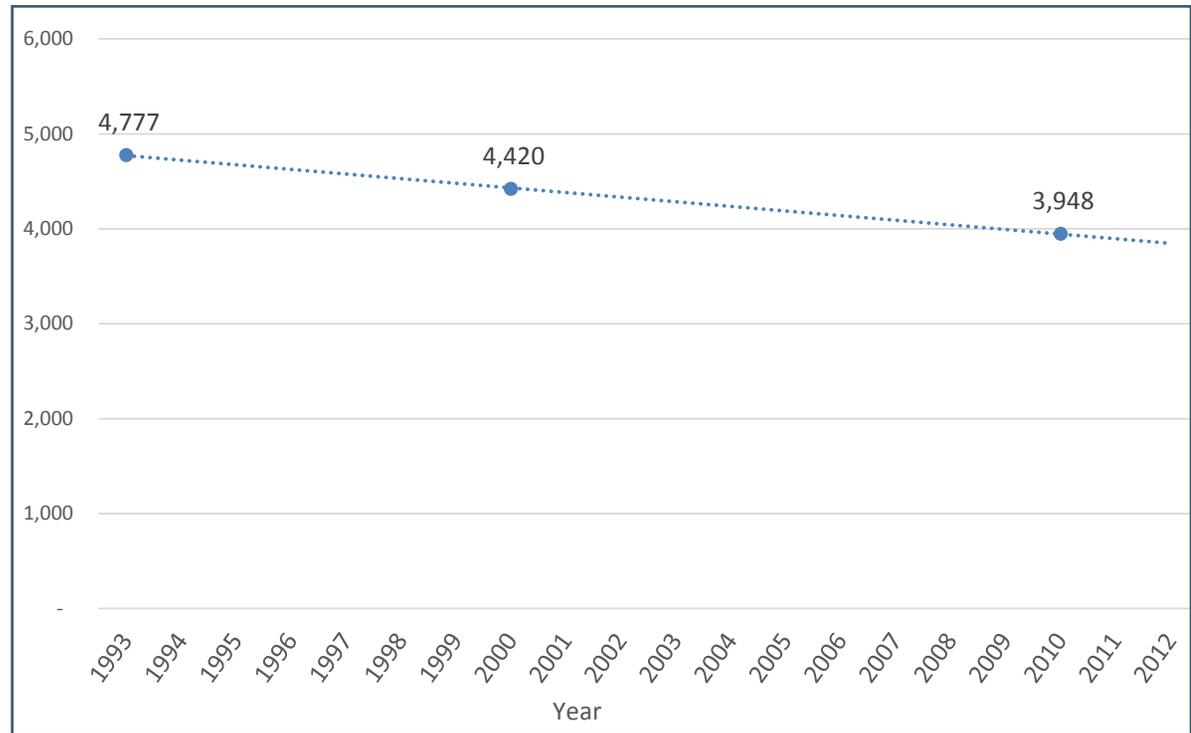


Figure 4.16. City of Seattle per capita residential energy consumption (kWh)
Source: Seattle City Light

Associated Policies

Seattle Comprehensive Plan:

UG3: Maximize the efficient use of resources by utility customers.

U7: Promote environmental stewardship in meeting City utility service needs and the efficient use of water and energy resources by utility customers through education, technical assistance and financial incentives.

U10: In meeting the demand for electric power, strive for no net increase in City contributions to greenhouse gas emissions by relying first on energy efficiency, second on renewable resources.

Metrics Goals: 2014 Comprehensive Plan Environmental Element: 8% reduction in residential energy use between 2008 and 2020 and a 5% reduction in commercial energy use between 2008 and 2020.

Background

Seattle City Light:

“Continue Conservation and Environmental Stewardship Leadership reflecting the values of its community and customer-owners. Seattle City Light has a rich tradition of environmental stewardship, including fish-friendly operation of its hydroelectric projects and achieving climate neutrality since 2006. Since the late 1970’s, energy conservation has been the utility’s first-priority resource for meeting customers’ electricity needs. Current power demand forecasts show City Light can meet expected demand through at least 2020 without purchasing new year-round generating resources through a combination of conservation, efficiency improvements, flexibility of current power contracts, and market purchases. Conservation levels assumed in the Strategic Plan are designed to ensure compliance with I-937, meet customer expectations, and support City Light’s legacy of environmental stewardship. Because of prior investments and strong environmental leadership, meeting objectives in this area does not require a substantial change from baseline investments.”

Analysis

Seattle City Light has a remarkable record of reducing energy usage within the user base through aggressive long-term strategies to balance capacity with load, reduce demand, and conserve energy. In the City of Seattle, residential energy sales decreased from 4,777 kWh in 1994 to 3,948 in 2010 per capita. This represents a 17% reduction that is confirmed by Seattle City Light’s status as the nation’s first carbon neutral utility since 2005.

SCL’s commitments to conservation combined with Seattle’s environmentally aware customers have contributed to dramatic decreases in energy use. Despite

population growth and large amount of commercial development that has taken place in last 20 years, Seattle’s built environment has helped to keep energy use down too.

Currently, 32% of all commercial properties in Downtown Seattle are LEED certified and 44% are Energy Star Rated. Seattle is moving towards dramatically reducing energy use and reducing carbon footprint.



References

<http://www.seattle.gov/light/conserve/>

A3 RECOMMENDATION

Seattle City Light should continue its long-term strategies to balance capacity with load, reduce demand, and conserve energy. To accommodate future growth while maintaining the city’s aggressive energy conservation and carbon reduction goals, more in-depth analysis of energy usage by subarea would help in developing new strategies.

Notes/Limitations

We were unable to obtain customer data aggregated to reflect our urban village study areas. Data was provided for zip code+4 digit code areas, but due to the large geographic zip code area and variation in the 4 digit code areas, data could not be geographically identified to areas that were remotely close to our urban villages.



**A4
RESIDENTIAL
WATER CONSUMPTION**



Desired Outcomes

- Resource efficiency
- Improve consumption behavior
- Conserve water reserves
- Protect In stream flows, fish habitat
- Reduce ecological footprint

Responsible Agency: Seattle Public Utilities

Format

Water Consumption data in CCF (100 Cubic Feet) aggregated by urban village boundary.

Data source/data collection methods: Urban village (10 total) GIS polygon layer, DAP (Discrete Address Layer) GIS point layer, Account Level Water Consumption data from CIDS extract 2004 – 2014. Water consumption data was extracted from the customer database using GIS to intersect meter locations with urban village polygon layer to identify only the records within each urban village.

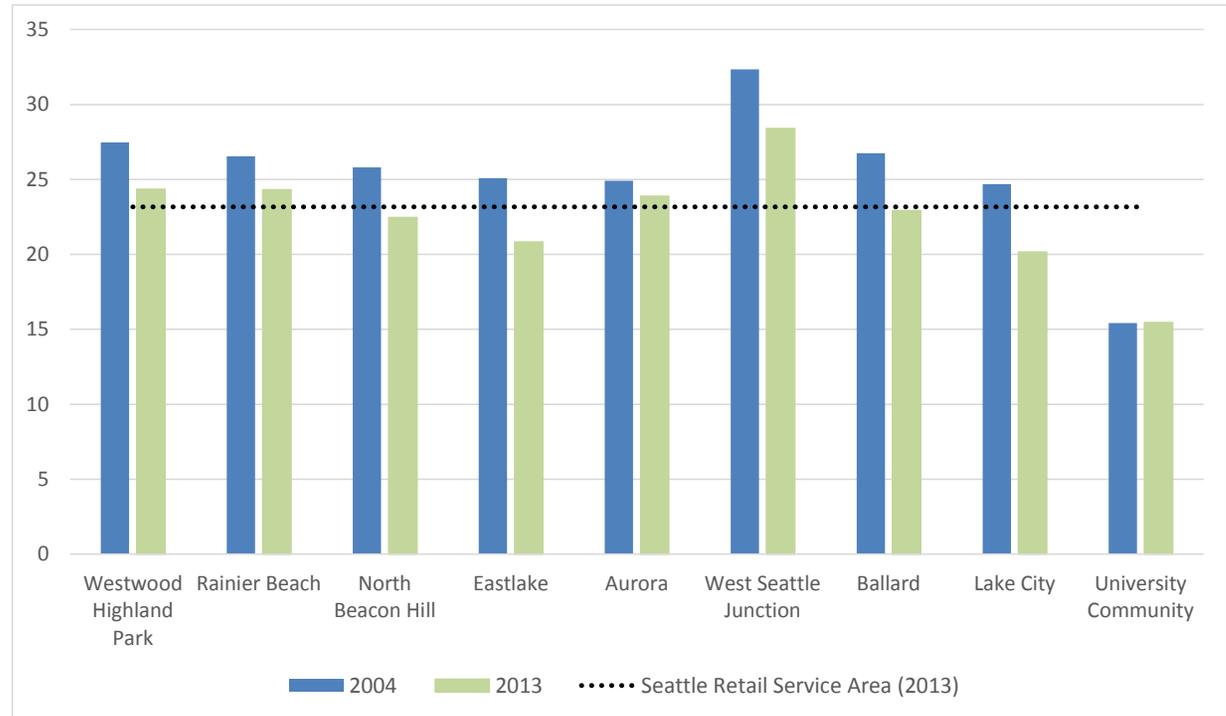


Figure 4.17. Urban village per capita residential water consumption measured in 100 cubic feet (CCF) aggregated from residential customer data for the years 2004 and 2013. City of Seattle per capita data (black dotted line) includes residential population within the Seattle city limits plus Shoreline West of I-5) Downtown data not included—data for the Downtown urban village did not accurately reflect residential water consumption due to the dominance of mixed-use buildings that were subject to coding errors.

Source: Seattle Public Utilities

Queries on the appropriate rate codes were performed, and the consumption history for each code was produced, allowing the calculation of Total Residential Actual CCF for each urban village, by year.

Data Years: 2004-2013

Associated Policies

Seattle Comprehensive Plan:
UG3: Maximize the efficient use of resources by utility customers.

U7: Promote environmental stewardship in meeting City utility service needs and the efficient use of water and energy resources by utility customers through education, technical assistance and financial incentives.

Background

Seattle Public Utilities (SPU) Stewardship:

SPU provides water to over 450,000 households in the Seattle-King County area. Most of these households (64%) are within the Seattle city limits, receiving their water directly from SPU (Seattle customers). The remaining 36% of households receive their water through seventeen water utility districts that purchase wholesale water from the City of Seattle (Wholesale customers). SPU and its Wholesale customers comprise the Saving Water Partnership (SWP), sponsors of the 1% Water Conservation Program (1% Program). The 1% Program's goal is to keep water demand steady between 2000 and 2010, despite population and economic growth in the region.

The Saving Water Partnership (SWP), with the support of residential, commercial and institutional customers, completed the eighth year of the 1% Program (2000- 2010). Regional per capita use is continuing to decline when normalized for variation in weather conditions. In 2008 the 1% Program achieved 0.75 million gallons per day (mgd) of savings, for a cumulative total of 8.4 mgd. (2008 report 1% Water Conservation Benchmarking Survey).

References

Tourbier, J.T. & Wetmacott, R.N. (1981) Water resources protection technology: A handbook of measures to protect water resources in land development. Washington DC: Urban Land Institute.

Analysis

Overall, Seattle residents have decreased their water consumption over the past 10 years. Analysis at the urban village level reveals variations in per capita water consumption between different areas and over time. The general long-term trend is toward decreased per capita water consumption in most of the selected urban villages. Of note, water consumption per capita is significantly less in the University Community urban center, and varies between urban villages. Downtown as noted, was not included because varied building typologies and mix of uses make a statistical comparison for per capita water consumption unreliable. This suggests a higher proportion of single-family units in areas like West Seattle Junction and Westwood-Highland Park may contribute to the difference in residential per capita water consumption.

Downtown, University Community, North Beacon Hill, Rainier Beach, Westwood-Highland Park and West Seattle Junction have seen small decreases from 2004 to 2013. Lake City, Eastlake and Ballard have decreased by around 5 CCFs per capita over the ten-year time period.

See Appendix B for individual urban village water consumption graphs (2004-2013).

A4 RECOMMENDATION

To accommodate future growth while maintaining the city's water conservation goals, Seattle Public Utilities should explore more in-depth analysis of water usage by subarea to help in developing new strategies. The city's ratepayer-based internal data collection could provide better analysis of water usage.

Notes/Limitations

Downtown is all multi-family mixed-use buildings. Coding of mixed-use buildings is challenging because it can be arbitrary whether a building is coded as residential or commercial. Some of the buildings have apartment coding, but not all. Given the small residential water consumption data and the large Downtown population, SPU hypothesizes that a significant proportion of mixed-use residential buildings are coded as commercial, and therefore the Downtown water consumption data is not accurate. Due to these limitations, Downtown data was omitted from this indicator. It is possible these limitations may have influenced data in other urban villages, most of which have some amount of mixed-use development.



**A5
RESIDENTIAL
LANDFILL WASTE**

Desired Outcomes

- Waste reduction
- Recycled and reused materials
- Efficient consumption behavior
- Surface emissions
- Toxic pollutants
- Public health

Responsible Agency: Seattle Public Utilities

Format

Tonnage tracked by category for collection day boundaries that are distributed across the city between Waste Management and CleanScapes.

Data source/data collection methods: Citywide residential garbage tonnage for all years 1994 to 2014 compiled from the Seattle Public Utilities Solid Waste Report Archives Garbage Reports. These reports provide detailed data regarding tonnage for Residential self-haul, CleanScapes and Waste Management City Stations, single family, multi-family and total, as well as commercial garbage tonnage for CleanScapes, Rabanco, Waste Management, and totals. Archived Solid Waste Reports also include Recycling Rate Reports, Organics Report, Construction Demolition and Land clearing (CDL) Reports.

Data Years: 1990-2013

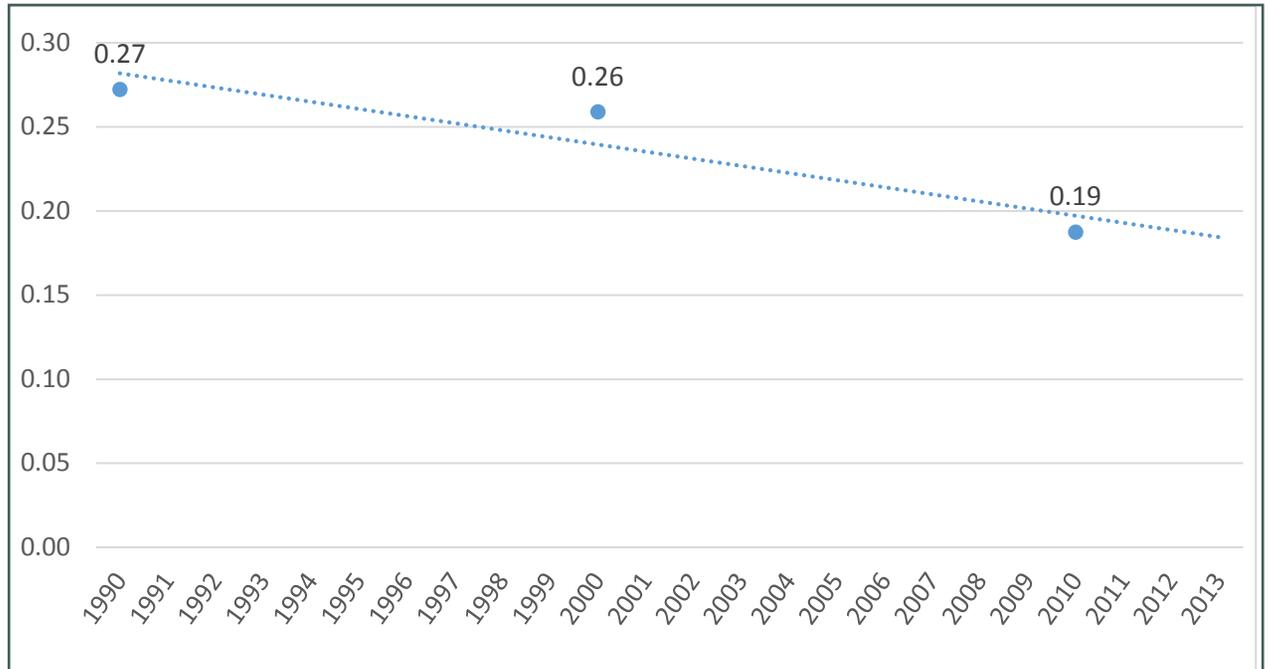


Figure 4.18. City of Seattle per capita residential solid waste tons
Source: Seattle Public Utilities annual garbage report archives.

Associated Policies

Seattle Comprehensive Plan:

U11: Encourage waste reduction and cost effective reuse and recycling by residents...through education, incentives, and increased availability of recycling options.

U12: Pursue the long-term goal of diverting 100% of the city’s solid waste from disposal by maximizing recycling, reducing consumption, preventing

food waste, and promoting products that are made to be reused, repaired, or recycled back into nature or the marketplace.

Metrics Goals: 2014 Comprehensive Plan Goal Increase diversion rate (recycle) to 69% by 2020.

Background

Seattle's 1998 Comprehensive Solid Waste Management Plan was one of the earliest solid waste plans in the United States to adopt a curbside recycling program and the conservation principle of Zero Waste. The City continues to be a leader in innovative implementation of waste prevention, recycling, and composting programs.

Seattle City Council Resolution 27871 implemented the Solid Waste Management Plan that established a goal of recycling 60% of the waste produced within the City's 1998 and 2004 Solid Waste Plans. Adopted Council Resolutions 29805 and 30750, respectively, reaffirmed the 60% goal. The substantial recycling progress to date has been slower than expected causing the timeframe for reaching the 60% recycling goal to be incrementally lengthened from 1998 to 2010.

"The 1998 Seattle Solid Waste Comprehensive Plan: On the Path to Sustainability" provided a policy framework of sustainability and stewardship, adopted "zero waste" as a guiding principle, and identified programmatic goals. The 1998 Plan also described various programs designed to achieve the goals in a manner that balanced the values of public and environmental health, cost-effectiveness and system efficiency, and customer and community needs.

Analysis

By any measure, Seattle has been highly successful in their citywide goals for recycling and solid waste. The previous Comprehensive Plan set a goal of 69% recycling by 2020. The fact that recycling and composting has grown nearly 10% in the last 5 years and 13% over the last decade suggest that the city will not only reach their goal, they will likely surpass it. Seattle's population has grown by more than 120,000 people

since the original Comprehensive Plan was written in the early 1990s. Despite the dramatic increase in population, Seattle landfill waste tons per capita has decreased from .27 tons per capita in 1990 to .19 tons per capita in 2010—a remarkable achievement.

Due to collection processes and contract collection day boundaries susceptible to frequent changes, there is no way to calculate landfill waste tonnage at the neighborhood scale. This raises the question—how do we know that increased diversion of landfill waste is being experienced everywhere in the city? Citywide data communicates a uniform trend across the entire city. While landfill waste diversion may be improving everywhere in the city, it is also possible some areas are improving, while others are stagnant or even getting worse.



A5 RECOMMENDATION

A restructuring of waste collection service area data to allow analysis of waste volumes by urban village – where the greatest urban growth is occurring – could provide information useful to developing new strategies for reducing landfill waste and increasing recycling rates.

Notes/Limitations

Sub-area residential tonnage data is nearly impossible to track consistently over time due to the fact that collection routes and contractors change. Sub area data is collected by collection day boundaries established in solid waste collection contracts between the City of Seattle and the collection and transfer companies. Collection day boundaries are subject to change with new or refined contracts. Currently, the Waste Management contract covers Northwest and South Seattle, and the CleanScapes contract covers Northeast and Central Seattle.

References

<http://www.seattle.gov/util/Documents/Reports/SolidWasteReports/index.htm>



**A6
HISTORIC
LANDMARKS**



Desired Outcomes

- History
- Resource conservation
- Sense of “place” character, & identity
- Community cohesion
- Social interaction
- Urban fabric and cultural vitality
- Quality of life
- Enjoyment

Format

Data Source/data collection methods: Historic Landmarks Preservation Board provided the landmark board designation date which indicates when the landmarks Preservation Board approved the landmark nomination. Landmarks were separated by urban village, and then in order of the landmark board designation date.

Data Years: 1994-2014

	Landmarks Added 1994 to 2014	Total Landmarks 2014
City of Seattle total	180	346*
Urban centers total		
Downtown	41	93
University Community	36	84
	5	9
Hub urban villages total		
Lake City	4	7
Ballard	2	2
West Seattle Junction	1	4
	1	1
Residential urban villages total		
Rainier Beach	2	7
North Beacon Hill	1	1
Eastlake	0	1
Aurora-Licton Springs	1	5
Westwood Highland Park	0	0
	0	0
*A number of the landmarks have multiple components. The estimated Seattle total of 346 does not include a count of each individual landmark component. The estimated total count including each individual landmark component for the City of Seattle is 400.		

Table 4.5. Designated historic landmark sites counted from the Landmarks Preservation Board Official City of Seattle Landmarks (April 2014). This list does not include Historic or Landmark Districts.

Source: Landmarks Preservation Board

Associated Policies

Seattle Comprehensive Plan:
EDG10: Recognize Seattle’s cultural resources including institutions, art organizations, traditions, historic resources and creative people as important contributors to the city’s economic vitality.

CRG6: A city that celebrates and strives to protect its cultural legacy and heritage, to preserve and protect historic neighborhoods and to preserve, restore and re-use its built re- sources of cultural, heritage, architectural, or social significance in order to maintain its unique sense of place and adapt to change gracefully.

Metrics Goals: None that we know of. Potential exists today to identify eligible landmarks.



Background

Historic landmarks include individual sites, buildings, vessels, vehicles and street clocks that have historic and architectural significance. The Seattle Landmarks Preservation Board defines an eligible historic landmark as a building, object, or structure more than 25 years old that fits one or more of these categories:

- It is the location of or is associated in a significant way with an historic event with a significant effect upon the community, city, state, or nation
- It is associated in a significant way with the life of a person important in the history of the city, state, or nation
- It is associated in a significant way with a significant aspect of the cultural, political, or economic heritage of the community, city, state or nation
- It embodies the distinctive visible characteristics of an architectural style, period, or a method of construction
- It is an outstanding work of a designer or builder
- Because of its prominence of spatial location, contrasts of siting, age, or scale, it is an easily identifiable visual feature of its neighborhood or the city and contributes to the distinctive quality or identity of such neighborhood or city.

Analysis

In the city of Seattle there are approximately 346 landmarks (excluding Historic or Landmark Districts), 180 (45%) of which have been designated in the past 20 years. Of the 10 urban village study areas, Downtown has by far the most designated historic landmarks, with 84 total. Aurora-Licton Springs and Westwood-Highland Park stand out with no designated historic landmark sites. This is not to say there are no eligible landmark sites, including homes and other buildings in these neighborhoods.

Designating a site for historic preservation is dependent on the historical and architectural significance of the site, and aims to protect cultural and historical legacy. Restoring historically significant buildings not only preserves a unique sense of place of a given area, it also builds upon existing resources, which is arguably a more efficient and environmentally conscious process. To accurately assess progress of designating historically significant sites in Seattle's unique neighborhoods, it's critical that each area has an inventory of eligible sites. In 2007, a historic resources inventory survey was conducted for the Downtown area. Of the 94 inventoried eligible landmark sites, 16 have been designated as historic landmarks since completion of the inventory in 2007.

This level of analysis is helpful and informative when evaluating how well Seattle is doing in regards to historic preservation. Due to inadequate resources, there has not been a complete and consistent inventory conducted for all areas of the city.

A6 RECOMMENDATION

Seattle's inventory of eligible sites for landmark designation is spotty and incomplete. The city should continue to inventory potentially eligible sites citywide, giving priority to urban villages. The comprehensive plan for Seattle 2035 should include stronger policies and more specific goals for strengthening the city's commitment to cultural resources and historic preservation.

Notes/Limitations

Westwood-Highland Park and Aurora-Licton Springs do not have any designated historic landmarks. Some areas of the city, including the University District, Fremont, and Downtown Seattle have undergone a systematic Historic Resources Survey process, where preservation consultants have inventoried older buildings (50 years or more in age), and identified eligible landmark sites. Due to limited funds and resources, there is a lack of consistency in the areas where these inventories have been conducted. This may inform recommendations for the future in regards to neighborhood surveys, database changes and tracking.

References

<http://www.seattle.gov/neighborhoods/preservation/landmarks.htm>

[B]
HEALTHY COMMUNITIES



B1
CRIME-RELATED
911 CALLS

Desired Outcomes

- Public safety
- Community cohesion
- Identify risk factors

Format

Computer-Aided Dispatch data (CAD) for 911 calls.

Data source/data collection methods: CAD data includes dispatched calls for service, officer initiated on-views, follow-up reports, etc that can be separated by Type Code, MIR (Final Case Type assigned by officer) and the DISP (description of the action taken) The Seattle Police 911 Center has used two different CAD systems during the last 16 years. The first CAD historical database ranges from March 30, 1998 - June 2, 2009, and the second from June 2, 2009 to present. This data was obtained from either, or both, of these two systems. Census tracts corresponding to SSNAP urban villages for 1998 and 2013 were used to sort data. Data was sorted by type code, which is assigned by the call-taker or dispatcher when the call is received. Type codes were grouped into three categories: Drug Crime Calls, Violent Crime Calls, and Property Crime Calls for each urban village study area.

Data Years: 1998-2013

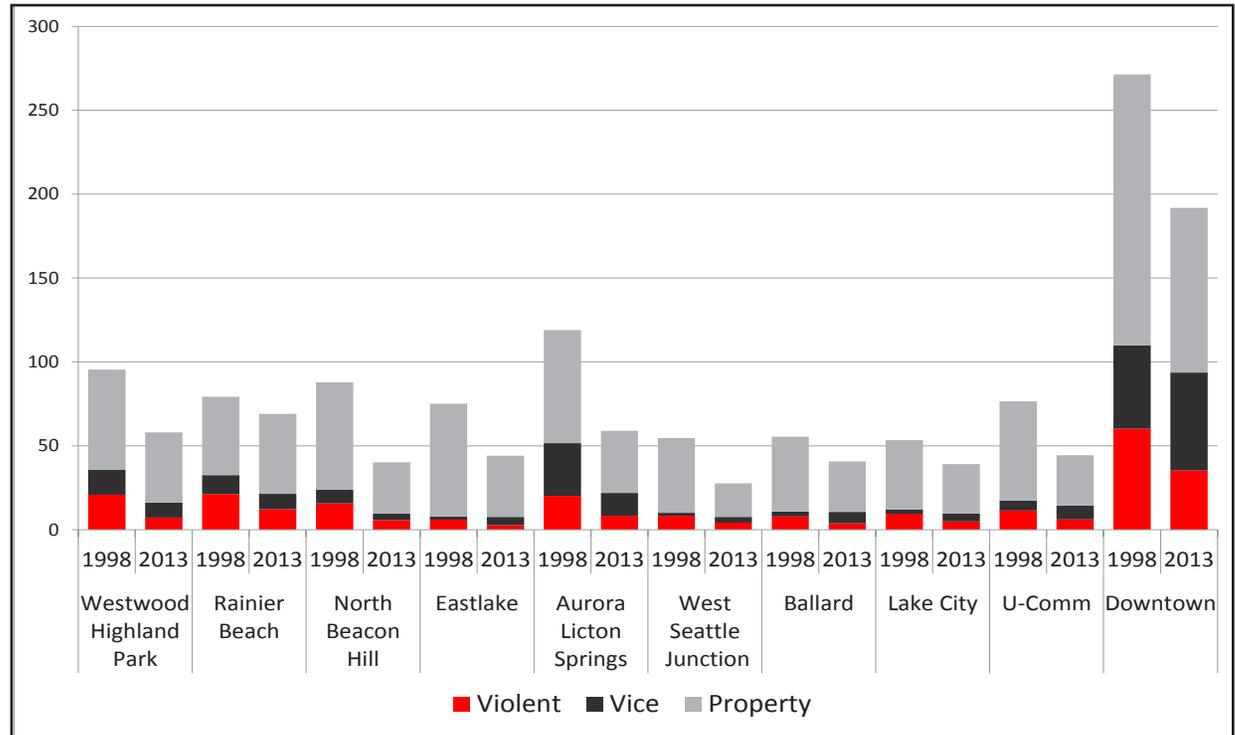


Figure 4.19. 911 crime related calls per 1,000 residents. The geographic area of this data sorts 911 calls by census tract(s) corresponding to SSNAP urban villages. Population counts for this indicator were also aggregated by census tract so the geographic areas used to compile the 911 calls data and population data were consistent. Source: Seattle Police Department

Associated Policies

Seattle Comprehensive Plan:
UVG11: Increase public safety by making urban villages places that people will be drawn to at all times of the day.
HD27: Encourage a policing strategy that works in partnership with the community to reduce crime through prevention, education and enforcement, and encourages communities to build block-by-block networks to prevent crime, develop social networks, and solve common problems.

HD30 Make public safety a consideration in design and management of public spaces to prevent crime and fear in public facilities and gathering places, streets and parking and shopping areas.

HD36.1: Periodically report on crime statistics and the public perception of safety to guide future decisions about programs and resource allocation that can help control crime and make Seattle residents feel safer in the city.

SPD Strategic Plan: SPD's mission is to "Prevent Crime, Enforce the Law, and Support Quality Public Safety by Delivering Respectful, Professional, and Dependable Police Services," and its vision is to "enhance public safety throughout the city of Seattle." SPD has not established quantitative measures or goals for reducing incidence of crime in the city, except for certain "hot spots" as directed by command staff and/or the executive. However, the 2004 SPD Strategic Plan does set of goal to enhance "crime fighting results" by "improving monitoring and tracking of operational results in preventing and fighting crime."

Metrics Goals:

SPD Strategic Plan Goal 3, Accountability Measures

- Develop and provide analytical reports to SPD commanders on bi-weekly basis
- Achieve case clearance rates that compare favorably with those of other jurisdiction
- Reduce calls for chronic behaviors/incidents by at least 10 % after SPD emphasis operations
- Reduce calls for service to "hot spots" by at least 25 % after SPD emphasis operations

Analysis

Past studies have used 911 calls as measurements of crime and fear of crime (Sherman, Gartin & Buerger, 1989). Fear of crime has been linked to neighborhoods where there is little cohesion and trust (Clampet-Lundquist, 2010), and to areas where buildings are deteriorating and the environment is littered with garbage and wrecked objects (Rountree, Land & Miethe, 1994). Crime rates have been shown to increase in areas with high levels of income disparity (Hipp, 2007), and in neighborhoods undergoing gentrification (Van Wilsem, Witterbrood & De Graff, 2006). Crime is also expected to increase to some degree simply with the increase of population (Bettencourt et al, 2010). While raw numbers of total 911 calls increased

in every area, the total number of calls per 1,000 residents decreased in all areas, with the largest decrease seen in Downtown. The large increase in population density in the Downtown area may account for the decrease observed in the data.

There are interesting differences in the data, however. The distribution of calls between violent, property, and vice crimes is similar, in most areas, but not in all. Aurora-Licton Springs shows a much larger proportion of calls related to vice crimes. Eastlake, Ballard, Lake City, and West Seattle Junction all had very low incidence of vice-related calls in 1998, but saw increases in this category in 2013 (Downtown also saw an increase in vice-related calls). In contrast, only Rainer Beach saw an increase in the population-weighted number of 911 calls related to property crime, and no area experienced an increase in violent crime-related calls per thousand residents.

It may be worthwhile to explore factors influencing these outcomes and patterns. Past studies have linked collective efficacy (Morenoff, Sampson & Raudenbush, 2001), residential stability (Crutchfield, Geerken & Gove, 1982), and inclusive social networks (Beyerlein, Carolina & Hipp, 2005) to low levels of crime. "Collective efficacy" describes a neighborhood-level process that is important to understanding variation in crime rates across neighborhoods. Collective efficacy involves both the willingness of individuals in a neighborhood to work together toward a common goal, such as neighbor- to-neighbor crime prevention, community policing, and mutual trust.

References

Bettencourt, L. M. A., Lobo, J., Strumsky, D., & West, G. B. (2010). Urban scaling and its deviations: revealing the structure of wealth, innovation and crime across cities. *PLoS One*, 5(11), e13541

B1 RECOMMENDATION

Further analysis is necessary to understand why the 911 call rates for certain types of criminal activity have increased in some urban villages and decreased in others. Using a best practice "micro" or community policing model, the city could consider an urban village or neighborhood level data analysis of crime related activity, and then establish performance goals for crime prevention in high activity areas.

Notes/Limitations

There are challenges to making a comparison of the prevalence of crime by category due to changes in the way crimes are identified and tracked by the police. Such challenges include changes in category name type, addition of sub-categories, and refined tracking methods. Police resources directed at crime prevention are not likely to be represented in 911 calls.

Clampet-Lundquist, S. (2010). "Everyone Had Your Back": Social Ties, Perceived Safety, and Public Housing Relocation. *City & Community*, 9(1), 87-108

Crutchfield, R. D., Geerken, M. R., & Gove, W. R. (1982). Crime Rate And Social Integration The Impact Of Metropolitan Mobility. *Criminology*, 20(3-4), 467-478.

Hipp, J. R. (2007). Income Inequality, Race and Place: Does the Distribution of Race and Class within Neighborhoods Affect Crime Rates? *Criminology*, 45(3)

Van Wilsem, J., Witterbrood, K., & De Graff, N. D. (2006). Socioeconomic Dynamics of Neighborhoods and the Risk of Crime Victimization: A Multilevel Study of Improving, Declining, and Stable Areas in the Netherlands. *Social Problems*, 53(2)



**B2
ACCESS TO ARTS
AND CULTURE**

Desired Outcomes

- Sense of place & identity
- Community cohesion
- Social interaction
- Cultural vitality
- Quality of life
- Enjoyment

Responsible Agency: City Office of Arts and Culture, King County 4 Culture

Format

Existing Public Arts Sites and Cultural Spaces Inventory data was sorted by urban village. The cultural spaces inventory counts every theater, gallery, arts office, rehearsal room, library, music club, museum, and cinema in Seattle. The results of this ongoing inventory are available through the city’s open data portal. The Office of Arts and Culture has proactively sought out and surveyed organizations to obtain a comprehensive and complete inventory of Seattle cultural spaces.

Data Source/data collection methods: Office for Arts and Culture.

Data Years: 2013

	Public Art Sites Within Boundary	Cultural Space Inventory	Total Art and Cultural Spaces	Ratio of a Public Art Site or Cultural Space to Number of Acres
City of Seattle	112	427	536	1 for every 99 acres
Urban centers				
Downtown	81	104	185	1 for every 5 acres
University Community	3	31	34	1 for every 12 acres
Total	84	135	219	
Hub urban villages				
West Seattle	0	17	17	1 for every 13 acres
Lake City	5	3	8	1 for every 17 acres
Ballard	11	17	28	1 for every 15 acres
Total	16	37	53	
Residential urban villages				
Eastlake	2	1	3	1 for every 66 acres
North Beacon Hill	2	5	7	1 for every 18 acres
Rainier Beach	2	4	6	1 for every 41 acres
Westwood Highland Park	0	2	2	1 for every 142 acres
Aurora-Licton Springs	6	1	7	1 for every 47 acres
Total	12	13	25	

Table 4.6. Public art sites and cultural spaces identified within each urban village. Total art and cultural spaces indicates the sum of both to represent access to arts and culture for this study

Source: Office for Arts and Culture public art database and cultural spaces inventory

Associated Policies

Seattle Comprehensive Plan:

CR1: Encourage and support communities in celebrating, preserving, and transmitting their traditions through cultural and heritage activities, the arts, education, publishing and reading, and public events.

CR2: Involve neighborhoods in public projects, including publicly-sponsored art and cultural events, so that the projects reflect the values of the neighborhood, have relevance and are thought provoking, as well as beautiful, fun and entertaining.

CRG4: A city that uses public projects and activities to help define Seattle’s identity, especially civic spaces that provide residents and visitors with strong symbols of the city or neighborhood identity.

LU271 Encourage the creation of cultural districts to support arts and cultural uses and the economic benefits they provide. Use the creation of cultural districts as a tool to carry out neighborhood plan recommendations and other city plans that promote arts and cultural uses.

LU272 Allow regulations and incentives to be adopted specifically for designated cultural districts. Allow adopted guidelines or regulations to modify, exempt, or supersede the standards of the underlying zone to encourage arts and cultural uses.

Neighborhood Plan Element:

Many neighborhood plan goals specifically identify the importance to a rich, diverse cultural life, access to information, and public arts and cultural services.

Analysis

Assessing a community's access to arts and culture is complex and multi-faceted. Exposure to arts and culture can include not just physical art sites, but also a range of different experiences, festivals and events. Also, the perception of what is defined as art or a cultural experience is subjective. In acknowledgement of these challenges, the access to arts and culture indicators is quantified by counting the number of public art sites and cultural spaces as characterized by Seattle's Office for Arts and Culture. The density of the total count of public art sites and cultural spaces is represented in the rightmost column as arts and cultural spaces per acre to demonstrate access to arts and cultural spaces relative to the size of each urban village.

Downtown is the region's cultural mecca, and has by far the most public art sites and cultural spaces, with 185 total, 34% of the city wide total. The other urban center, University Community, has less than a fifth of the number of art and cultural spaces that exist in Downtown. However, it still has more than any hub urban village or residential urban village. Lake City stands out as the hub urban village with the fewest art and cultural spaces to acres ratio.

Assessing number of acres per 1 public art site or cultural space reveals that besides North Beacon Hill, the residential urban villages are lacking in access to public art sites and cultural spaces. The University Community urban center exceeds the hub urban villages only slightly.

Judging by the number of arts and cultural spaces, Seattle seems on target to meet its goals of maintaining Downtown as the center of cultural activities, and of promoting Ballard and West Seattle as hubs of arts and culture. However, the Comprehensive Plan Cultural Resources goal CR2 states the intent to integrate neighborhoods into public projects, art sites, and cultural events that reflect the values of the neighborhood in which they are located. This suggests the importance of improving access to arts and culture in all neighborhoods, not just the Urban Centers and Hub urban villages.

Engagement with art and culture has been linked to improved mental health and increased civic participation (Walker, 2002). Of course, presence of art and cultural spaces does not guarantee community engagement with them. Furthermore, some studies have linked the prevalence of art and cultural sites to gentrification (Mathew, 2010) and increased property prices (Stern & Seifert 2010). Hence, the benefits of art and cultural spaces may be the most profound when residents of that neighborhood are the ones cultivating the spaces (Catungal, Leslie & Hii, 2009).

See Appendix B Table B3 for an overview of four key funding programs administered by the Office for Arts and Culture that strive to enhance arts and cultural experiences for different organizations, programs and neighborhoods.

B2 RECOMMENDATION

Every neighborhood can benefit from access to art and cultural events. Similar to the parks and open space gap-analysis, the city could establish a set of arts metrics, then produce an arts and culture gap analysis by population for each urban village. The analysis could assure more equitable allocation of arts funding.

Notes/Limitation

Public art sites data is inclusive of only permanent art sites, and does not include temporary art sites put in place and then removed. The cultural spaces inventory was started in 2013 by the Office of Arts and Culture, and is a work in progress, user-contributed inventory. Venues qualify if the primary use is related to the arts. The Office for Arts and Culture reviews all submissions to ensure legitimacy and accuracy. Different communities have different needs and may have different understandings of what constitutes an art or cultural space. Those caveats should be kept in mind, particularly when comparing residential urban villages.

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**B3
FARMERS MARKETS**

Desired Outcomes

- Food Security
- Economic sustainability
- Resiliency
- Healthy diets
- Place-making
- Community cohesion
- Education
- Culture

Responsible Agency: Washington State Farmers Market Association, Neighborhood Farmers Market Alliance, Seattle Farmers Market Association, Pike Place Market Preservation and Development Authority

Format

Location of farmers market within the SSNAP urban villages, organization, first active year, approximation of number of vendors in first active year, current number of vendors, and number on current wait list.

Data Source/data collection methods:

- Neighborhood Farmers Market Alliance: University District, Lake City, West Seattle, Seattle
- Farmers Market Association: Ballard
- Pike Place Market Association

Farmers Market	Organization	First Active Year	Number of Farmers and Vendors (approximation)	Farmers and Vendors (2013)	Current Vendors Wait List (approximation)
University District	Neighborhood Farmers Market Alliance	1993	22	104	35
Lake City	Neighborhood Farmers Market Alliance	2002	30	32	8
West Seattle	Neighborhood Farmers Market Alliance	1999	34	56	20
Ballard	Seattle Farmers Market Association	2000	20-24	65	N/A
Downtown Pike Place Market	Pike Place Market PDA	1907	--	140-180	N/A
Downtown Pike Place Market Express Pioneer Square	Pike Place Market PDA	2013	8	8	N/A
Downtown City Hall Plaza Pike Market Place Express	Pike Place Market PDA	2008	13-15	13-15	N/A

Table 4.7. Farmers markets operating within the 10 urban village study areas. Data includes Pike Place Market and Pike Place Market Express locations within the Downtown Urban Center. Specific data regarding first year, number of vendors, and wait list provided by management organization for each market.

Source: Neighborhood Farmers Market Alliance, Seattle Farmers Market Association, and the Pike Place Market PDA.

Background

The Washington State Farmers Market Association (WSFMA) is a statewide organization that strives to connect all residents in Washington State to a thriving and sustainable farmers market. WSFMA aims to provide advocacy, support, and programs, and other resources for new and existing farmers markets, playing an exceptionally influential role in addressing issues of food access. The City of Seattle has a total of 16 WSFMA member farmers markets.

Associated Policies

Seattle Comprehensive Plan

HD13.5: Seek to expand access to healthy food by encouraging better distribution and marketing of healthy options in a greater diversity of places and by addressing nutrition standards in City purchasing programs.

HD13.6: Encourage local food production, processing, and distribution through the support of home and community gardens, farmers markets, community kitchens, and other collaborative initiatives to provide healthy foods, promote food security, and build community.

ED11.5: Recognize the value of the local food system in sustaining the local economy and seek ways to expand this benefit by supporting our capacity to grow, process, distribute, and access local foods.

Farmers Markets are a recurring goal in the Neighborhood Plans.

Analysis

The Seattle Neighborhood Farmers Market Alliance, the Seattle Farmers Market Association, and the Pike Place Market Preservation and Development Authority are the heart of Seattle farmers markets. These three organizations are comprised of 16 total farmers markets throughout the City of Seattle; 11 neighborhood markets, Pike Place Market, and 4 Pike Place Express locations. All Farmers Market vendors must be farmers from within Washington State or must source all products and ingredients within Washington State. The Pike Place Market farmers market has more stringent protocol for who can sell in the market.

The Pike Place Market is the premier Seattle farmers market, with over 40 local farmers, and up to 120 local craft vendors during peak summer months. A close second is the University District Farmers Market, the oldest active farmers market of those featured in this assessment. Since its founding year in 1993, the University District Farmers Market has thrived, increasing by 82 vendors in 20 years and building up a wait list demand of around 35 vendors. Due to a change in location in 2013, the University District has been able to

expand its capacity and continue to grow. The Ballard farmers market is the largest of the hub urban village farmers markets with 56 vendors. Of the 10 urban village study areas, Rainier Beach, North Beacon Hill, Westwood-Highland Park, and Aurora-Licton Springs residents do not have access to a farmers market within their immediate community.

Farmers markets, like P-Patch gardens, are associated with an increase in consumption of healthy foods (Jilcott et al., 2011). Farmers markets help to integrate local food production into consumption patterns and choices. Alternatively, studies show that lack of awareness of farmers markets, inability to use EBT food stamps, and limited days and hours of operation, create barriers for accessibility for low-income residents (Grace et al. 2007). To address these barriers, all Seattle farmers markets accept the use of EBT food stamps. In addition, WSFMA is working in collaboration with the City of Seattle's Office of Sustainability and Environment, the Washington State Farmers Market Association and Seattle's farmers markets to implement programs such as the Fresh Bucks program to increase access to farmers markets for low-income shoppers at farmers markets.

Farmers markets not only connect city residents with local farmers, local food products, and crafts, farmers markets also provide a vibrant venue for social activity, promote a sense of community, and provide support to the local economy. (Oberholtzer and Grow, 2003).



B3 RECOMMENDATION

The city could strengthen its partnership with local farmers market organizations to expand farmers markets and ensure every urban village and neighboring communities have reasonable access to locally grown fresh produce.

Notes/Limitations

Not all urban villages include a farmers market. Of the farmers markets that operate within the urban village study areas, some are much larger and in much higher demand than others, and serve communities beyond the local village.

References

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**B4
COMMUNITY GARDENS**

Desired Outcomes

- Local food sourcing
- Food security
- Self-sufficiency
- Healthy eating
- Sense of “place” and identity
- Community cohesion

Responsible Agency: Department of Neighborhoods

Format

Community and P-Patch garden location, year established, size, number of plots, and average wait.

Data Source/data collection methods: Information sourced from the Department of Neighborhoods P-Patch garden information.

Data Years: 1994-2014

Background

The Seattle P-Patch Community Garden Program operates under the Department of Neighborhoods and is accessible to any and all members of the community. Community gardens are supported, developed and managed by volunteers, local non-profit organizations, Seattle Housing Authority, and other agencies. Community gardens vary in their size and use. Some include both individual and collective plots, while some have one or the other. These gardens de-

Urban Village	Community Garden(s)	Year Founded	Land Size in Acres	Number of Plots	Average Wait
Downtown	Belltown	1994	.43	39	3 years
University District	University District	1976	.52	46	1 year
	University Heights	1991 Expanded 2002 Rebuilt 2013-14	.17	31	<1 year
	Ravenna (1981)	1981	.10	18	1.5 years
Ballard	Greg’s Garden	1999	.15	21	2 years
Eastlake	Eastlake P-Patch	1998 Expanded 2010	.25	47	4 years
North Beacon Hill	Beacon Bluff	2002	.12	14	½ year
Rainier Beach	Thistle P-Patch	1974	2.15	77	1 year
Westwood-Highland Park	Longfellow Creek	2003	.16	22	1 year

Table 4.8. Community P-Patch gardens in the Department of Neighborhoods program within the 10 urban village study areas.

Source: Department of Neighborhoods

pend on active community members to oversee and coordinate tasks and activities at each garden site. The city of Seattle community gardens program is comprised of 90 community gardens that make up a total of 34 acres of land.

The gardens inventoried for this indicator are a part of the city’s Department of Neighborhoods Community P-Patch Garden program. Community gardens such as the Danny Woo garden in the International District, El cantro de la raza community garden in North Beacon Hill, and the St. Luke’s Community Garden in Ballard are not operated by the city. Nevertheless, these gardens are of great value to serving community needs and meeting demand for garden space.

Associated Policies

HD13.5: Seek to expand access to healthy food by encouraging better distribution and marketing of healthy options in a greater diversity of places and by addressing nutrition standards in City purchasing programs.

HD13.6: Encourage local food production, processing, and distribution through the support of home and community gardens, farmers markets, community kitchens, and other collaborative initiatives to provide healthy foods, promote food security, and build community.

ED11.5: Recognize the value of the local food system in sustaining the local economy and seek ways to expand this benefit by supporting our capacity to grow, process, distribute, and access local foods.

Urban Village	Households	Number of Community Gardens	Is there 1 garden per 2,500 Households?
Westwood Highland Park	1,944	1	YES
Rainier Beach	1,331	1	YES
North Beacon Hill	1,279	1	YES
Eastlake	3,118	1	NO
Aurora	3,018	0	NO
West Seattle Junction	2,324	0	NO
Ballard	6,177	1	NO
Lake City	2,178	0	NO
University Community	7,367	3	YES
Downtown	16,643	1	NO

Table 4.9. Number of households (2010) for each urban village, number of community gardens, and if the urban village meets the metric for 1 community garden per 2,500 households.

Analysis

Seven of the ten urban village study areas have at least one community garden within the urban village boundary. Gardens vary in square footage, plot number, and wait time. Thistle P-Patch in Rainier Beach is the largest with approximately 2.15 acres of garden space and 77 plots, exceeding the number of plots at the University District garden by almost double.

Seattle community gardens collectively are in high demand. The nine gardens featured in this report have an average wait time of just under 2 years, ranging from the Beacon Bluff average wait time of six months to the Eastlake P-Patch average wait time of four years. The nine community gardens listed have a current total of approximately 4 acres and 315 plots.

Community gardens have two dominating positive outcomes: 1) community building, and 2) access to and knowledge of healthy food consumption and production. Elements of community building associated with community gardens include household income savings, access to recreation and social interactions, cultural preservation and expression, and a decrease in neighborhood crime (Clover 2003 & Lawson 2007). Community gardens provide ideal venues for connecting with neighbors, cultivating mutual trust and collective decision making, and promoting civic engagement (Tieg et al. 2009). Providing local food sources through community gardening programs has consistently shown to be associated with an increase in healthy food consumption and eating habits (McCormack, Laska, Larson & Story, 2010).

The Community garden program in Seattle has established community building relationships founded on both a need for affordable healthy food sources as well as a passion for spreading knowledge and rekindling our connection to where our food comes from (Seattle Tilth). In 2008 under the Local Food Action Initiative, the Department of Neighborhoods requested creation of an inventory of publicly owned lands suitable for P-Patch community gardens. Megan Horst, a University of Washington student with the College of Architecture and Urban Planning, in collaboration with the Department of Neighborhoods, completed this inventory. The results of this study identified a total of 45 unused and vacant city-owned parcels, 122 school properties and 139 public parks that have space suitable for urban agriculture. The results of this study provide strong evidence to the vast potential for Seattle's community gardens program to continue to integrate Seattle residents into local food systems.

B4 RECOMMENDATION

The long waiting period for P-Patch plots indicates significant demand. To plan for growth and better meet current demand, the city should consider a sizable expansion of the P-Patch program. New sites for this program could be identified through an inventory and feasibility study of surplus city-owned land and under-utilized parcels.

Notes/Limitations

Not all of the urban villages have a DoN P-Patch garden within the urban village boundaries.

References

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- Horst, M. (2008). *Growing Green: An Inventory of Public Lands Suitable for Community Gardening in Seattle, Washington*. University of Washington, College of Architecture and Urban Planning.



B5 LOW BIRTH WEIGHT

Desired Outcomes

- Community health
- Quality of life
- Healthy mothers
- Healthy babies

Responsible Agency: Public Health - Seattle and King County

Format

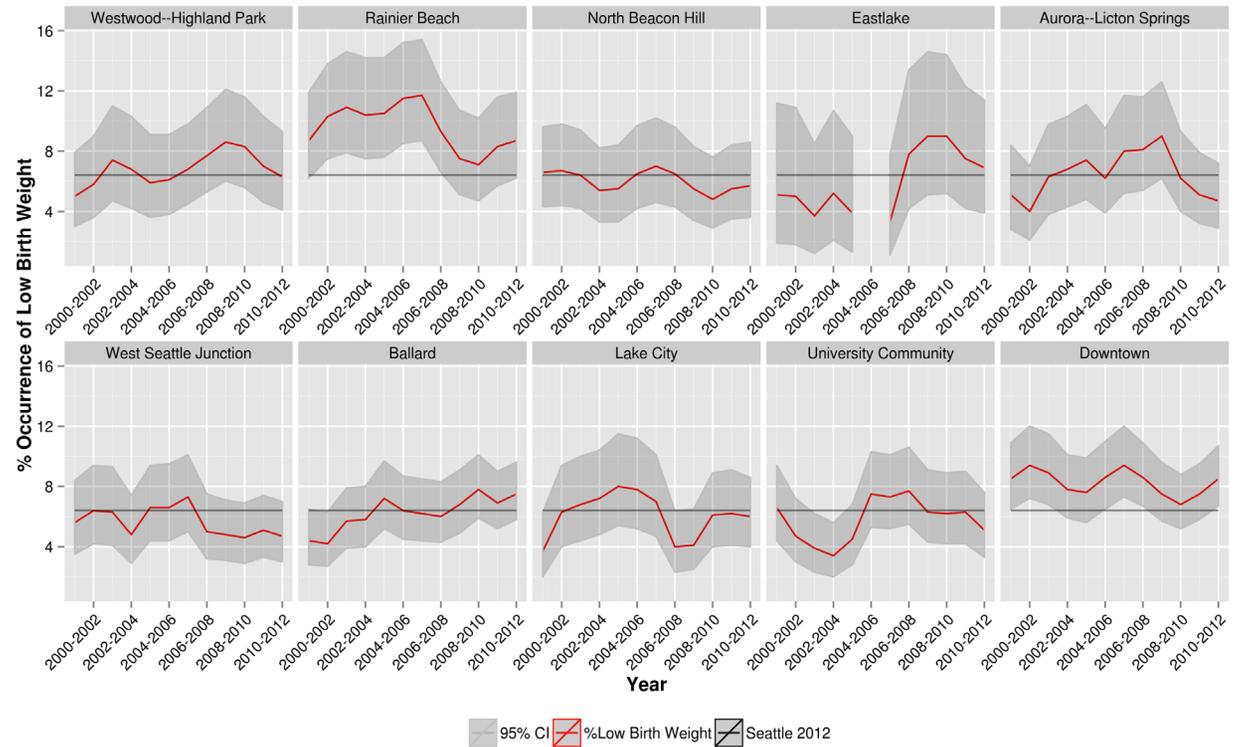
Percentage of births with low birth weight, SSNAP urban villages, 1999-2012, rolling three-year averages.

Data source/data collection methods:

Prepared by Public Health - Seattle & King County, Assessment, Policy Development & Evaluation Unit, 5/2014.

Rolling three-year averages, sourced from birth certificates, Washington State Department of Health, and Center for Health Statistics. Compiled by census tracts. *Estimates with less than five occurrences per three-year period are suppressed to protect confidentiality.

Data Years: 1999-2012



Associated Policies

Seattle Comprehensive Plan

HD22: Work toward the reduction of health risks and behaviors leading to chronic and infectious diseases and infant mortality, with particular emphasis on populations disproportionately affected by these conditions.

Figure 4.20. Percent of births with low birth weight, with 95% confidence interval around the mean. Data is represented using 3 year rolling averages for the 10 urban village study areas, from 2001 to 2012. Estimates with fewer than 5 occurrences per 3-year period are suppressed to protect confidentiality (this likely produced the gap in data for 2004-2006 3-year rolling average in Eastlake). Low birth weight data is tracked by residence of the mother and was aggregated by census tract(s) that correspond with the urban village study areas.

Source: Assessment, Policy Development & Evaluation Unit, Public Health – Seattle & King County

Analysis

Low birth weight is defined as weighing less than 2,500 grams – 5.5 pounds – at birth. In general, risk factors in the mother that may contribute to low birth weight include young age, multiple pregnancies, previous LBW infants, poor nutrition, heart disease or hypertension, drug addiction, alcohol abuse, and insufficient prenatal care. Environmental risk factors include smoking, lead exposure, and other types of air pollutants.

Downtown and Rainier Beach have maintained the highest rates of low birth weight infants (over 8%), with no net change over the ten year period. All other urban villages in this study have seen an increase in the frequency of low birth weight infants. However, during the ten year period, occurrence of low birth weight has fluctuated substantially in all of the urban villages. While Downtown remained relatively flat, Rainier Beach peaked in 2007 at almost 12% of babies born having low birth weight, before decreasing again. Only Ballard, and to a lesser extent Westwood-Highland Park, have seen steady, essentially uninterrupted increases in frequency of low birth weight. The causal factors driving this upward trend in these areas are unclear, but should be of concern to public health.

The two urban villages with the greatest net increases over the studied period were Lake City, which increased from 3.66% to 5.96% (though it should be noted Lake City peaked in 2005 with 8%), and Ballard, which increased steadily from 4.35% to 7.5%. There appears to be a split between those urban villages that are remained relatively stable, and those with much larger swings in occurrence of low birth weight. It is also evident that the situation is likely quite complex, due to the

fact that there is no consistent pattern between urban villages; some increase sharply in periods where others decrease.

High rates of low birth weight (LBW) are cause for concern, as LBW children are more likely to face infant mortality (Eichenwald & Stark, 2008) and have lower life expectancies (Risnes et al., 2011). LBW has also been linked to asthma, ADHD, and lower educational attainment (Elgen, Holsten & Odbergm, 2013). Potential causes of giving birth to LBW infants include living in old housing (English et al., 2003), living near highways (Zeka, Melly and Schwartz, 2008), living in neighborhoods with high crime rates (Sellstrom, Bremberg, 2006) and a lack of open space (Zeka, Melly & Schwartz, 2008), living in segregated neighborhoods (Leventhal & Brooks-Gun, 2000), exposure to high traffic densities (Zeka et al., 2008), and exposure to high levels of air pollutants (Bobak, 2000).

Downtown and Rainier Beach have relatively high levels of both crime and LBW infants, so there may be an opportunity to approach these problems holistically.

References

- Eichenwald, E. C., & Stark, A. R. (2009). Management and Outcomes of Very Low Birth Weight. *Obstetric Anesthesia Digest*, 29(2), 60-61.
- Risnes, K. R., Vatten, L. J., Baker, J. L., Jameson, K., Sovio, U., Kajantie, E., Bracken, M. B. (2011). Birthweight and mortality in adulthood: a systematic review and meta-analysis. *International Journal of Epidemiology*, 40(3), 647–61
- Elgen, I. B., Holsten, F., & Odberg, M. D. (2013). Psychiatric disorders in low birthweight young adults. Prevalence and association with assessments at 11 years. *European Psychiatry: The Journal of the Association of European Psychiatrists*, 28(7), 393–6.

B5 RECOMMENDATION

Public Health - Seattle and King County should consider a study of possible localized environmental factors and root causes of increased low birth weight, and develop targeted strategies to reverse high prevalence in certain neighborhoods.

Notes/Limitations

Estimates with fewer than 5 occurrences per 3-year period are suppressed to protect confidentiality. The average count per year varies across years and urban villages.

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Sellström, E., & Bremberg, S. (2006). The significance of neighbourhood context to child and adolescent health and well-being: a systematic review of multilevel studies. *Scandinavian Journal of Public Health*, 34(5), 544–54

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B6
LIFE EXPECTANCY

Desired Outcomes

- Community health
- Longevity
- Quality of life

Responsible Agency: Public Health - Seattle and King County

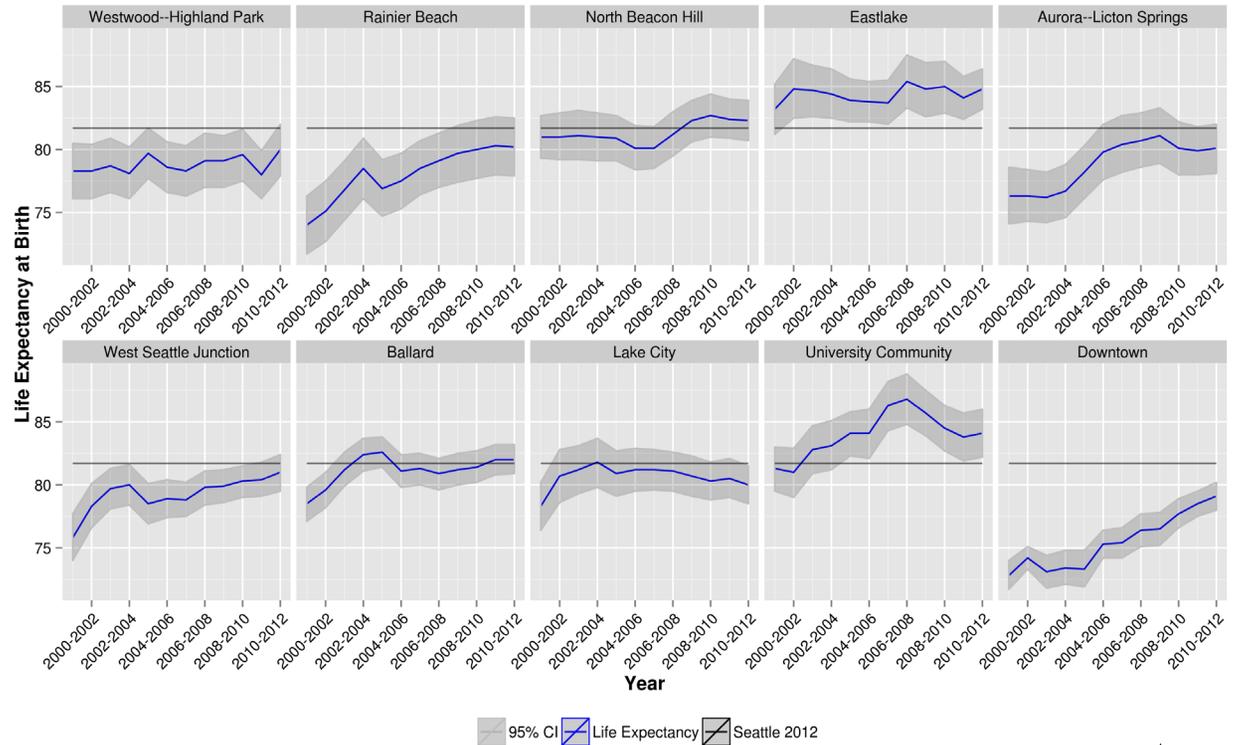
Format

Life expectancy at birth, SSNAP urban villages, 1999-2012, rolling three-year averages.

Data source/data collection methods:

Prepared by: Public Health - Seattle & King County, Assessment, Policy Development & Evaluation Unit, 5/2014. Rolling 3 year averages sourced from Death Certificates, Washington State Department of Health, and Center for Health Statistics. Compiled by census tracts.

Data Years: 1999-2012



Background

Life expectancy at birth is the number of years a newborn can expect to live if the current age-specific death rates stay the same for his/her life (Public Health Seattle & King County).

“Life expectancy in the city of Seattle has positively soared over the last couple of decades ... by 1997, Emerald City life expectancy shot ahead of the state average; and by the middle of the last decade it had even moved ahead of British Columbia. Today, if Seattle were an independent nation, its life expectancy would rank second in the world, just a month behind Japan’s.” –Sightline

Figure 4.21. Life expectancy at birth with 95% confidence interval around the mean. Data represented in 3 year rolling averages. Source: Assessment, Policy Development & Evaluation Unit, Public Health – Seattle & King County.

Sightline’s positive commentary, while perhaps applicable on a regional level, does not express significant variations found at the subarea community level.

Associated Policies

Seattle Comprehensive Plan

HD21: Encourage Seattle residents to adopt healthy and active lifestyles to improve their general health and wellbeing to increase their number of healthy years lived. Provide opportunities for people to participate in fitness and recreational activities and to enjoy available open space

See Duwamish Cumulative Health Impacts Assessment (2013).

Analysis

Life expectancy at birth has been on a more or less steady rise in all the SSNAP urban villages since 1999-2001. Less positive, is that life expectancy still varies by as much as five years between urban villages across the city, revealing persistent disparities in community health. However, it is important to note that over the 10 years, the disparity amongst urban villages has decreased; the life expectancy gap was over ten years between Downtown and Eastlake in 2000. Life expectancy in Downtown, Lake City, Westwood, Aurora, and Rainier Beach remains roughly five years less than the life expectancy in Eastlake, the highest. This highlights the importance of place in determining lifelong health outcomes. Life expectancy has increased across all urban villages, but a five-year disparity means there is still work to be done to improve health access across all communities to eliminate disparities. Efforts such as the Duwamish Valley Cumulative Health Impacts Analysis (2013) dive into causes and risks associated with life expectancy and its variation amongst sub areas.

Lower life expectancies have been shown to correlate with unemployment (Potter, 1991) and lower

levels of education (Guralnik et al., 1993). It also correlates with neighborhoods that have high crime rates (Ross & Mirowsky, 2008) and low levels of trust (Kawachi et al., 1996). Limited access to natural areas and outdoor recreation facilities have also been linked to lower life expectancies (Poudyal et al., 2009). It is probable that a portion of the increase in life expectancy for some of the SSNAP urban villages is due to demographic changes; in particular an influx of wealthier, healthier residents into an urban village would increase the overall life expectancy. However, that does mean that the outlook for other residents has changed positively; many of the factors that drive their lower life expectancy may remain in place.

B6 RECOMMENDATION

Life expectancy at birth has seen significant increases for most of the urban villages. When considered along with the increased low birth weight in some urban villages, it suggests complex social, economic, and environmental factors. The mixed results of these two indicators require additional public health research within the Seattle area, particularly within the urban villages.

References

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[C] OPEN SPACE AND DEVELOPMENT



C1 AREA OF PARKS AND OPEN SPACE

Desired Outcomes

- Quality of life
- Physical activity
- Emotional, mental, physical and social health
- Reduced Stress
- Social interaction
- Equity

Responsible Agency: Seattle Department of Parks and Recreation

Format

GIS Data

Data Source/data collection methods: Shapefiles of Seattle Parks and Recreation data for Parks and urban village boundaries were accessed from WAGDA and processed in QGIS to determine area of parks that fell within the boundary of the urban villages, as well as those that intersected with a 1/4 mile buffer zone for each urban village type. The area of parks that fall within the 1/4 mile buffer around the urban village boundary is included in the total.

Data Years: 2014

Urban Village	Internal Parks				Total Parks		
	Acres	# Parks	% Total	Acres per 1,000 Households	Acres	# Parks	Acres per 1,000 Households
Westwood Highland Park	0.00	0	0.00%	0.00	18.68	3	9.61
Rainier Beach	13.75	4	15.21%	10.33	90.39	15	67.91
North Beacon Hill	3.15	2	10.70%	2.46	29.45	10	23.03
Eastlake	5.42	7	20.50%	1.74	26.44	20	8.48
Aurora-Licton Springs	7.55	1	46.08%	2.50	16.38	4	5.43
West Seattle Junction	0.61	3	1.36%	0.26	45.00	8	19.36
Ballard	5.30	5	49.27%	0.86	10.76	8	1.74
Lake City	4.53	5	72.45%	2.08	6.25	7	2.87
University District	8.04	8	28.54%	1.09	28.18	15	3.83
Downtown	25.86	28	59.55%	1.55	43.42	35	2.61

Table 4.10. Summary of parks and open space by urban village. Data includes area intersecting the 1/4 mile buffer zone of the urban village boundary, total area in acres of usable open space within 1/4 mile buffer area, and acres per 1,000 households of usable parks and open space within the 1/4 mile buffer.

Source: Seattle Parks and Recreation GIS

Background

The City maintains a system of parks and open areas that includes approximately 6,361 acres, or about 10% of the city's total land area. This includes 4,562 developed acres. Over 6,000 acres of parks and open space are deemed adequate capacity to serve a population of at least 600,000. More than 35 sites are being acquired through the 2000 Pro Parks Levy, including 16 Neighborhood Park projects, 12 Opportunity Fund projects, and 13 Green Spaces. Many of these sites are small properties in densely developed urban villages, but their acquisition will make a significant difference to the lives of the people in these under-served urban neighborhoods. Usable Open Space can be summarized as dedicated open space that is relatively level, green, open and easily accessible. The Seattle Comprehensive Plan states the minimum size of usable open space is 10,000 square feet (.23 acres).

Associated Policies

Seattle Comprehensive Plan

UVG15: Provide parks and open space that are accessible to urban villages to enhance the livability of urban villages, to help shape the overall development pattern, and to enrich the character of each village.

Metrics Goals: The Seattle Comprehensive Plan establishes goals for open space that fall into three general categories: total supply of open space, specific types of facilities, and distribution of open space.

The following population-based goal was used to measure progress in the urban village study areas:

- One acre of Village Open Space per 1,000 households (HH)

Analysis

The data show that for most urban villages the majority of park and open space area is located outside of the urban villages proper. The only UVs for which this does not hold is Lake City and Downtown, where 72% and 60% of the area of total park and open space is located within the boundary, respectively. Lake City is also the urban village with the smallest total area of park space accessible to residents. The adjacent park total may not accurately represent space that is easily accessible to residents of the urban villages, as it includes a number of parks which have area that is largely outside of the buffer distance, but which have a small piece within range. Thus, the total presented here may be somewhat conservative.

In terms of meeting Comprehensive Plan goals, the city appears to be doing reasonably well, with all urban villages meeting the goal of 1 acre per 1,000 residents when the total area of parks within ¼ mile is considered. It is also unclear how much of this space qualifies as “usable”, due to the inclusion of areas like greenbelts and medians, which are difficult to use for many recreational or social purposes. Research suggests that the quality of the green space matters; the most highly valued spaces are those that offer a variety of natural settings and opportunities for socializing (Burgess, Harrison, & Limb, 1988), functions that overgrown greenbelts and medians may not afford.

Access to open space has been shown to significantly impact social and health outcomes. Lower amounts of green space in people’s living environment correlates with feelings of loneliness and perceived shortage of social support (Maas, van Dillen, Verheij, & Groenewegen, 2009); conversely the amount of green space is negatively correlated with health problems, particularly for people with lower levels of education and for the elderly (Vries, Verheij, Groenewegen, &

Spreeuwenberg, 2003). Parks and open spaces provide a host of ecological functions, in addition to their recreational value for residents. Butterfly and moth abundance and diversity correlate positively with park size (Giuliano, Accamando, & Mcadams, 2004), as is bumble bee abundance (McFrederick & LeBuhn, 2006), and biodiversity generally (Tilghman, 1987).

References

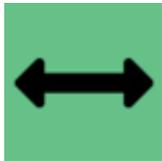
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C1 RECOMMENDATION

Four of the selected urban villages lack sufficient internal park space to meet the needs of their residents. As expected growth leads to greater density, more urban parks and open space will be needed. Land acquisition, privately developed open space, and the creation of pocket parks and other accessible green spaces within the deficient urban villages will encourage healthy growth and vitality of dense urban villages.

Notes/Limitations

Data are limited to the present due to consistent updates of GIS data by the city Parks and Recreation Department. Parks and Recreation standards for useable space serving needs of population differ from the Comprehensive Plan Inventory of Public Facilities serving urban centers and urban villages. It is also unclear how much of the green and open space is genuinely useful to the average resident. Data does not examine amenities associated with green spaces. Parks and open spaces in high socioeconomic neighborhoods may have more amenities, such as picnic tables and drinking fountains, as well as trees that provide shade, water features, walking and biking paths, and lighting (Crawford et al., 2007), and such discrepancies are not investigated by this metric.



C2
PROXIMITY TO PARKS
AND OPEN SPACE

Desired Outcomes

Desired Outcomes

- Quality of life
- Biophilia
- Physical activity
- Emotional, mental, physical and social health
- Stress
- Social interaction

Responsible Agency: Seattle Department of Parks and Recreation

Format

Percent of population served by parks and open space within ¼ mile of urban village boundary

Data Source/data collection methods: Seattle Parks and Recreation GIS data, 2010 Census block population data. Population for areas served and unserved was determined using QGIS to establish the area of each 2010 Census block that fell within a buffer ring of a quarter mile around all parks associated with the urban village. Population density inside the blocks was assumed to be uniform, and the population in/out of areas served was determined using the area of the block in each. For the sake of consistency, total population count for each urban village was similarly determined for the purposes of this metric, rather than using totals produced by the city.

Urban Village	Population			Area in Acres		
	Total	Served	% Served	Area	Served	% Served
Westwood Highland Park	4,243	1,667	39%	275.5	135.5	49%
Rainier Beach	3,564	3,557	100%	262.5	262.3	100%
North Beacon Hill	2,848	2,842	100%	130.6	130.1	100%
Eastlake	5,158	5,158	100%	268.1	268.1	100%
Aurora-Licton Springs	6,147	3,337	54%	327.0	195.8	60%
West Seattle Junction	3,915	3,697	94%	225.8	216.8	96%
Ballard	10,290	8,442	82%	424.6	351.2	83%
Lake City	3,635	3,635	100%	142.2	142.2	100%
University Community	22,681	21,397	94%	770.0	562.6	73%
Downtown	26,925	26,825	100%	1,016.7	963.7	95%

Table 4.11. Area and population of urban villages with parks and open space within 1/4 mile, based on current GIS data from the City and 2010 Census population data.

Associated Policies

Seattle Comprehensive Plan

UVG15: Provide parks and open space that are accessible to urban villages to enhance the livability of urban villages, to help shape the overall development pattern, and to enrich the character of each village.

Metrics Goals: The Seattle Comprehensive Plan establishes goals for open space and recreation facilities both inside and outside urban villages. These goals fall into three general categories: total supply of open space, specific types of facilities, and distribution of open space.

Comprehensive Plan proximity to parks and open space goals are based on density and vary for urban centers, hub urban villages and residential urban villages. The metric used in this assessment is based on the least conservative proximity goal for residential urban villages:

- All residents within a quarter mile to usable open space

Data Years: 2014

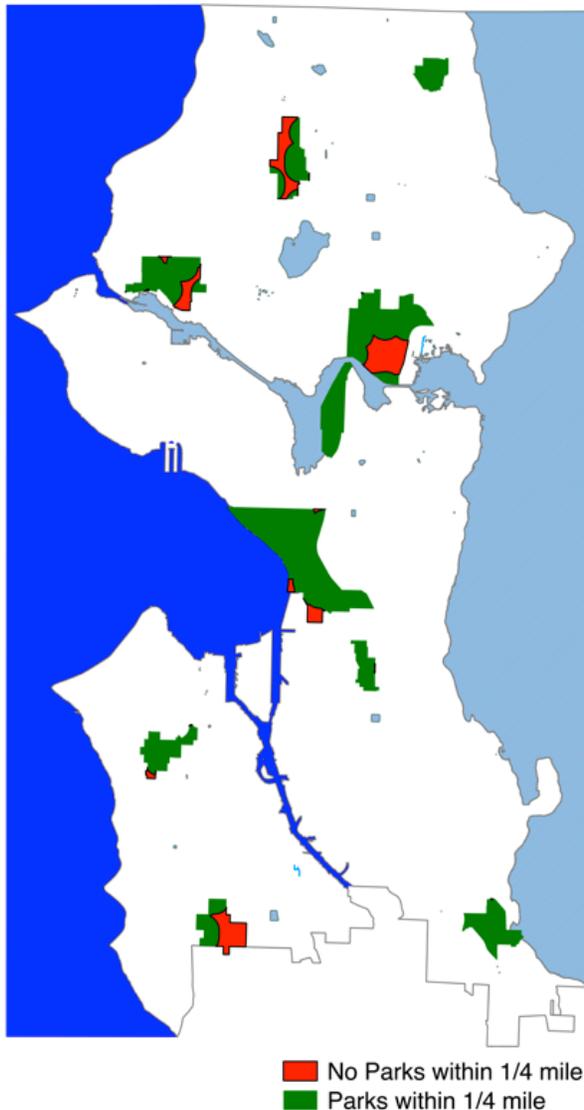


Figure 4.22. Map showing areas of selected urban villages within one quarter mile of parks and open spaces, based on current City of Seattle Department of Parks and Recreation GIS data.

Analysis

The data suggest that most neighborhoods have uniform and universal access to parks and open space for nearly all, or all residents. However, Aurora-Licton Springs, Ballard, and Westwood-Highland Park do not. Westwood-Highland Park in particular is extremely underserved, with only 49% of the population within easy walking distance of a park. This is due to the fact that only one large park serves the urban village. There is also some discrepancy between area served and population served, due to the non-uniform distribution of population within the urban villages.

Proximity to parks is known to be positively related to a host of social, health, and economic outcomes. Property values tend to be higher (Anderson & West, 2006), children tend to be less obese if they are close to parks (Wolch et al., 2011), seniors have higher rates of survivorship when closer to green space (Takano, Nakamura, & Watanabe, 2002), and people near green spaces are less likely to find traffic noise annoying, as well as be generally less stressed (Gidlöf-Gunnarsson & Öhrström, 2007). These are non-trivial factors in the physical and economic health of communities. That some urban villages in this assessment have larger percentages of their population at some remove from green space may place residents of these places at a disadvantage to other areas, and decrease the desirability of those areas.

References

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C2 RECOMMENDATION

The gaps in this analysis emphasize the need for more parks and open space for residents and workers in the urban villages. The non-uniform population density of the urban villages should be a factor in the creation of new parks and open spaces serving the urban villages.

Notes/Limitations

We have not been able to track down a 1994 benchmark for acreage within Seattle's urban villages. Urban village boundaries have also changed slightly in some cases between 1994 and 2014. There is not dependable GIS data from 1994 because the data set is continuously updated. Due to use of 2010 Census data and current park boundaries, the percentages listed here may be somewhat inaccurate. It should also be noted that the approach here does not reflect practical factors such as ease of access to all populations or the existence of physical barriers such as major roads, highways, and land forms.

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Hobbie, S. E., Baker, L. a., Buyarski, C., & Finlay, J. C. (2013). Decomposition of tree leaf litter on pavement: implications for urban water quality. *Urban Ecosystems*, 17(2), 369–38

Richardson, J. J., & Moskal, L. M. (2014). Uncertainty in urban forest canopy assessment: Lessons from Seattle, WA, USA. *Urban Forestry & Urban Greening*, 13(1)

Nowak, D. J., & Greenfield, E. J. (2010). Evaluating the national land cover database tree canopy and impervious cover estimates across the conterminous United States. *Environmental Management*, 46(3)



C3 TREE CANOPY COVERAGE

Desired Outcomes

- Healthy ecosystems
- Permeability
- Water and air quality
- Soil quality
- Natural habitats
- Noise pollution
- Heat island effect

Responsible Agencies: Department of Planning and Development, Seattle Department of Transportation, Seattle Department of Parks and Recreation, Seattle City Light

Format

GIS. Data Years: 1993, 2014 for urban villages. 2012 for City of Seattle.



Data Source/data collection methods: City of Seattle 1993 Orthophotography (WAGDA), Google Maps & iTree Canopy, City-wide canopy estimate from Richardson, J. J., & Moskal, L. M. (2014). Shapefiles for Municipal and urban village boundaries were accessed from WAGDA.

Canopy cover for the urban villages was measured using a random point survey; approximately 500 points were generated within the modern boundaries of the urban villages using the iTree Canopy tool (USDA Forest Service, 2014. i-tree canopy v6.1). Each point was then manually classified as being either “Tree” or “Non-Tree” based on current satellite imagery made available by Google. The point location datasets were exported into QGIS and one-foot resolution orthophotography from 1993 was used to generate a 1993 canopy estimate using the same technique. Bias was checked for by recording of uncertainty about point classification, following the method of Richardson & Moskal (2014).

The point-estimate method used here was found by Richardson and Moskal to closely correspond to more sophisticated LiDAR and high resolutions satellite image based methods. Richardson and Moskal estimate canopy cover for the city in 2009 to be 29.6%, while a 2012 iTree Canopy based estimate was 28.5%, placing their estimate within the margin of error. While National Landcover Change Database data is available for 2001 and 2011, this data has been found to significantly under-estimate the canopy cover in Washington State (Nowak, D. J., & Greenfield, E. J., 2010). Summary statistics and statistical tests were conducted using R 3.0.2

Data for canopy cover for the City of Seattle for 2002 and 2007 were produced for the Seattle, Washington Urban Tree Canopy Analysis Project Report: Looking Back and Moving Forward, by NCDL Imaging. The NCDL imaging study used 2-ft pixel QuickBird multi-spectral satellite imagery and a propriety GIS land classification methodology to assess canopy cover. A report summary is available at <http://www.seattle.gov/trees/canopycover.htm>.

Associated Policies

E23: Achieve no net loss of tree canopy coverage, and strive to increase to 40%, to reduce storm runoff, absorb air pollutants, reduce noise, stabilize soil, provide habitat, and mitigate the heat island effect of developed areas.

E8: In order to reduce the financial investment in built infrastructure while controlling the environmental impacts that infrastructure can cause, explore opportunities to restore or productively use the functions that a healthy ecosystem can provide in conjunction with, or as a substitute for, built infrastructure.

E24: Update tree canopy inventory in Urban Forest Management Plan at least every 10 years to measure progress toward the goal of increased canopy coverage.

Metrics Goals: The Seattle Comprehensive Plan Environment Element policy E23 states a goal of 40% cover for the City of Seattle.

Seattle's Tree Planting and Urban Forest Management Plan

The City of Seattle sets explicit goals for tree planting, and keeps detailed annual progress reports showing tree removals and plantings. Seattle's Urban Forest Management Plan lays out several 30-year goals, including increasing tree canopy coverage to 30%, and planting over 2,000,000 trees. This extensive and thoughtful management plan takes into consideration a variety of goals including community engagement and education, tree diversity, and improving maintenance practices.

By increasing the number of urban trees, the City hopes to reduce stormwater runoff and erosion, increase air filtration, provide wildlife corridors, and improve the livability of the city. There is a citywide 2:1 tree replacement policy – for every tree that is removed, at least 2 must be planted. Each of the different city programs and departments involved with tree planting has distinct tree-planting targets to help the city surpass that goal. Departments involved include Parks and Recreation, the Department of Transportation, Seattle City Light, and Seattle Public Utilities. Programs include the Seattle Center Tree Replacement Program and the Trees for Neighborhoods Program. Since 2007, a total of 22,698 trees have been planted, with a net gain of 16,224 trees. Roughly 3.5 trees have been planted for each tree that has been removed.

Trees provide a wide range of benefits, but there are also best practice urban forest management issues that should be considered. For instance, street trees that produce litter that ends up in storm drains can contribute to nutrient loading in waterways (Hobbie, et al. 2013). Trees which branch into power lines

can create serious hazards and power outages during storms. In neighborhoods where a thick tree cover creates darkness, people may feel less safe. Not all tree species provide the same benefits. Deciduous trees tend to survive more easily in urban environments, but may provide less natural habitat than native conifers do. Coniferous trees also tend to provide a higher degree of filtration effect than deciduous trees (Stolt, 1982). Higher maintenance levels for certain types of species may also be a factor to consider.



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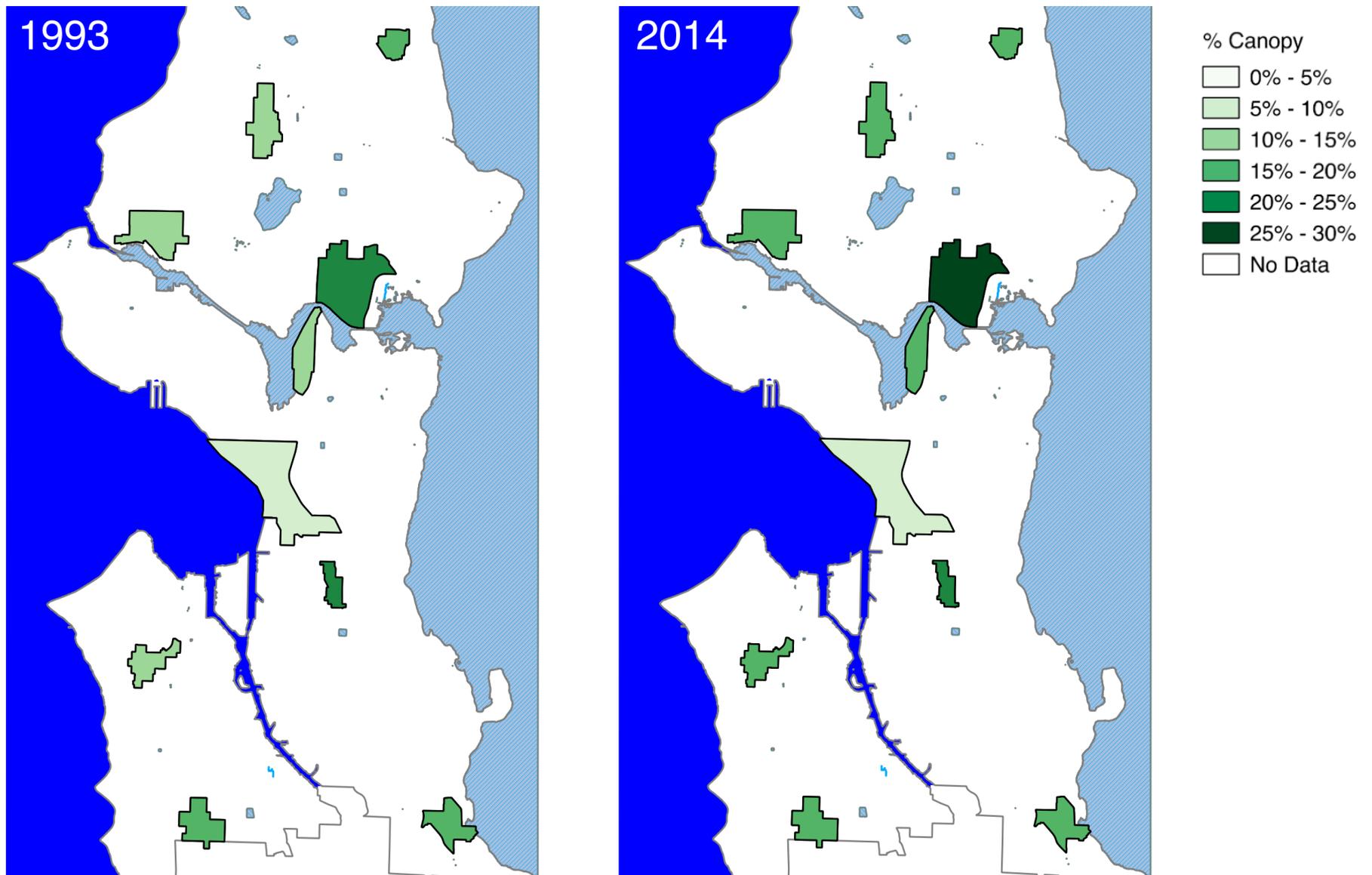


Figure 4.23. Tree canopy cover for the urban village study areas for the years 1993, and 2014. Canopy cover was determined using a point estimate method. Data Source: City of Seattle 1993 Orthophotography (WAGDA), Google Earth, City-wide canopy estimate from Richardson, J. J., & Moskal, L. M. (2014)

Table 4.12. Summary of results for canopy cover analysis for urban villages and City of Seattle

Urban Village	1993	2014	change
Westwood-Highland Park	16.0%	20.0%	4.0%*
Rainier Beach	20.0%	20.0%	0.0%
North Beacon Hill	20.5%	24.0%	4.0%**
Eastlake	15.0%	16.5%	1.5%
Aurora-Licton Springs	14.5%	15.5%	1.0%
West Seattle Junction	13.0%	17.0%	4.0%**
Ballard	11.0%	18.0%	7.0%***
Lake City	16.5%	15.5%	-1.0%
University Community	21.0%	25.5%	4.5%**
Downtown	7.0%	10.0%	3.0%**
City of Seattle (2012)	NA	28.5%	NA
* changes statistically significant at the 0.10 level			
** changes statistically significant at the 0.05 level			
*** changes statistically significant at the 0.01 level			

Analysis

Canopy cover increased within all but two of the urban villages over the 20 year period of this study. Six urban villages (Ballard, Downtown, North Beacon Hill, University District, West Seattle Junction, and Westwood-Highland Park) had increases that were statistically significant. All other changes in canopy cover fall within the margin of error of the method employed, and may or may not indicate actual changes.

All of the urban villages have canopy cover values below that of the city generally. This corresponds with the fact that they were also found to have higher average impervious surface than the city as a whole (see below), reflecting their status as centers of devel-

opment within the city. Increases in Canopy Cover in many urban villages appeared to be primarily due to planting and maturation of street trees. This should not be considered a rigorous assessment, however, as percentage of canopy contributed by private versus public trees was not determined; the analysts noted that trees were often absent in the historical imagery for locations marked "Tree" for 2014 imagery which occurred in planting strips

Rigorous assessment of the maximum canopy coverage possible would require a census of available public and private planting sites and open space within each village combined with an assessment of suit-

able trees for each location and a regularly updated estimate for canopy cover. While the City's street tree inventory goes a considerable distance towards understanding areas available for the city to plant in, privately owned land constitutes a large area of the city, and the canopy goals cannot be met through the action of the City alone. Policies that promote and incentivize the planting of trees, and importantly, the retention of large trees on private parcels are and will remain an important factor in meeting the canopy goals set in the Comprehensive Plan.

C3 RECOMMENDATION

As the city moves toward increasing urban tree canopy, stronger significant tree and grove preservation protections are needed on both public and privately owned lands, along with aggressive goals for increasing tree canopy concurrent with urban growth.

Notes/Limitations

Data for urban villages produced using iTree Canopy tool and QGIS, as a point estimate. The state of data for tree canopy cover for the City of Seattle is reviewed by Richardson and Moskal (2014), who note the state of the historical data for the region is very poor, and many numbers cited regarding historical canopy have no known source. Nowak and Greenfield (2010), meanwhile, found that the National Land Cover Database results for this region were very poor.



**C4
IMPERVIOUS SURFACES**

Desired Outcomes

Desired Outcomes

- Ecosystem services
- Permeability
- Water quality
- Green storm water infrastructure
- Heat island effect

Responsible Agency: Seattle DPD

Format

GIS data

Data Source/data collection methods: Urban Ecology Research Lab categorical raster (1995, 2002), National Land Cover Database categorical raster (2001, 2011). Both the NLCD and UERL data use 30 meter LANDSAT Thematic Mapper source data. The NLCD data products for impervious surfaces have been found to be extremely accurate for this region (Nowak, D. J., & Greenfield, E. J., 2010). Average impervious surface inside the boundaries of the urban villages and City of Seattle (at the subunit level) were determined using QGIS. Shapefiles of Municipal and urban village boundaries were accessed from WAGDA. Calculations to determine average impervious surface for the units and tests of statistical significance were conducted in Microsoft Excel (2011).

Data Years: 1995, 2002, 2001, 2011

Urban Ecology Research Lab (UERL)			
Urban Village	1995	2002	Change
Westwood Highland Park	75.0%	75.0%	0.0%
Rainier Beach	65.0%	66.5%	1.5%*
North Beacon Hill	75.5%	75.0%	-0.5%
Eastlake	57.5%	58.5%	1.0%
Aurora-Licton Springs	80.5%	81.0%	0.50%
West Seattle Junction	83.0%	83.0%	0.0%
Ballard	85.5%	85.0%	-0.50%
Lake City	84.0%	83.0%	-1.0%
University Community	73.0%	74.0%	1.0%*
Downtown	83.0%	85.0%	2.0%**
City of Seattle	62.5%	62.5%	0.0%
National Land Cover Database (NLCD)			
Urban Village	2001	2011	Change
Westwood Highland Park	61.5%	62.0%	0.5%
Rainier Beach	54.5%	57.0%	2.5%*
North Beacon Hill	61.5%	63.0%	1.5%
Eastlake	57.5%	58.0%	0.5%
Aurora-Licton Springs	70.0%	70.5%	0.5%
West Seattle Junction	72.5%	73.0%	0.5%
Ballard	76.5%	76.5%	0.0%
Lake City	75.5%	76.5%	1.0%
University Community	65.5%	67.0%	1.5%**
Downtown	81.0%	82.0%	1.0%**
City of Seattle	51.0%	52.5%	1.5%**
* changes statistically significant at the 0.10 level			
** changes statistically significant at the 0.05 level			

Table 4.13. Urban Ecology Research Lab data for percentage of the area that is impervious surface in 1995, 2002, and percent change between the two time periods.

Table 4.14. National Land Cover Database data for percentage of area that is impervious surface in 2001, 2011, and percent change between the two time periods.

Associated Policies

Seattle Comprehensive Plan

U13: Work regionally to improve programs and management strategies designed to prevent and reduce contamination of street runoff and storm water from all sources.

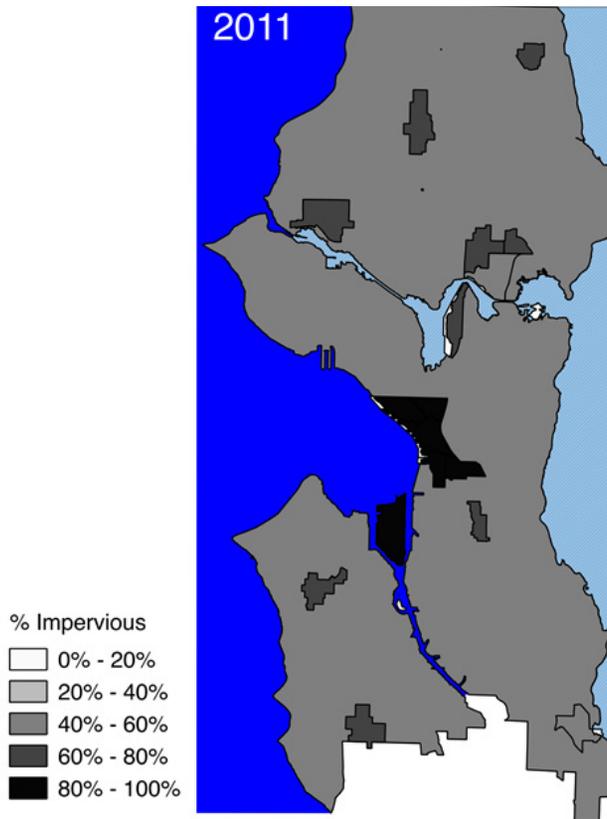


Figure 4.24. Impervious surface for the City of Seattle (including islands) and selected urban villages (at sub-area level), for the year 2011, based on NLCD data

Analysis

Impervious surface within the urban villages was higher on average than citywide. Most changes to impervious are within the margin of error, and should not be considered significant, or representative of change on the ground. Change in impervious surface thus appears to have been for the most part negligible, with small increases in a small number of urban villages. Statistically significant increases were found in Rainer Beach, the University Community,

Downtown, and in Seattle overall. Caution should be exercised when considering these increases, however. The very large sample size presented by the data (the number of 30 meter pixels inside the boundary) makes it possible to detect as significant “differences” which have no real impact on how impervious surface functions within the city. The change in Rainier Beach is most likely to be of genuine significance, due to it being the smallest area to see an increase, and has the largest increase observed within the data.

That impervious surface was higher in the urban villages than in the city generally reflects their status as centers of relatively intensive development, commercial activity, and multifamily housing. The only village for which this is not true is Rainier Beach, which has impervious cover similar to that of the city as a whole. The primary environmental concerns associated with impervious surface relate to water quality (Anderson 1986; Leopold 1986; Tourbier and Westmacott 1981). More intensive study would be required to determine if there are differences in outcomes between the urban villages on factors related to impervious surface. Impervious surface (as a proxy for development density) can also be associated with social outcomes. More densely urbanized areas can have less green space and gardens, more runoff, and higher maximum temperatures. Some of these relationships are non-linear – green space coverage, for instance, often declines most rapidly at lower levels of urbanization (Tratalos, Fuller, Warren, Davies, & Gaston, 2007).

One may wonder how canopy cover has increased while impervious surface has remained constant or increased as well. The optimum timing of imagery for the two is different: tree cover is typically measured during the spring and summer, when trees are in full leaf; conversely impervious surface is typically measured in the winter when deciduous trees have dropped their leaves. This matters because tree canopy often overhangs impervious surfaces, and will

obscure them when in full leaf. This also explains how canopy cover can increase while impervious surface remains constant or increases, and broadly speaking the two are not particularly correlated (Iverson & Cook, 2000).

C4 RECOMMENDATION

With impervious surface levels in the urban villages already high, the city should put in place policies that incentivize development footprints to remain within already impervious areas. The goal should be to minimize future loss of permeable surface, and to replace existing impervious surfaces with permeable surfaces wherever possible.

Notes/Limitations

The data are drawn from two distinct sources produced using different methods. This renders direct comparisons between the two data sets impossible. However, due to overlaps between the two, the general direction of trends may be noted.

References

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[D] SHARED PROSPERITY AND OPPORTUNITY



D1 CITY INVESTMENTS IN INFRASTRUCTURE AND CAPITAL FACILITIES

Desired Outcomes

- Investing in people
- Social equity
- Balancing growth with services
- Urban Villages Strategy

Responsible Agency: Executive, City Council, Budget Office, Department of Finance, all other City departments.

Format

2005-2014 Capital Improvement Program (CIP) appropriations per capita (2010 population) by urban village. *Includes appropriations, not revenue sources.

Data Source/data collection methods: Budget Office Capital Improvements Program data sorted by projects appropriations designated to the urban village study areas.

Data Years: 2005-2014

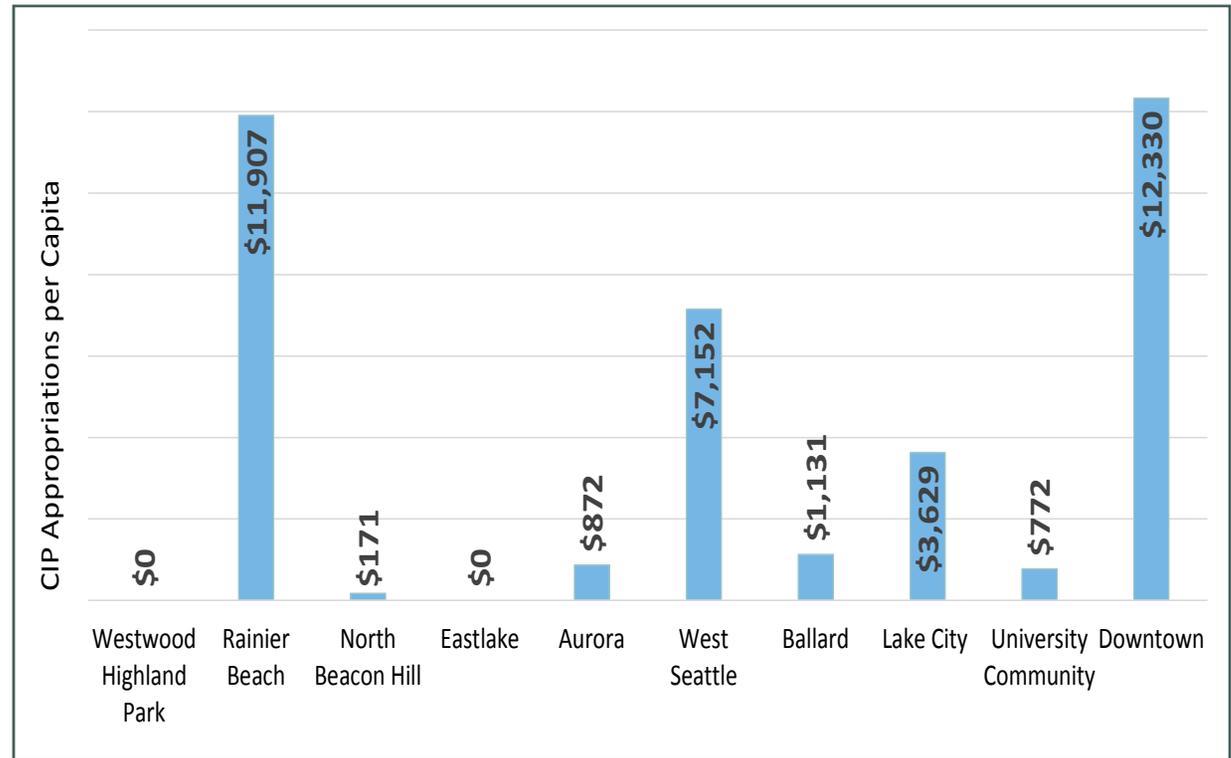


Figure 4.25. Per Capita Capital Improvement Program (CIP) appropriations (2005-2014). 2010 Census population counts prepared by Seattle’s Department of Planning and Development for the urban villages were used to calculate per capita appropriations. Source: City Council, Budget Office Capital Improvements Program Data

Associated Policies

Seattle Comprehensive Plan UVG9: Maximize the benefit of public investment in infrastructure and services, and deliver these services more equitably.

CFG3: Make capital investments consistent with the vision of the Comprehensive Plan, including the urban village strategy.

Background

City of Seattle’s Capital Improvement Program allocates existing funds and anticipated revenues to rehabilitate, restore, improve, and add to the City’s capital facilities. Projects in the CIP cover a wide range of capital improvements, including construction of new libraries, street repairs, park restoration and work on

electrical substations. The CIP covers a six-year planning horizon—updated each year to reflect ongoing changes and additions. The CIP acts as a budgeting tool to support appropriations made through the adoption of the budget. The Overview of the 2005-2014 CIP budget states “The CIP is consistent with the City’s Comprehensive Plan and includes information required by the State’s Growth Management Act.”

Many projects in the 2005-2010 Adopted Budget are civic, cultural or public safety facilities funded by voter-approved levies (e.g., “1999 Seattle Center and Community Centers” Levy, the “Neighborhood Parks, Green Spaces, Trails and Zoo” Levy, and the “Fire Facilities Emergency Response” Levy) and bonds (“Libraries for All”).

Utility-funded projects in the Seattle City Light and Seattle Public Utilities CIPs improve or maintain the utility infrastructure that serves Seattle residents. Projects in the Seattle Department of Transportation (SDOT) CIP are funded by multiple fund sources – local, state, and federal – and focus on streets, bridges and other elements of our transportation infrastructure. Finally, the CIP also projects the financial impact on City departments of major transportation projects including the Monorail, Sound Transit Light Rail, and the Alaskan Way Viaduct. Key projects are more fully described later in this overview, and details on funding and schedules can be found in the individual department sections.

Analysis

The CIP data provided included approximately \$6.97 billion in CIP investments from 2005-2014. Based on CIP location tracking, of the \$6.97 billion in investments (2005-2014), approximately \$3.2 billion were invested within Seattle’s urban villages and approximately \$3.2 billion were invested outside the urban

villages. The 10 SSNAP urban villages received approximately \$445 million in CIP investments.

Where CIP data was available and tracked by urban villages, the data reveals significant variation in the distribution of appropriations amongst the 10 urban village study areas. Downtown and Rainier Beach per capita CIP appropriations far exceed the eight other urban village assessment areas. The data provided showed no record of CIP appropriations identified within the Eastlake and Westwood-Highland Park urban villages.

However, it should be well-noted that ambiguities in CIP project location, and limitations in the tracking and data collection weaken conclusions that can be drawn from the CIP data provided. Projects are often listed as located within more than one urban village and are often programmed under broad definitions like “bike master plan implementation” that would not be tracked by specific project location. Likewise, some of the biggest investments are in utility projects funded and managed by Seattle City Light (SCL) and Seattle Public Utilities (SPU). For example, 66% of the 2005-2010 CIP Adopted Budget was allocated to utility projects managed by SCL or SPU. These projects may be located in one area but serve much broader geographies and are thus not tracked by individual investment.

The CIP data collected for this report does not provide sufficient information to evaluate how well the City is maximizing public investment in infrastructure. Additionally, supporting information and research concerning the needs of Seattle’s urban villages could inform decision-making and prioritization, and help advance Comprehensive Plan goals for supporting growth related needs.

D1 RECOMMENDATION

More accurate CIP data tracking by location and urban village is needed to determine where CIP appropriations are directed, and whether public investments are working to improve specific growth-related infrastructure needs within the urban villages. The Seattle 2035 Plan should include an update of priority CIP projects specific to the urban villages, and consider a six year strategic investment plan tied to the urban villages.

Notes/Limitations

Project location data is based on the most up to date information. If a program that has budgeted funding changes primary location, it will make the update in the database. This can cause problems when looking at past budgeting. Capital projects in certain areas, as part of citywide projects, may not be tracked by urban village. Due to the imperfect nature of project location tracking, strong conclusions should not be made from the CIP data provided. A complete analysis of capital investments by urban village was not possible due to limited data.

References

A Resident’s Guide to the City Budget and Budget Process (2013-2014).



**D2
NEIGHBORHOOD
MATCHING FUND**

Desired Outcomes

- Investing in people
- Social equity
- Community empowerment, cohesion
- Sense of place
- Civic Engagement, volunteerism, self-help

Responsible Agency: Department of Neighborhoods

Format

Annual NMF project awards by Neighborhood Districts corresponding with our urban villages.

Data Source/data collection methods: From the Department of Neighborhoods Neighborhood Matching Fund database

Data Years: 1994-2013

Associated Policies

Seattle Comprehensive Plan

HD1 Work toward achieving a sense of belonging among all Seattle residents.

- a. Promote opportunities that bring people together to help them build connections to each other, their peers, their neighbors and the greater community.

SSNAP Urban Village	Neighborhood District	Population (2010)	Awarded Amount (1994-2014)	Number of Projects (1994-2014)
Westwood-Highland Park	Delridge	34,904	\$2,800,716	227
Rainier Beach	Southeast	46,640	\$7,430,810	194
North Beacon Hill	Greater Duwamish	44,948	\$3,640,349	255
Eastlake	Lake Union	45,166	\$2,872,090	164
Aurora-Licton Springs	Northwest	70,821	\$2,838,361	227
West Seattle Junction	Southwest	48,008	\$3,099,652	171
Ballard	Ballard	43,935	\$129,347	15
Lake City	North	41,442	\$2,010,311	148
University Community	Northeast	77,198	\$3,395,106	242
Downtown	Downtown	18,004	\$506,234	32
SSNAP Urban Village Total			\$28,722,976	1,923

Table 4.15. Summary of Neighborhood Matching Fund total awards 1994-2014 by Neighborhood District. Source: The Department of Neighborhoods Neighborhood Matching Fund Database.

Background

The Neighborhood Matching Fund (NMF) was created in 1988 to encourage volunteerism and community involvement by providing neighborhood groups with City resources in recognition that strong neighborhoods support quality of life in Seattle. The NMF has awarded more than \$49 million to over 4000 neighborhood projects throughout Seattle since its inception. Awards must be matched by a community contributions of volunteer labor, professional services, or donated materials. Since 1988 the NMF has resulted in the engagement of 86,000 volunteers and over 574,000 hours donated in the community match.

- b. Enhance opportunities for intergenerational activities.
- c. Strive to reach people in new ways to encourage broad participation in neighborhood and community activities and events.

The NMF fills a unique niche for Seattle-based grassroots groups of neighbors and residents to come together to design, build, and implement their own neighborhood and community improvement project ideas. The NMF coordinates City resources to community improvement projects driven by actively engaged, diverse community members. NMF projects cultivate strong partnerships between community residents and the City to enhance and strengthen the neighborhoods that make the City of Seattle unique and vibrant. The NMF program includes three funds:

Small Sparks Fund provide awards up to \$1,000 to encourage community members to become engaged.

- Emphasis is on self-help, organizing, and community building
- Available to small neighborhood and grassroots community groups with annual organizational budgets of less than \$25,000.

Small and Simple Projects provide awards up to \$25,000 to build stronger connections between neighborhood/community based groups, ad hoc groups, and business groups and their neighborhood.

- Neighborhood-based groups, community-based organizations, ad-hoc groups and business groups (such as chambers of commerce) that want to do a project to build stronger connections in their neighborhood.
- Community groups that do not have a geographic base, such as a racial or ethnic group, GLBT groups, a disability community, etc.

Large Projects Fund provide awards up to \$100,000 for community building, activities and/or physical projects with an emphasis on self-help.

- Open to all neighborhood based organizations and non-geographic community groups
- All projects must demonstrate capacity to build stronger healthier communities

Financial need of a group or organization is not considered in the rating criteria, nor a factor in awarding of NMF funds. All applications submitted undergo a competitive review process with all applications (not just those from their district). NMF awards are based on the level of demonstrated community interest and momentum to develop a project, ability to match funds with in-kind contributions of resources and volunteer hours, and potential to successfully implement the project.

Project types are wide ranging, and have included planning, design & reports, youth related, community events, public school projects, environmental, climate protection, organizing, , arts & culture, physical improvements, neighborhood organizing, race and social justice

Analysis

Allocation of NMF funds over 20 year period shows large differences between the city's neighborhood districts and urban villages contained within them. For example, the total amount awarded to projects located in the Southeast Neighborhood District over the 20 year period was approximately \$159.32 per person, whereas for Ballard District with a similar population was just \$2.94 per person. The three neighborhood districts and corresponding urban villages receiving the highest amount of NMF funding over the 20 year period are Rainier Beach, North Beacon Hill, and the University Community. The widely varying award levels of matching funds between city neighborhood districts do not correlate with population or geographic distribution, and it would be speculative to presume funding levels reflected differences by neighborhood district in levels of community engagement, organization or volunteerism.

D2 RECOMMENDATION

The Neighborhood Matching Fund is an applicant-based city program. While needs and purposes may vary, the city should strive to award the funds in a way that equitably serves and supports all city neighborhoods and communities. Consistent tracking and annual reporting of distributions by neighborhood or urban village, volunteer hours contributed, and outcomes, would improve accountability and transparency.

Notes/Limitations

Neighborhood Matching Fund data is organized by neighborhood district. Data does not represent funding awarded to projects within urban village boundaries. Instead, data represents awarded funding for projects within the neighborhood district that serves each urban village.

References

<http://www.seattle.gov/neighborhoods/nmf/>



D3 ACADEMIC PERFORMANCE

Desired Outcomes

- Investing in people
- Employability
- Economic opportunity
- Equity
- Skilled and competent young adults to pursue higher education or enter the workforce
- Higher income earning potential

Responsible Agency: Seattle Office of Education, Seattle Public Schools

Format

Percent met standard for fourth grade reading standardized test scores for public elementary school(s) within or closest to the SSNAP urban village boundaries. Washington Assessment of Student Learning (WASL) scores were used for 1998 and 2009 data points. In 2010, the Measurements of Student Progress (MSP) replaced the WASL. MSP scores were used for 2013 data points.

Data source/data collection methods: Sourced from the Office of Superintendent of Public Instruction Washington State Report Card.

Data Years: 1998-2013

Background

On the MSP, students are asked to read passages and answer multiple choice and short-answer questions.

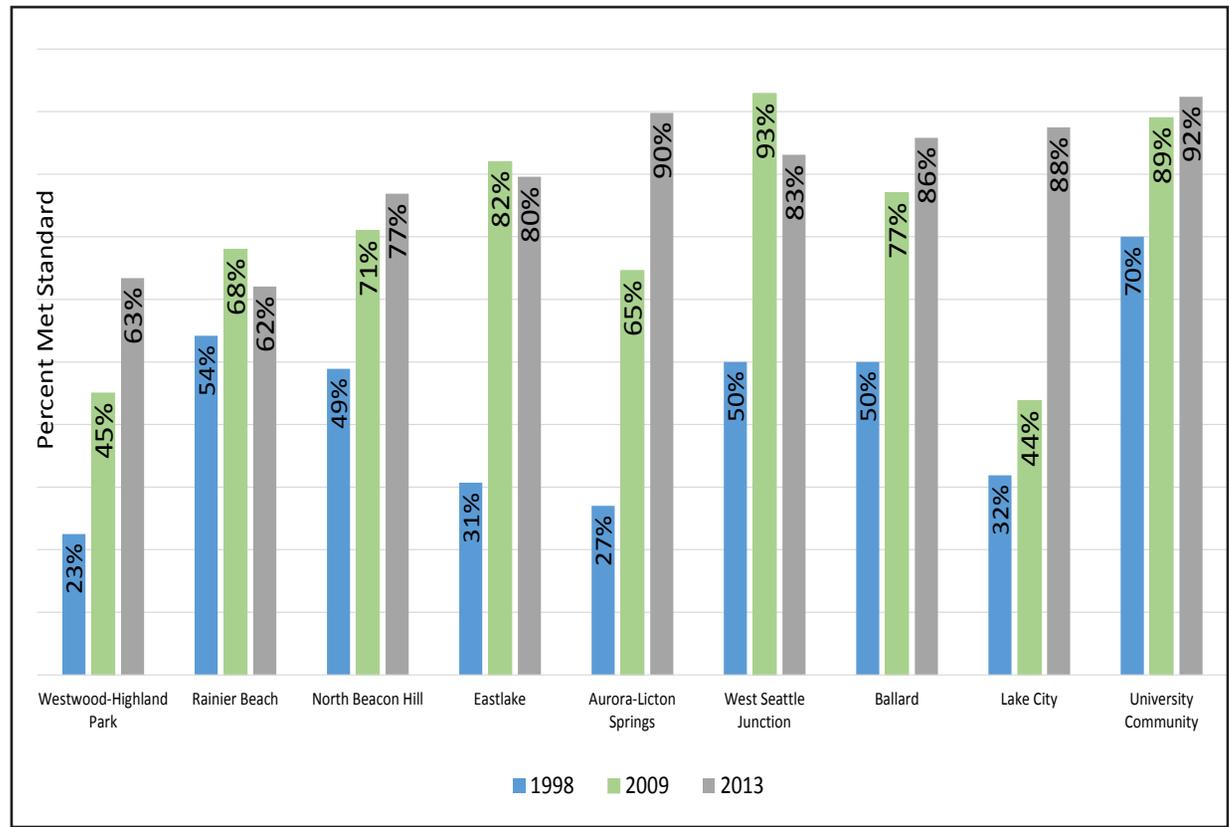


Figure 4.26. Fourth grade reading percent met standard for Washington State standardized test scores for public elementary school(s) located within or closest to the urban village boundaries (see Appendix B Table B5 for list of schools). The 2013 data is for the Measurements of Student Progress standardized test.

Source: Washington State Office of Superintendent of Public Instruction Student Report Card

The questions address reading comprehension, understanding of writing structure, analysis of content, and word choice. Multiple-choice answers are scored electronically; short-answer questions are scored by multiple people who abide by a detailed rubric to ensure consistency. Students receive number scores, which are then grouped into four levels: Advanced (Level 4), Proficient (Level 3), Basic (Level 2) and Be-

low Basic (Level 1). Level 3 or higher is a passing score, and typically requires that 60-65% of the questions are answered correctly. The WASL included multiple-choice and short answer questions, as well as essay questions. Similarly to the MSP, students received a score on the WASL reading test, and scores were then grouped into four levels, with level 3 or 4 considered "passing."

Analysis

The percentage of 4th grade students meeting the reading standards on the statewide standardized test has increased across all of the urban villages. Some urban villages that began with less than half of the students meeting the standard now have upwards of 80% meeting the standard (Lake City, Eastlake, and Aurora). Several schools saw a slight decrease in the number of students meeting the standard on the 2013 test as compared with the 2009 test (Rainier Beach, Eastlake, West Seattle, Aurora). It is possible that this is in part due to change in the test, from the WASL to the MSP.

Westwood, Rainier Beach, and North Beacon Hill have relatively low percentages of students meeting the reading standards. There is a definite disparity in performance on the reading test between urban villages. Rainier Beach and Westwood have roughly one-third fewer of their fourth graders meeting the reading standards than several of the other urban villages. These disparities have not always been characterized in the same way; in 1998, Rainier Beach had a higher proportion of its students performing well on the test than most of the other urban villages. Yet Rainier Beach saw the least amount of increase in students meeting the standards, while other areas increased dramatically.

Poor academic performance has been linked to neighborhoods with violent crime (Aj, Cd, Pj, 2010) and low levels of collective efficacy among community members (Emory et al., 2008). Students who miss more days of school due to sickness are also less likely to perform well on tests (Moonie, Figs & Castro, 2008).

D3 RECOMMENDATION

Wide disparities in performance between Seattle public schools still exist. Lack of access to early-learning and pre-school opportunities for some disadvantaged families may be a contributing factor. The mayor's recently proposed Department of Education, in coordination with Seattle Public Schools, should consider further research into targeted areas of the city to develop strategic, and evidence-based strategies for achieving higher outcomes.

Notes/Limitations

University Community, Aurora-Licton Springs, Lake City and West Seattle Junction do not have an active elementary school within the urban village boundary. The closest schools were selected to represent school performance. There was no data available for Downtown.

The WASL and MSP standardized test scores are only administered in Seattle Public Schools. It is not guaranteed that the percent met standard data is reflective of students living within the urban village, as it is often the case that a student will travel outside the neighborhood in which they live to attend school.

In Spring of 2010, the Washington State standardized test changed from the Washington Assessment of Student Learning (WASL) to the Measurements of Student Progress (MSP).

References

- Aj, M., Cdm, F.-H., & Pj, L. (2010). Perceived School and Neighborhood Safety, Neighborhood Violence and Academic Achievement in Urban School Children. *The Urban Review*, 42(5), 458–467. doi:10.1007/s11256-010-0165-7
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- Moonie, S., Sterling, D. A., Figs, L. W., & Castro, M. (2008). The relationship between school absence, academic performance, and asthma status. *The Journal of School Health*, 78(3), 140–8. doi:10.1111/j.1746-1561.2007.00276.x





D4
UNEMPLOYMENT RATE

Desired Outcomes

- Employment opportunity
- Competency
- Equity
- Quality of life

Responsible Agency: None that we know of

Format

Unemployment rate for each urban village from the 2000 Census, 2006-2010 ACS, and 2008-2012 ACS data.

Data source/data collection methods: Census and American Community Survey unemployment data calculated by taking total number unemployed in all census tracts for each urban village and dividing by total in labor force for all census tracts for each urban village.

Data Years: 2000-2012

Associated Policies

ED9: Strive to address the special needs of areas in Seattle that historically have experienced less economic opportunity and that have high concentrations of people living in economic hardship.

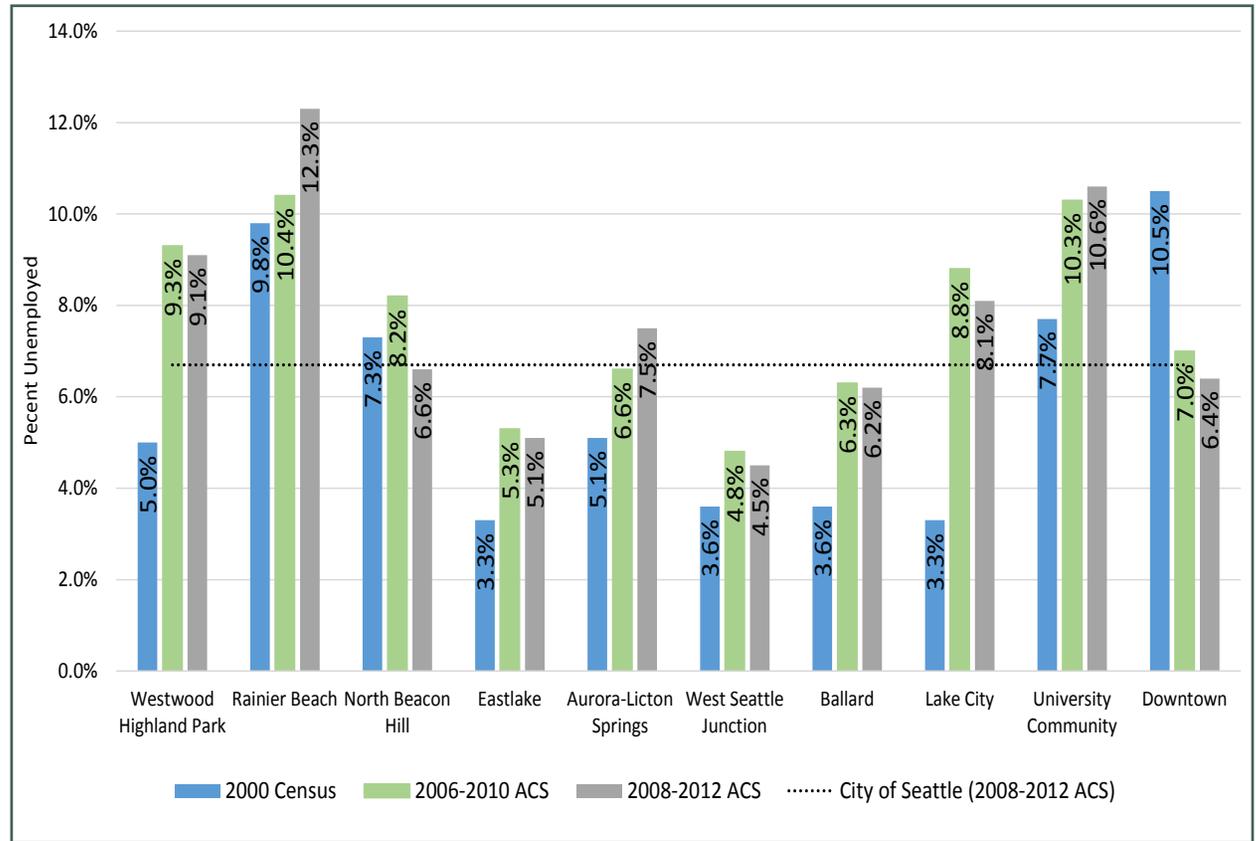


Figure 4.27. Percent unemployed calculated by taking number of unemployed people out of total in labor force for the census tracts corresponding with the urban village study areas
Source: 2000 Census and American Community Survey

Analysis

In the current post-recessionary period, Seattle has experienced a lower unemployment percentage than much of the nation. As of April 2014, Seattle's unemployment rate reached just 4% while the National average was 6.3% (Bureau of Labor Statistics). Seattle was also somewhat insulated from the extremely high unemployment experienced in many parts of the country from 2008 to 2010. However, the picture of unemployment at the neighborhood level, especially in some of Seattle's historically disadvantaged areas, is not as positive, with wide disparities between urban villages.

Unemployment variances between the 10 SSNAP urban villages could not be tracked accurately year to year. This is because the only data currently available for unemployment at the neighborhood level is from the American Community Surveys (ACS), produced by the Census Bureau. There are limitations with this data listed in the following section. Regardless of data collection limitations, the Census data does raise some important questions about the persistent (longitudinal) differences between lower unemployment urban villages versus high unemployment urban villages. For example, in the latest ACS data (2008-2012) the unemployment rate in the West Seattle Junction urban village, is nearly 3 times lower than unemployment rate in the Rainier Beach urban village. The 2008-2012 ACS data also demonstrates that five out of the ten SSNAP urban villages have a higher unemployment rate than the citywide average of 6.7% (U.S. Census).

Notes/Limitations

Census.gov advises comparing 2000 Census unemployment data with 2012 ACS unemployment data with caution due to the fact that the reference periods are different between the two. Census.gov also notes Census 2000 SF3 appears to overstate the estimates of people in the labor force, unemployed, and percent unemployed because of data capture errors.

We also received customer data collected by the Washington Unemployment Security Office for total number of individuals who filed unemployment claims and total amount paid. This data was geographically sorted by zip code, which was too large an area to represent the urban villages.



D4 RECOMMENDATION

The city has a clear role in addressing high levels of structural unemployment, poverty, and hardship. The first step is to identify through data collection and tracking the specific areas struggling from a lack of economic opportunity, and then to develop effective long-term community-based strategies to reduce poverty and unemployment. As one example, Opportunity Communities (<http://kirwaninstitute.osu.edu/>) is a research and evidence-based model for creating opportunity-rich communities.

References

U.S. Census Bureau

Washington State Employment Security Department



D5
POVERTY RATE

Desired Outcomes

- Quality of life
- Community health
- Human health
- Equity
- Employment opportunity

Responsible Agency: None that we know of

Format

Poverty rate for each urban village from the 2000 Census, 2006-2010 ACS, and 2008-2012 ACS data.

Data source/data collection methods: Census and American Community survey poverty rate data.

Data Years: 2000, 2006-2010, 2008-2012

Associated Policies

HDG3: Strive to alleviate the impacts of poverty, low income and conditions that make people, especially children and older adults, vulnerable.

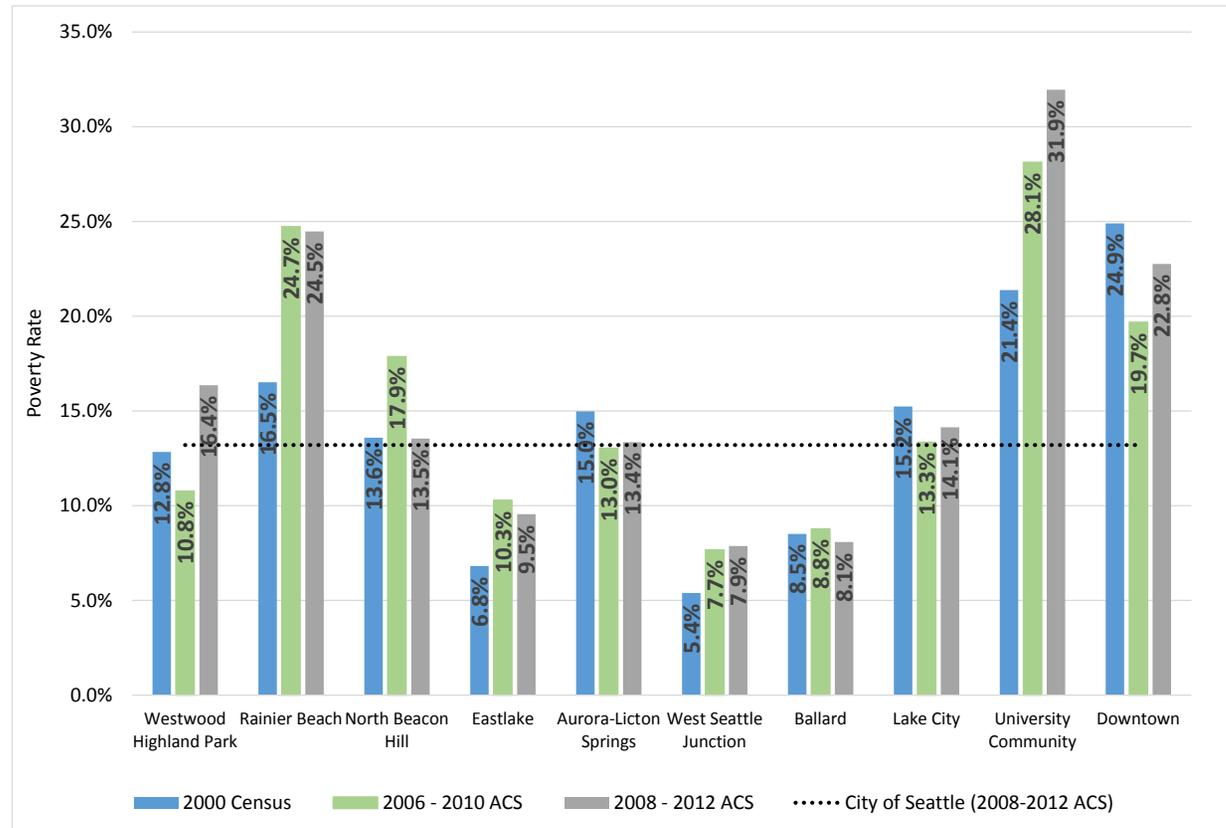


Figure 4.28. Poverty rate data from 2000 Census, 2006-2010 ACS and 2008-2012 ACS organized by the census tracts that correspond to the urban village study areas.

Source: 2000 Census and American Community Survey

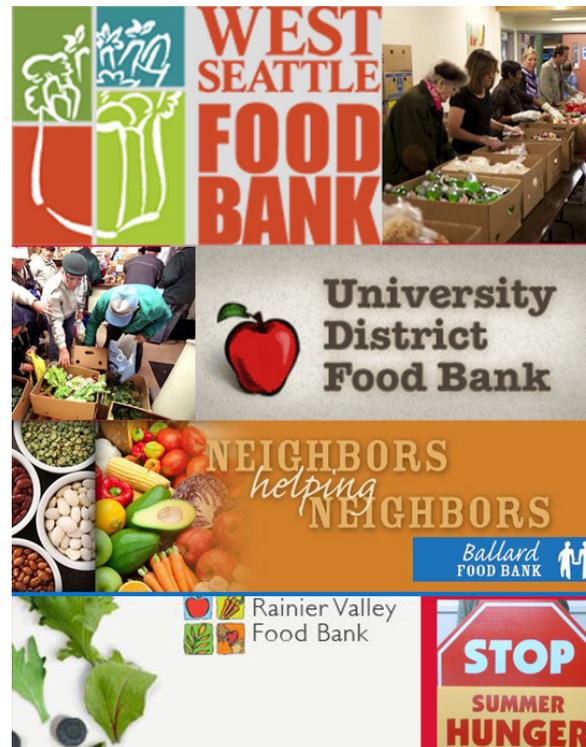
Analysis

There is no single accepted definition for poverty. Poverty represents the lack of economic means to afford the most basic needs in life. In the U.S., poverty level is determined by yearly earnings, \$23,850 for a family of four in 2014. In 2012, the U.S. Census Bureau determined that approximately 16% of Americans live in poverty. The 2008-2012 ACS estimated that the percentage of persons living below the poverty line in Seattle was 13.2%, placing six out of the ten SSNAP urban villages with a poverty rate of at least 2 percentage points greater than the citywide average. Employment rates also appear to correlate with poverty levels, and poverty levels across half of the urban villages are also higher than the citywide average.

There are other factors that affect poverty not reflected in the quantitative data. A poverty rate of almost 30% in the University Community may reflect the disproportionately high number of no/low income college students living in the reporting area who may rely on financial assistance from family, scholarships, and/or student loans. In Downtown, poverty remains very high, accounting for the concentration of poor residents and low income seniors, supportive services, homeless shelters and subsidized housing. A shift in the mix may be occurring with the influx of luxury residential high rises and limited number of affordable units.

Notes/Limitations

The U.S. Census advises comparing 2000 Census Poverty data with 2012 ACS Poverty data with caution due to the fact that the ACS collects data throughout the year on an on-going, monthly basis and asks for a respondent's income over the "past 12 months." Census 2000, however, collected the income data for a fixed period of time—"during 1999" (the last calendar year). 2008-2012 ACS 5-year data reflect incomes over 2007-2012.



D5 RECOMMENDATION

The city relies on external data for assessing poverty rates, and no city agency appears to be tracking economic stress in specific areas of the city. Internal data collection and tracking specific to the context of Seattle and its neighborhoods would provide data-driven means to develop stronger responses to economically stressed communities.

References

U.S. Census Bureau





D6
HOUSING COST BURDEN

Desired Outcomes

- Housing opportunity
- Affordability
- Access to basic needs
- Mental and emotional health by reducing stress
- Quality of life

Responsible Agency: Office of Housing, DPD

Format

2008-2012 ACS data for percent of income spent on housing costs including renters, houses with mortgage, and houses w/o mortgage.

Data source/data collection methods: 2008-2012 ACS data for percent of income spent on housing.

Data Years: Census: 2012

Associated Policies

HG2: Maintain housing affordability over the life of this Plan.

EDG1.5: Establish Seattle as a place where average wages are high and costs of living are reasonable so that the city can accommodate households at a wide range of income levels.

Metrics Goals: Housing burden is a measure of cost of housing as a percent of income. Federal HUD standard has housing cost of 30% (or less) of household income as affordable.

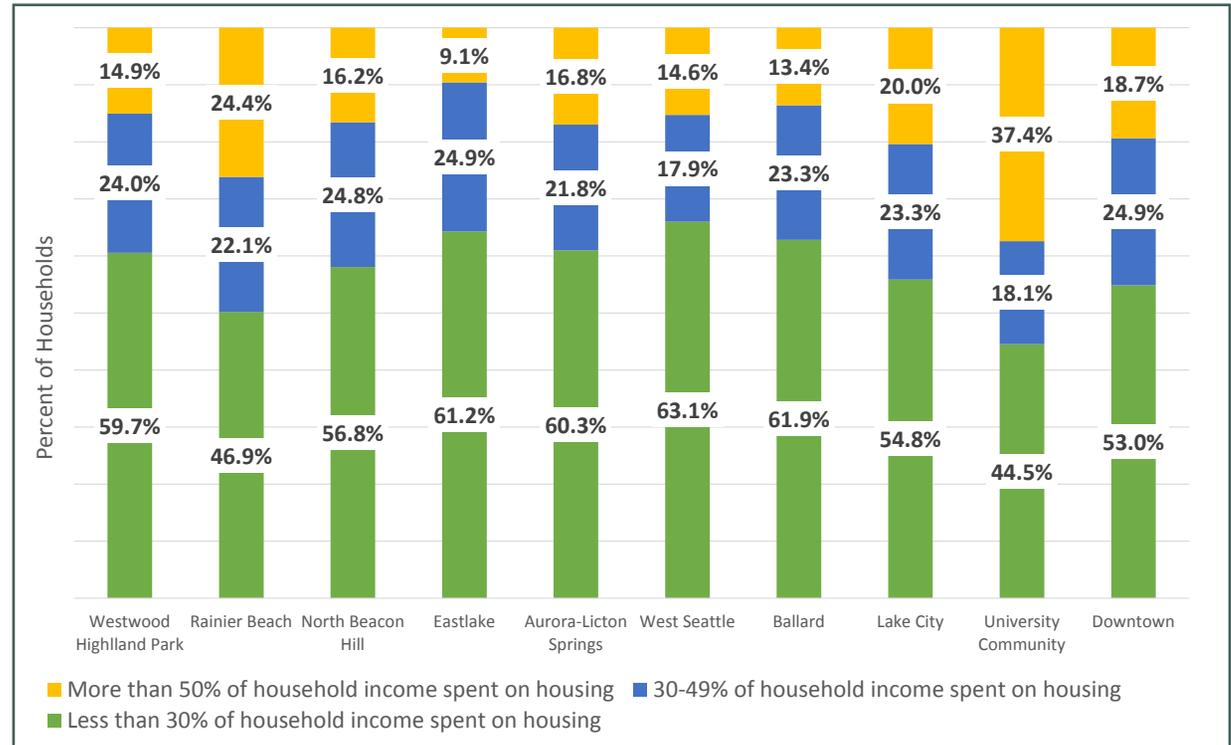


Figure 4.29. Housing cost burden data from 2008-2012 ACS organized by census tracts. Severe housing burden defined as households spending more than 50% of the household income on housing. Moderate housing burden defined as households spending 30% to 50% of income on housing. Low/No housing burden defined as households spending under 30% of income on housing.

Source: 2008-2012 American Community Survey.

Analysis

From the data, we can see how housing affordability as a measure of rental costs and household income varies widely between neighborhoods throughout Seattle. In every urban village study area, the housing cost burden (as defined by HUD as household that spends 30% or more of their income on the combined housing costs of rent/mortgage and utilities), is significant, ranging from 32 % to 55% of all households

in each of the selected urban villages spending more than 30 % of their income on housing. The Comprehensive Plan’s urban village strategy aims to concentrate growth in population and employment within the designated urban centers and villages. The results do not correlate affordability with higher densities across the selected urban villages. The housing cost burden is higher in the top three densest urban vil-

lages (University, Downtown, and Lake City) than it is in 6 of the other 7 urban villages. Only Rainier Beach, ranked 10th in density, compares more closely in housing cost burden with the densest areas of the city. Density may not in itself result in lower housing cost burden, particularly in lower wage communities where wages and household incomes have not kept up with increasing housing costs.

A Harvard Joint Center for Housing Studies found that in 2009 nationwide, 26.1% of renters spent more than 50% of their income on rent. This figure has risen by almost 6% since the beginning of the decade. During the same time period in Seattle, the number of severely burdened renters was 22.7%, up more than 4% from the beginning of the decade. The housing burden is not only a problem of poor or disadvantaged communities. Rising rents in Seattle have also extended housing burden issues into some of our city's higher income neighborhoods.

The 2008-2012 ACS data show that two urban villages, Rainier Beach and University Community, have severe housing burdened statistics higher than the City of Seattle percentage. The fact that rents are rising in each of the 10 urban village study areas suggests that the severe housing burden could continue as a long term trend in Seattle's neighborhoods if wages and household incomes do not keep pace.

Like some of the other social indicators, the full picture of what differentiates housing burden in one urban village from another is complex. Housing cost burden in a household with an average income of over \$100,000 may be very different from the housing burden in a household below the poverty level. Looking at specific urban villages in our study, the high housing burden in University Community may be explained by the large population of underemployed college students. However, the high percentage of households experiencing severe housing cost

burden in Rainier Beach should raise more serious concerns. Furthermore, when the fact that average rents in Rainier Beach are just over \$600 a month for a one-bedroom compared to other urban villages, the degree of the problem becomes even starker.

D6 RECOMMENDATION

Consistent localized data collection and closer tracking of household incomes and affordability by neighborhood or urban village would provide a fuller and more accurate picture of Seattle's housing needs, and better inform housing policy strategies. The primary challenge is to not just increase the supply of housing, but to expand the diversity of housing typologies and affordable choices for future growth and changing lifestyles. Housing preservation strategies should also be strengthened.

Notes/Limitations

There are many challenges associated with identifying the most informative and accurate measure of housing affordability. The data available is limited and it is challenging to pair current household income data with current market rental rates, which change year to year, and are location specific. Census and ACS data provide household income data but does not demonstrate the variation in cost of housing across the city. ACS data is supplemented with Dupre + Scott average rent data (Appendix B Table B4) to provide a more complete picture of housing affordability/housing burden and how it varies across the city (as represented by our urban villages).

References

The State of the Nation's Housing 2011. (2011). <i>Joint Center for Housing Studies of Harvard University,</i> 27-31. Retrieved from http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/son2011_housing_challenges.pdf



5. FINDINGS ON DATA COLLECTION AND MONITORING

1

2

3

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5. FINDINGS: DATA COLLECTION

6

7

Seattle's Data Collection and Tracking System

As a pilot study, the SSNAP project has served to probe and test the city's current databases, collection and retention practices, all critical in monitoring progress of the Comprehensive Plan's 20-year horizon using the 22 trial indicators we developed. This proved to be the project's biggest challenge. The initial process of identifying the data source, contact, format, scale, and years of available data for each indicator, provided the basis for making data requests to various government agencies and city departments.

Once the 10 urban villages were selected, preparing data requests for some of the indicators required time-intensive preparatory work to identify the necessary data points and spatial parameters corresponding with the urban villages.

Only three departments of the city, DPD, Finance, and Parks, track at least some of their data by urban village, and no outside agencies track by urban village. In other instances, where data we sought related to specific locations (such as elementary schools, traffic screen lines, and 911 calls), the city's data sources provided available information sufficient for us to compile the indicator data by urban village. We found spatial parameters of the various data collected by everything from address, to census tract, block, zip code, police beat, city sector and city district, making consistency more challenging.

In some cases it was not possible to narrow the spatial parameter enough to confine data to the urban village. Data collection by address, though collected internally by the city's utilities, was not made available to us for reasons of privacy laws. While this could have been aggregated for us, department resources

and time constraints did not allow it. As a result, there are spatial variances across the 22 SSNAP indicators.

During the SSNAP study period, we spoke with numerous neighborhood groups. Although each was involved in a different neighborhood, they all had two things in common: the need for neighborhood level data and the desire to engage in improving the quality of life in their neighborhoods.

Data Collection Challenges

Availability and accessibility of 1994 data: Databases have changed and collection methods have evolved with changing technology – from analogue to digital to GIS. Past databases may no longer be maintained in an organized form. For empirical studies such as SSNAP and longitudinal tracking, these evolutions can impact methodology and organization.

Geographic scale: Inconsistencies in the geographic/spatial area in which data is collected and tracked was acknowledged during Phase I and noted in Phase II as a large contributor to delays in data delivery and

SEATTLE OPEN DATA – www.data.seattle.gov

The City of Seattle, following open data movements that call for greater public access to information and greater transparency, has created an online platform where users are free to view and use data collected by the public authorities. The web interface, powered by an external software developer called Socrata, is easy to understand and to handle for all types of users. The content available is classified in thematic categories: city business, community, education, finance, land base, permitting, public safety, transportation.

The information provided by this website concerns the city's action and their knowledge about the territory: for instance, building permits, crime statistics, tree maintenance and current levies for school funding is readily available for the general public, which confirms the city government's intentions of transparency with community members. Some data is geo-coded, which helps get a sense of the local character of the information documented in this platform.

processing. Changes in urban village boundaries also had significant consequences on the study.

Delays in delivery of data: With advance planning and queries, we expected data returns to occur over a two-week period. Unfortunately, some of our sources were unable to respond within our time frame, due to "higher priorities" or limited resources. Some departments suggested that SSNAP was "DPD's project," hence outside of their competencies. Departments also noted the time intensive process required to pull the data in the form requested.

Data.seattle.gov is practical tool for the curious user, yet provides little methodology as to how the data is collected, which may put into question its objectivity. In fact, the policy does not commit to providing the data in a reliable fashion:

“The City of Seattle Government makes no claims as to the completeness, accuracy, timeliness, or content of any data contained in this application”.

This newly created program helps residents understand better the actions undertaken by the City. It can also provide information on the ongoing situation in Seattle, in a variety of topics, which certainly is a great move towards transparency and communication between official institutions and the civilian society. Emphasizing on neighborhood indicators is the next step in the movement towards fully accessible open data.

Comprehensive Plan Goals and Policies Regarding Data Collection and Monitoring

In May 2007, the Seattle City Council adopted by resolution (CR no. 30976), a set of proposed amendments to the city’s comprehensive plan pursuant to the requirements of the Growth Management Act (RCW 36.70A). The resolution called for new set of comprehensive Sustainability Goals and Policies to address environmental, economic, health levels and called for ongoing analysis of all city departments and projects.

The resolution was followed in the same year, by a council ordinance (adopted December 2007) amending the 2007 comprehensive plan to:

“Collect data and regularly report the sustainability measures and numerical goals in this plan to inform and enable community members and decision-makers to consider alternative policies and programs, where outcomes differ from what was intended Use data, public input and approaches developed by other agencies and private organizations that address sustainability. Consider combining this monitoring activity with the one described in the Urban Village Element of this Plan.”

The 2014 Comprehensive Plan Goals and Policies establish clear intent for use of metrics, target-setting, data collection and monitoring.

Urban Village Element

UV44 – In order to monitor the effects of the Urban Village strategy: collect data, review, and report on growth and change in urban centers, villages, and manufacturing/industrial centers at least every 3 years. Include in these reports factors such as: progress on implementing neighborhood plan approval and adoption matrices; changes in the numbers of jobs and housing units; housing costs, including net loss or gain of low-income and very low-income housing units; housing types; crime rates; transportation systems and their use; business types; public facilities; services; and open space, to the extent information is practically available. Collect and report on similar data for typical areas outside villages for comparison. Broadly communicate the results of monitoring effects.

Environmental Element

E17: To improve the City’s environmental performance, set targets, use innovative approaches, encourage employees, and coordinate with other government entities.

E18: Collect data and regularly report on the sustainability measures and numeric goals in this plan to inform and enable community members and decision-makers to consider alternative policies or programs, where outcomes differ from what was intended. Conduct an inventory of greenhouse gas emissions in Seattle at least every three years. Use data, public input, and approaches developed by other public agencies and private organizations that address sustainability. Consider combining this monitoring activity with the one described in the Urban Village Element of this Plan.

Since the mid-2000s, the Seattle Comprehensive Plan has identified the importance of data collection and monitoring of the plan’s goals targets, and progress toward greater sustainability. Much of the data collection phase of the SSNAP study was devoted to navigating and resolving inconsistencies in the data provided, and then organizing data in a usable format to develop the most accurate and precise data set across all indicators. It was a laborious and time-consuming process that could be alleviated if there was a coordinated data-collection system in place across city departments.

Without institutionalized, systematic data collection, benchmarking and monitoring at the subarea/Urban Village level, it is impossible to track progress of the city’s goal-setting in the comprehensive plan, and achievement over time as it relates to the neighborhoods, and even citywide.

Comparative Analysis of Data Collection and Tracking Systems

After our initial survey of more than two dozen North American cities, we identified six mid-size cities in the U.S. that engage in data collection, benchmarking, indicator analysis and tracking. The set of best-practice cities selected have a mix of innovative solutions: data driven decision-making, cutting edge technology, democratized data on community access websites, and progressive neighborhood engagement initiatives.

Baltimore Neighborhood Indicators Alliance

www.bnijfi.org

The Baltimore Neighborhood Indicators Alliance (BNIA) produces reliable quality of life indicators and measurement for Baltimore's neighborhoods with the core purpose being to "strengthen Baltimore neighborhoods by providing meaningful, accurate, and open data at the community level." The specific goals of the BNIA are simple and effective: 1) Provide accurate data collection for objective research, 2) Democratization of data for community members and academics, and 3) Analyze neighborhood level data accurately to inform better policy. The Vital Signs are census demographics, housing and community development, children and family health, crime and safety, workforce and economic development, sustainability, education and youth, and arts and culture. Each Vital Sign is comprised of a set of related indicator data points aiming to "take the pulse" of Baltimore's neighborhoods, totaling over 150 indicator data sets for 55 Community Statistical Areas.

The open source data practice of the BNIA is a particularly advantageous innovation and one that increases cooperation, standardization, and modernization across city departments. The BNIA open source data informs grant writing and neighborhood planning, student project development, community mapping, community innovations, goal planning, evaluating programs and policies, and to inform residents about their neighborhood. Furthermore, the data obtained from the BNIA assists Baltimore city departments with neighborhood sustainability plans, city budgeting, grants (i.e. Sustainable Communities Grant, Community Development Block Grant, and Energy Block Grant), and incorporating neighborhood sustainability indicators (i.e. home prices/sales and energy/water use).

Denver Sustainable Neighborhoods Program (DSNP)

www.sustainableneighborhoodnetwork.org/sustainable-neighborhoods-denver

The Denver Sustainable Neighborhoods Program (DSNP) gives neighborhood residents "the opportunity to become active partners in making a vibrant and sustainable community." DSNP is a unique certification program that organizes workshops, improvement projects, and neighborhood events focused on long-term neighborhood sustainability. The DSNP uses five broad indicators to guide their project selection process: energy, air, water, land, and people. Neighborhoods earn credits for completing various community projects. The credits earn residents the right to be designated as a Participating Sustainable Neighborhood or an Outstanding Sustainable Neighborhood. Each neighborhood can choose any variety of specific projects, such as energy efficiency, water efficient landscaping, or neighborhood food drives.

Neighborhoods that earn the Outstanding Sustainable Neighborhood designation are recognized by elected officials and receive a distinctive neighborhood sign designating them as such. The DSNP, by recognizing good citizenship, promoting community involvement, and tracking progress, demonstrates the power of community participation in implementing city programs and priorities. The Denver model helps foster an environment of positive neighborhood volunteerism by supporting and recognizing efforts to improve their neighborhoods.

Greater Indianapolis: Indy Indicators

www.indyindicators.iupui.edu

The Indy Indicators project established in 2012, uses a searchable website to measure, assess, and encourage community participation in quality of life issues. The user-friendly site allows the public to search topics such as school districts, public health, and other established indicators. Indicators are chosen by their current effect on critical quality of life issues. The public site shows the measurement of each indicator and offers the ability to compare indicators across geographies.

Users can generate a neighborhood profile using Census tract level data to view the area profile or download tables of data. The indicators measured are: Arts and Culture, Demographics, Economy, Education, Environment, Global Connections, Government and Safety, Philanthropy, Public Health, and Transportation. The Indy Indicators project has been continuously evolving by integrating best practice methodologies informed from other neighborhood level projects around the country.

Madison Neighborhood Indicators Project (MNIP)

www.madison.apl.wisc.edu

The MNIP has three primary purposes, 1) to use indicators as a tool for making informed, data-driven decisions, 2) to couple this data with public input, and 3) to ensure privacy and confidentiality of neighborhood members (i.e., if the data set is so small that it could be assumed everyone in an area had a particular characteristic, it is left out of the public data set). Policy makers use the MNIP data to gain a better understanding

of neighborhoods, help better shape neighborhood solutions to fit particular characteristics, identify emerging trends, and as an early warning system for signs of strain on a neighborhood. The MNIP gives local policymakers the opportunity to address issues efficiently, proficiently and often less expensively, too.

The MNIP uses six broad indicator categories that are further broken into 30 individual indicators. The broad indicator categories are: Community Action and Involvement, Housing Quality and Availability, Public Safety, Health and Family Well-Being, Economic Vitality, and Transportation. All of these indicators can be found and compared for each neighborhood or planning district through the website. The MNIP was developed to help make better neighborhood level project funding decisions. By 2013 Madison had collected six years of data in 62 planning districts and 95 neighborhoods.

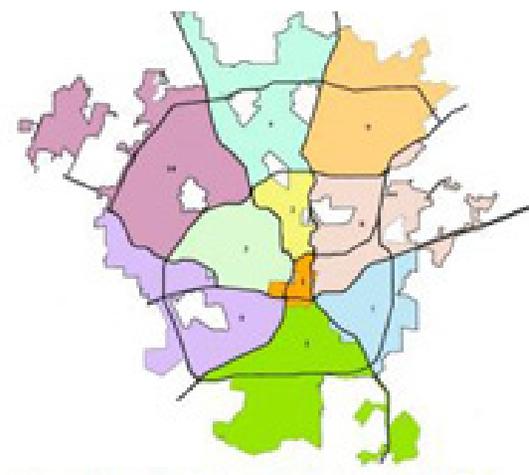
City of San Antonio Neighborhood Sustainability Assessment

www.sanantonio.gov/sustainability/

Commissioned by the City of San Antonio's Office of Environmental Policy, the San Antonio Neighborhood Sustainability Assessment (SANSA) is a neighborhood-level sustainability indicators study that uses cutting edge technologies and indexing software. A team of researchers from the University of Texas at San Antonio's College of Architecture conducted the assessment in 2012. The SANSA identifies and measures sustainability performance indicators. The project's goal is to provide support for neighborhood planning efforts to reduce energy, water, VMT, pollution, and the overall carbon footprint of the city's neighborhoods.

The SANSA uses GIS data obtained from a variety of city agencies to accomplish its mission. Data is analyzed using the INDEX Plan Builder, a GIS-based software tool that is designed to assist in community planning and development. The INDEX Plan Builder software allows for measurement of current conditions, creating and measuring scenarios, evaluating alternate approaches, and implementing initiatives that have been tested and found to have the most impact. SANSA used INDEX Plan Builder to measure 29 indicators within the 275 neighborhoods inside San Antonio.

The resulting data was used to calculate a Neighborhood Sustainability Index and seven supporting indices based on HUD, DOT, and EPA livability principles. These measurements give the City of San Antonio and its residents a concrete way to quantify the level of sustainability in their neighborhoods. The use of technology saves San Antonio resources and time in choosing what new neighborhood initiatives to implement.



The San Francisco Indicators Project

www.sfindicatorproject.org

San Francisco Indicators Project, formerly known as the Sustainable Communities Index and the Healthy Development Tool is a system of indicators that measures livability, equality, and prosperity in the city. The San Francisco Department of Public Health manages the data collection and monitoring. The SF Indicator Project uses an online framework and data repository to provide an open data source for neighborhood performance.

The SF Indicator Project examines eight dimensions of a healthy, equitable community: environment, transportation, community cohesion, public realm, education, housing, economy, and health systems; to measure and compare performance across San Francisco neighborhoods. Since its inception in 2007, the SF Indicator Project has developed into a strategic model for providing neighborhood baseline conditions assessments to inform long term strategic planning in the city of San Francisco. The SF Indicator Project measurement methods have been adapted and are being practiced in cities including Richmond, California; Denver, Colorado; Galveston, Texas; Oakland, California; Philadelphia, Pennsylvania; and Geneva (Switzerland).



Minneapolis Sustainability

<http://www.ci.minneapolis.mn.us/sustainability/index.htm>

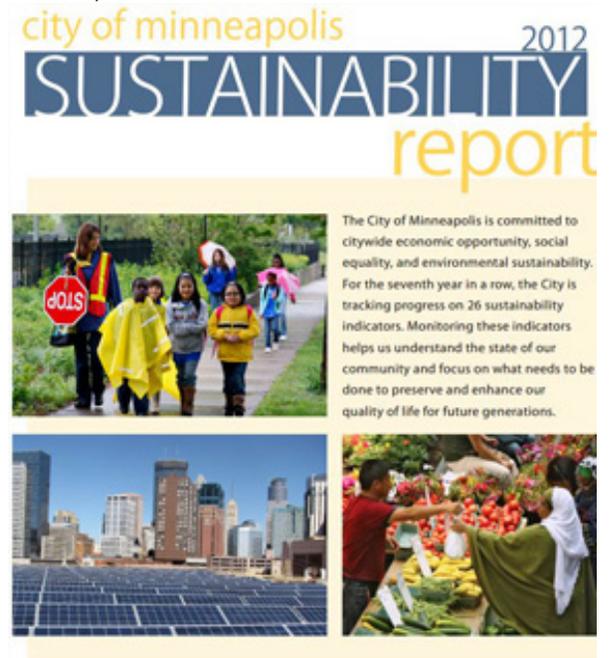
The City of Minneapolis has adopted a data driven strategy aimed at improving their mission of citywide “economic opportunity, social equality, and environmental health”. The City has developed a system of sustainability indicators that are tracked and recorded to understand current successes and failures, as well as to inform planning for the future.

The City Council approved 10 year goals for all the indicators most recently in January of 2012. The Indicators included three main target areas of focus which contains 26 subarea indicators. The main areas of focus are:

1. A Healthy Life – This target area covers issues of health measurement, including infant health, teen pregnancy, STDs, health issues related to weight, asthma, and lead poisoning.
2. Greenprint – This target area includes indicators for measuring environmental resiliency, including climate change, renewable energy, air quality, landfill reduction and recycling, bicycling, and transportation.
3. A Vital Community – This target area measures indicators important to community concerns, including cost burdened housing, homelessness, brownfields, violent crimes, community engagement, arts and economy, high school graduation, employment, and poverty.

In 2012, the City of Minneapolis also began making their tracking and measurement of sustainability indicators public through a city website to make data available to a wider audience. The City also took this opportunity to provide a more visual analysis of their

data. They used “interactive graphs, charts, and other visual aids” to provide data to community members in a visually rich format designed to more easily inform and educate the public. They also make a number of reports available to the public that outline the city’s goals and progress on issues like the greenhouse gas inventory. Beyond publicly available data and reports, Minneapolis is also engaging with community members directly to take part in “protecting (their) environment and expanding opportunity and equity” through activities such as an energy challenge, grants for special projects, and educating community members on how they can help to protect the City’s lakes, streams, and rivers.



Additional Resources

National Neighborhood Indicators Partnership (NNIP)

www.neighborhoodindicators.org

The National Neighborhood Indicators Partnership is a network of local organizations which collect, organize and use neighborhood data to tackle issues in their communities. With the spread of the movement for open data and government transparency at the local level, they operate in collaboration with the national Urban Institute to provide information for decision-making and community building. The guiding principle is to provide open and accessible data, a service made possible thanks to major cost reductions in information technologies.

The NIIP was created in 1995 with the gathering of six original partners equipped with the most sophisticated neighborhood-level data systems in the US: the Atlanta Project, the Boston Foundation (Persistent Poverty Project), the Center on Urban Poverty and Social Change in Cleveland, the Piton Foundation in Denver, the Providence Plan and the Urban Strategies Council in Oakland. Their practice provided a number of principles which hence guided NIIP's development:

- maintain automated data systems with regularly updated data from multiple sources
- emphasize the application of data in action programs and policymaking
- support community building and address issues in distressed neighborhoods
- serve as a reference for a variety of users in the public interest
- use information as a bridge to encourage collaboration among stakeholders

- provide reliable information free of any short-term interests

All NIIP partners today maintain data from three types of sources: U.S. censuses, administrative records updated by local public agencies, and special surveys and inventories. As for neighborhood indicators, however, the NIIP has recognized that there is no one "correct" list. Outcome indicators should be selected at the discretion of the local partner according to:

- regularity and actuality of the data
- reliability and stability
- clarity and simplicity
- honesty (risks of potential bias)
- its relevance
- most importantly, its usefulness

The primary goal of the NIIP is to facilitate the direct and practical use of objective data by city and community leaders, by developing new tools and guide and by informing policymakers. Secondly, it seeks to build and strengthen capacity in new or distressed neighborhoods by encouraging the development of community services and by making information readily accessible. Finally, the NIIP also intends to strengthen national leadership by providing new tools for best-practice governance.

Community Indicators Consortium (CIC)

www.communityindicators.net

The Community Indicators Consortium is a collaborative effort seeking to further information sharing and collaborations across geographies and disciplines. An open dialogue policy is the key to improving the quality of community life and the sustainability of the shared environment. The objective of the CIC is to provide ways for community groups, individuals

and governments to coordinate efforts and generate positive change, by enhancing knowledge and community measurement. The CIC, therefore, is an active and global community of practice among persons interested or engaged in the field of indicators development and application –this can entail, for instance, community-based practitioners, academic experts, community residents, public officials, students, civic leaders, planners, media professionals, etc. All stakeholders can participate in the CIC's open learning network. The goal of the CIC is to:

- advance the art and science of indicators, and their use for community awareness and change
- facilitate the exchange of knowledge about indicators, by creating a global community of practice
- encourage the development of effective indicators and the connectivity between them
- foster informed civic and media discourse about local, regional, national and global priorities

The CIC has been building an online resource database since 2005. It gathers information about indicators (publications, presentations, reports) and provides users with links to other relevant sources of knowledge. The CIC in itself does not constitute a database of indicators, but rather a tool to understand appropriate methodologies about data collection, measurement and analysis. For instance, it can provide pertinent resources to assess the relevancy of a study or to complement a project with new indicators. Users can participate in online discussions and get involved in a community of practice: this platform aims at the general improvement of the shared knowledge on indicators, and seeks to promulgate the best practices in using and developing neighborhood-level measurements.

DataHaven

www.ctdatahaven.org

For the city of New Haven, the largest provider of high-quality data is DataHaven, a local non-profit created in 1992. Since 2003, their core product is an interactive website (www.ctdatahaven.org) which provides a wide range of information on the region of New Haven, fully accessible to the public. The data collection covers indicators for 22 towns of South Central Connecticut, as well as some state-level indicators for comparison purposes (partnership with Connecticut Data Collaborative).

Its objectives are to engage the general public through interactive resources, to facilitate progress monitoring through objective data, to provide resources to civic groups of all levels (neighborhood, community, city, regional)

The website gives access to raw data organized into 8 Community Indicators: demographics, economy, housing, health, education, civic vitality, public safety, and environment. Some data is available as far back as 1990, but time spans are generally variable. For the majority of indicators, a breakdown in small geographic units (districts) and in years is available and customizable in table form. All the data seems to be provided by local public authorities and social services. The areas of economy, housing, health and education have the most content over larger time periods (typical quantitative indicators), while the environment section only displays data about commuting; the civic vitality page only has information about voting and library use. This apparent lack of data is addressed with a knowledge center, a collaborative project easily accessible through interactive links. It was generated with the standard wiki web platform,

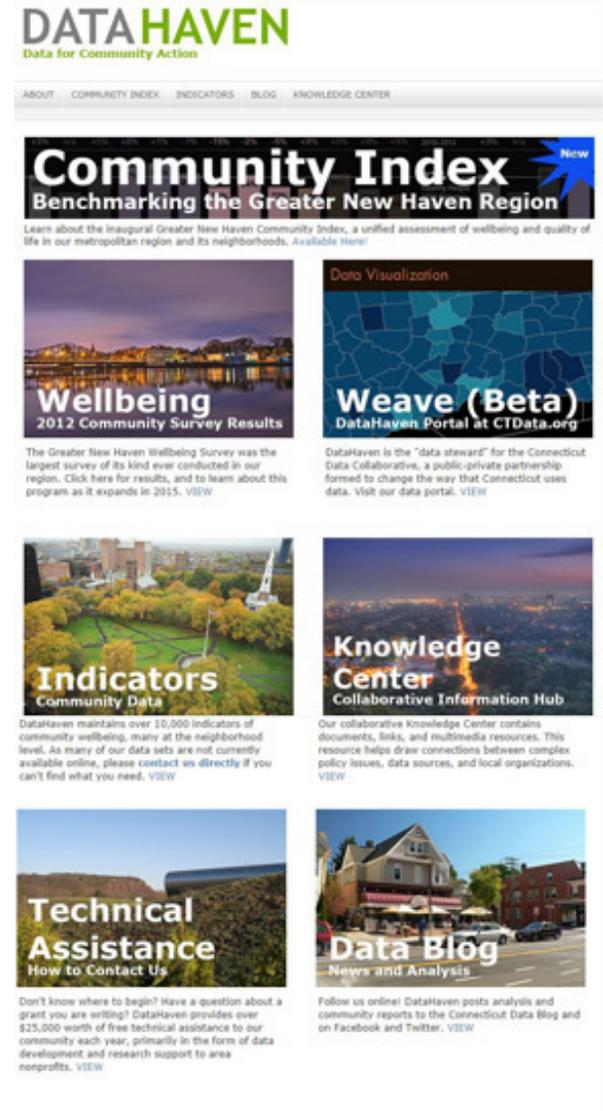
which allows users to search by geography, topic, organization, etc., and to make contributions after approval by an administrator.

The role of this center is to:

- gather documents from local agencies
- connect with relevant agencies and research institutes and their upcoming meetings
- provide information on national resources, agencies and policies,
- gather news articles and examples of civic activism that have positive impacts on indicators
- open an on-line discussion column

DataHaven’s objective is also to compile and analyze data, in the form of reports and surveys available on-line. Their most comprehensive report, The Greater New Haven Community Index 2013, aims at a better understanding of regional dynamics for the general public but also for policy making and decision taking. DataHaven is currently conducting a Community Wellbeing Survey (ongoing research until 2015-2016), the largest undertaken in the area. Results are extracted from telephone interviews with 1,307 randomly-selected landlines of the region, in September 2012. Most questions were derived from other national surveys for comparability, but some also targeted issues specific to the region (e.g. racial issues, disparities in education).

DataHaven is working in close connection with the Connecticut Data Collaborative, a state-wide initiative (www.ctdata.org) which also provides a data catalog, visual collections, links to other resources and relevant information, and a knowledge center.



Recommendations for Data Collection and Monitoring

There is no currently no reliable, systematic method of annual data collection that enables full monitoring and assessment of plans, policies, public spending, and outcomes. Extensive data is collected internally by many city departments and other agencies, but is not typically transparent or accessible to the public. The SSNAP research of best practices in other U.S. cities, as well as our recent experience in attempting to source and collect data from multiple city and other agencies, highlights areas where significant improvements can be made in goal-setting, data collection, benchmarking, monitoring and tracking, and open access (as the comprehensive plan calls for).

By institutionalizing subarea data collection across departments, using new technologies, and open sourcing, planners gain powerful tools for sustainable growth. Decision makers will be better informed, and community members will have better information about community needs and the city's response.

Subarea Data Collection

There is a high value and return in benchmarking and tracking data by subarea (i.e. neighborhood or Urban Village). Subarea measurements tied directly to the Urban Village Strategy and comprehensive plan goals give the city, departments, and policy makers, greater insight into how indicators are performing at the neighborhood level. These same insights simply cannot be gleaned from citywide or regional measurements. Citywide measurements, while still useful, may hide important and sometimes striking differences and wide disparities in economic, social, and environmental outcomes between neighborhoods. The data collection and spatial criteria should be set to correspond with the Urban Village Strategy if this is to be carried forward.

Sustainability Indicators

Integral to the city's success in the future and long overdue, the next Comprehensive Plan Seattle 2035 would be well-served by establishing now, a carefully selected, durable set of sustainability indicators to measure social, environmental, and economic outcomes over the lifetime of the plan.

Public Expenditures

Capital project and program spending should be tied to subarea outcomes, consistent with the intent of the Urban Village Strategy. There is presently no consistent way to accurately track public investment in neighborhoods or measure results across areas of service, supports, and the concurrent infrastructure improvements that are needed to support growth.

Use of Advanced Technologies, Academic Research and Partnerships

Advancements in data collection software and GIS technologies are tools that can help make the city more efficient and effective at implementing new strategies. There is great potential to tap the resources of some of our outstanding local research institutions such as the University of Washington's School of Public Health, College of the Built Environment, Urban Ecology Research Lab, and Green Futures Lab.

Remove Data Collection Barriers

When data is routinely collected but cannot be readily compiled for an urban village or the target subarea, such as residential and commercial solid waste, energy, or water usage, establish spatial criteria for organizing data that allow greater consistency with other types of data collected in alignment with the city's Urban Village Strategy.

Strengthen Link to Comprehensive Plan

Design and institutionalize an inter-departmental data collection system linked to all major comprehensive plan goals, the Urban Village Strategy, and all 11 elements of the plan, including Urban Villages, Land Use, Transportation, Housing, Capital Facilities, Utilities, Economic, Neighborhood, Human, Cultural, and Environment.

Open Source Data

Establish a user-friendly open source data collection and reporting website drawn from various departmental and agency sources, where compiled, aggregate, and updated raw data can be accessed by anyone for any purpose. The website could also be activated with ideas and solutions postings from community members.

SEATTLE SUSTAINABLE NEIGHBORHOODS ASSESSMENT PROJECT



6.ROLE OF COMMUNITIES

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6.ROLE OF COMMUNITIES

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Role of Communities

People and organizations, because of their intimate knowledge and associations, can motivate and sustain changes in their communities, and can have a powerful role in influencing positive outcomes at the neighborhood level. To gain a deeper understanding of the role of community members in advancing sustainability in Seattle's neighborhoods, grassroots activism and priority setting were identified as informative. Research was conducted to examine community organizations and involvement of community members in each selected urban village, with a focus on the pathways and obstacles experienced towards sustainability and community growth objectives. Limitations in the scope of work prevented more extensive outreach and research. Nevertheless, we reviewed active neighborhood and community groups and websites, conducted personal interviews and conversations with community members, and observed and participated in community meetings and events.

Downtown

As the largest selected neighborhood of Seattle and the most populated, the sense of place and community may be hard to grasp at first. While most areas are following specific neighborhood plans, a unique development process has been implemented in Downtown Seattle with hefty funding from the city government. Residents, groups and businesses are actively involved in the Downtown Seattle Association, creating a number of programs aimed to sustain the health and vibrancy of Seattle's urban core. The DSA is the only association that focuses solely on the downtown area, gathering residents for semi-monthly discussions and meals, and organizing quarterly resident councils. With great civic activism, the DSA has advocated for environmental improvements such as the waterfront promenade, and the replacement of the Alaskan Way Viaduct.

Other examples include the creation of five Metropolitan Improvement Districts where cleaning, safety, transportation and business development programs are prioritized. Pressing policy issues are frequently communicated to members.

Downtown Seattle Cares, a key social program of the DSA, builds upon the association's long history of addressing a wide range of issues. It provides services such as support for mental illness or substance abuse, night and day shelters, and creates professional training and employment opportunities. Diversity and vibrancy are crucial objectives in the development plans of the downtown area. As Downtown's residential population grows so have the number of active residential tower associations and Downtown community groups, who are taking active roles in influencing city policy on quality of life issues from crime, to parks, and bike and pedestrian needs.

Seattle's Public Housing Authority is working to bring in more mixed-income housing to the urban core, including the massive Yesler Terrace project, one of the largest public housing/mixed use redevelopments in the nation.

University Community

The University Community benefits greatly from the presence of an active and engaged population. In particular, the University of Washington (UW) provides vast human and intellectual resources, which direct focus to neighborhood development and community growth. The UW faculty and the diverse student engagement enhance a wide range of knowledge centers and civic activism throughout the area. Community resources and volunteer opportunities are bountiful.

However, in the built environment, the vibrancy of the U-District community has yet to be enhanced through urban planning and design. Walkability is an indicator subject to much change in the coming years, with the arrival of the Link light rail transit systems. Public participation is made possible through the City/University Community Advisory Committee (CUCAC), which consists of 16 representatives appointed by surrounding communities and the UW. It is formally organized and staffed under the city's neighborhood community council system. The University District Partnership was recently created from merger groups in collaboration with the City, the UW, Sound Transit, business owners and residents. It has identified short and long-term actions aiming to enhance the surrounding neighborhood as a diverse, economically active, attractive and safe community for all.



Ballard

The Ballard community draws its charming character from a vivid history of maritime traditions and Scandinavian heritage. New residents have come to animate this blend of long-time “Ballardites”, giving rise to an active nightlife with many up-and-coming bars and shops around the main arterial. Many organizations seek to preserve the lasting identity of Ballard, while encouraging the development of the thriving business district. For instance, the Ballard Partnership for Smart Growth is a local initiative which leads the conversation around urban design, transportation and public safety, putting much emphasis on the need to balance growth and preservation in the neighborhood. The Ballard Historic Society also contributes to these goals.

Residents and stakeholders have congregated together to address the community’s priorities while remaining coordinated with citywide policies and regional goals for urban development. Many take an active part in the Ballard Urban Design Framework, especially with the projected construction of a high-capacity transit station in the area. The residents’ voice in solving neighborhood issues is represented by a strong community council, a central district council as well as the Ballard Residents Association. Environmental concerns and quality of life are tended to by dynamic families and organizations such as Sustainable Ballard. Events, services and news are communicated by organizations such as My Ballard and the Ballard Neighbor Connection.

Lake City

The Lake City Neighborhood Alliance (LCNA) unites 22 community groups with the objective of improving and protecting the lives of Lake City residents. With a geography divided by large arterials and a state highway, resolving the physical and mental sense of separation was identified as the main mission of the LCNA. Through active engagement, the member organizations collaborate to identify common neighborhood goals, pool resources and support each other in developing neighborhood projects. A frequently updated online calendar contributes to bringing community members together with public interest events (e.g. bi-monthly cleanup walks), socials (e.g. knitting night) or democratic meetings to review community goals.

Another collaborative group called Lake City Future First came together to enable residents and businesses to have a voice in the city’s creation of an urban design framework for the Lake City neighborhood. Their mission is to create a sustainable organization, engage businesses, and develop a strategic plan. Overall, active participation has been complementing the city’s plans for Lake City. The collaborative effort organizes focus group discussions, public workshops, online comments, and works with neighborhood groups to provide ideas and recommendations for future development.

West Seattle Junction

Sustainable West Seattle is a strong neighborhood group, which provides valuable community resources for residents living in the West Seattle Junction. It aims to bridge sustainability and community in the local West Seattle neighborhood by providing access to resources, information and tips on how to help enhance the neighborhood’s sustainability, from native plant protection to facts on transportation. The webpage is up-to-date with numerous events and newsletter posts which engage civic activism. A powerful statement explains the inspiration for the organization: “We envision a West Seattle community of empowered community members who actively lead us toward greater self-reliance, local democracy, social justice, and existence in harmony with life on earth” (<http://www.sustainablewestseattle.org/about>).

The famous West Seattle Blog is another key tool for sharing information throughout the West Seattle community. The West Seattle Blog includes information covering crime watch, traffic, lost/found pets, weather, events, local news, and job postings. This is a model for neighborhood and community information sharing.

The West Seattle Junction’s visitor webpage demonstrates the vibrancy of the neighborhood by identifying places to eat, shop and drink, by listing local services and events. Overall, community building grows through multiple opportunities to engage in social gatherings.

Aurora-Licton Springs

The Licton Springs neighborhood webpage provides community engagement resources, coordinates neighborhood work parties and plans events for community building. Monthly work meetings provide an opportunity for community building in the Aurora-Licton Springs neighborhood. Licton Springs Community Council organizes meetings and events, and has put up a webpage that promotes the sense of place by reviewing a history of urbanization in the area. Their monthly neighborhood newsletter has been up and running since 2012, showing a recent surge in community ties.

Eastlake

Eastlake has a unique geographic disposition where I-5 borders the entire neighborhood, and the parallel arterial avenue acts as transit corridors for commute and bus routes. This physical separation calls for special urban designs to help improve the connection between the scenic waterfront and the inner residential areas. The Eastlake Community is strongly represented by the Eastlake Community Council.

The ECC coordinates community efforts, and informs community residents about what is going on in the Eastlake Community. The webpage provides a wealth of community resources including resource links, social media/blog pages, traffic and safety information, and links to land use and neighborhood planning information. The Eastlake newsletter informs residents of issues such as development plans, and sidewalks needing improvements.

North Beacon Hill

The North Beacon Hill Council and El Centro de la Raza work to deliver valuable community resources to North Beacon Hill residents. El Centro de la Raza was founded as a voice and hub for the Latino community in Beacon Hill, but aims to empower, honor, and respect all people of all races. El Centro's services and advocacy programs actively prepare community members to be impactful members of society. The Beacon Hill Blog is a popular social media site for community news and events, and a great source of information about the neighborhood.

Enhancing the sense of place, "Beacon Rocks!" is a community sponsored performance arts series held at Roberto Maestas Festival Street, now in its 5th season. The Neighborhood Matching Fund seeded another significant project: a seven-acre urban farm is being developed north of Jefferson Park. The so-called Food Forest is becoming one of the "biggest public food forests in the country" (Seattle Weekly, February 16, 2012). This will undoubtedly provide growth and opportunities to surrounding businesses, and enhance the residents' sense of place by creating a strong identity for the neighborhood.

Rainier Beach

The Rainier Beach community has many active community groups and organizations working to provide resources to residents and enhance the character of the Rainier Beach neighborhood. Leading examples include the Rainier Beach Coalition, Rainier Beach Community Club, Rainier Beach Merchants Association, and the Rainier Beach Coalition for Empowerment. With the construction of a light rail station in

2009, new publicly subsidized redevelopment projects appeared in Rainier Valley through the 50 million dollar Community Development Fund, and Seattle Housing Authority's Hope VI redevelopment projects, including New Holly and Rainier Vista. Residents in Rainier Beach have actively proposed a variety of initiatives to reinvigorate the neighborhood, where households' financial struggles and lack of parental involvement may lessen community engagement. Examples include affordable housing projects, classes and workshops for all by the Neighborhood Academy, a Youth Community Orchestra, etc. The vision for empowered community members is completed with environmental initiatives such as the Rainier Beach Urban Farm and Wetlands, and Daylighting Maples Creek project.

Westwood-Highland Park

The Highland Park Improvement Club has represented historic solidarity in the Westwood-Highland Park neighborhood since 1919. This community group aims to combine community service with an active social network by engaging the community, organizing neighborhood events and places for people to gather. The Westwood Village also has a webpage for shopping, dining out, and events within the Westwood Village community, enhancing ties between the residents and promoting local businesses. The White Center Community Development Association located in the Westwood-Highland Park urban village aims to address holistic community development in Westwood-Highland Park and the greater White Center community.

Themes in Community

COMMUNITY ENGAGEMENT AND VOLUNTEER EVENTS: Uniting people to improve neighborhood conditions by providing venues for community interaction.

Featured example: the Aurora-Licton Springs monthly work meetings for community building and Licton Springs Park improvements and restoration of what was once vast wetlands. Community members unite to nurture and preserve this environmentally significant piece of land that make their community unique.

URBAN DESIGN: Redesign and innovate to enhance streets, parks, greenways and open public spaces in a sustainable manner.

Featured example: the Lake City Urban Design Framework is motivating collaborative relationships between community stakeholders and the city of Seattle Department of Planning and Development. The Lake City Urban Design Framework strives to integrate grassroots activism with policy and planning to advance goals and facilitate positive change to streets, pedestrian connections, public open spaces, and natural features.

ACCESS TO INFORMATION: Community social media and communication tools are trending across neighborhoods as the venue for coordinating and motivating grassroots activism and strengthening community empowerment.

Featured example: the West Seattle Blog and Sustainable West Seattle webpage connect West Seattle residents to a hub of information including volunteer opportunities, crime watch, events, community and sustainability resources, newsletter posts, and links to useful pages ranging from native plants to transportation.

PUBLIC SAFETY: Whether it is traffic safety, walkability, or crime, neighborhood residents deeply value the safety of the places in which they live. Communities all across Seattle unite to combat crime and work to improve public safety in their surrounding environments by increasing awareness, addressing risks, and strengthening resources for youth.

Featured example: Rainier Beach 'Find it Fix it' Community walk urges residents to get out and walk the Rainier Beach community, focusing on several crime hot spots to identify what can be improved to make the Rainier Beach community a safer neighborhood.



Goals and priorities vary across the city of Seattle due to differences in existing conditions, demographics, and unique community culture.

The SSNAP research elucidated four common themes in community priorities. Each trend includes a featured example from one of the 10 SSNAP Urban Villages.

Note: Themes are not listed in any order of importance.

Recommendations for Community Involvement

Reflecting Seattle's enduring values, there are innumerable community groups ranging from environmental and sustainability interests, to social justice youth advocacy, education, crime prevention, to neighborhood empowerment interests. The range and depth of Seattle's volunteer organizations, led by highly motivated and inspired individuals, help drive progressive change. However, our research into the role of community members influencing Seattle's sustainability achievements revealed multifaceted levels of engagement. Areas with high levels of community activism, like Rainier Beach, still suffer from comparatively higher poverty and crime rates. Neighborhoods such as Ballard have very active residents speaking out in response to increased traffic and parking pressures, public safety, and the construction of numerous large building blocks threatening to transform the old Ballard small town character.

These limited findings and recommendations below have been identified based on SSNAP research and observation. They are intended to encourage broad, positive, and effective community involvement.

How well can community members access the resources, information, expertise and political influence to inform city planning and influence actions?

Continue to integrate active community organizations with city planning and policymaking to nurture the connection between Seattle residents, neighborhoods and communities, and the City's strategic planning, prioritizing, and resource distribution.

Efforts such as the 2014 Seattle Neighborhood Summit demonstrate the powerful potential of honest open collaboration between city government and the community members it serves, and dialogues between neighborhoods across the city. As a convener, the city can provide a listening forum for department staff, elected leaders and community members to join together in open community conversations, share ideas, and gather information. Programs under the city's Department of Neighborhoods such as the Neighborhood Matching Fund (see indicator D2) provide funding to support community organizations and programs and positive activism. Other outreach examples such as the The Lake City Urban Design Framework and Ballard Open Space Plan can help cultivate positive community partnerships around a collective vision for prioritizing city investments in neighborhoods, infrastructure and urban villages.

Inform, coordinate, and cultivate community involvement to advance neighborhood and citywide goals.

The success of the comprehensive plan goals and fulfillment of the Urban Village Strategy depends on well-informed communities, including neighborhood based organizations and the city's district councils in every corner of the city. Regular updates, outreach, reports, tracking and data collection can help maintain community focus, encourage community engagement, and keep neighborhood and citywide funding priorities on track. Broad based groups such as SCALLOPS (Sustainable Communities ALL Over Puget Sound), Green Seattle Partnership, Feet First, and Seattle Neighborhood Greenways can help coordinate local efforts, plan events, educate, and provide a venue for collaboration between community and neighborhood groups.

Improve open data sources and accessibility of information to foster effective and informed involvement in community improvement.

The use of social media communication tools allow organizations to share information and community members to pro actively stay up to date and conversant. The city of Seattle data.seattle.gov webpage is a budding city government effort to provide open data source information. Improving the structure, organization, and data content to include established metrics consistent with city planning would provide a more user friendly and effective tool for coordinated and strategic community involvement.

CONCLUSION

Actions and Conditions That Influence the Achievement of Sustainability

If urban sustainability is defined as the embodiment of enduring community, social, economic, and environmental principles, then the analysis of the 22 SSNAP Indicators reveal the city has made measurable and impressive achievements during the 1994 –2014 comprehensive plan period. The Urban Village Strategy has worked successfully to direct urban growth predominantly to the urban villages, investment in multi-modal transportation system is working to increase capacity, and the city’s environmental stewardship and conservation achievements are among the highest in the country.

Achievements

In transportation, one of Seattle’s greatest challenges, major strides have been made in developing a stronger multi-modal urban transportation system, with the extension of regional light rail, bus rapid transit, and urban trails, neighborhood greenways, pedestrian, and bike infrastructure improvements.

Seattle Public Utilities, City Light, and Seattle Parks deserve high recognition for their advanced conservation strategies, education, and advocacy programs. This is especially true in the areas of energy and water conservation, and municipal waste reduction. Urban tree canopy, parks acreage, and access to parks, also have demonstrated exemplary performance in data collection, tracking and reporting results. These achievements would not be possible without strategic planning and budgeting, aggressive goal setting, reliable data tracking, and steady institutional commitment to conservation. Political leadership, and strong, active support from community members cannot be overlooked as important critical factors in these successes.

Opportunities for Improvement

As much as 25% of the city’s streets lack basic infrastructure such as sidewalks, drainage, and traffic safety controls, and traffic congestion and car dependency citywide are still at very apparent. As much 25% of the city still lacks basic pedestrian infrastructure and sidewalks. It is clear that the city is far from a fully developed, seamless, inter-modal system.

Moreover, King County Metro, which carries more than 300,000 riders per day through Seattle and is approaching 125 million boardings annually – the lion’s share of regional non-auto daily commute and other travel – is facing severe service cuts, by as much as 16%. With current ridership capacity already strained and projected new growth in population and employment, we can expect to see continued worsening traffic congestion, overcrowded buses, and longer travel delays.

Inadequate storm water management and street drainage are still a widespread problem. The city is under a federal EPA consent decree to respond with

aggressive measures to correct the high number of combined sewer overflows (CSOs) that contribute significantly to the on-going water pollution and poor water quality that effect environmental health. An even bigger challenge may be the long-awaited cleanup of the Duwamish River and waterway running through the low-income communities of South Park and Georgetown, where a federal EPA superfund site is targeted for major hazardous waste cleanup.

Comprehensive Plan 2035: Toward a Sustainable Seattle

As Robert Kennedy often said, “We don’t measure what really matters.” The SSNAP economic and community indicators identify deep, persistent, long-term disparities between the city’s various neighborhoods in education, health, housing, and economic opportunity. We can take much pride in our environmental accomplishments, but a truly sustainable and just city we cannot ignore these troublesome patterns of social inequity. Arguably, without a better balancing of priorities and public investment, true sustainability cannot be realized.

The Urban Village Strategy has been highly successful in distributing most of Seattle’s employment and population growth to designated urban centers and villages. This achievement has been accomplished largely through planning, land use and zoning tools. However, this study has found that many of the comprehensive plan’s other important goals and policies intended to support the Urban Village Strategy lack clearly defined metrics and the means to track performance at the department level, where they are carried out. The Department of Planning and Development independent of other city departments cannot fully accomplish its planning function without strong commitment and coordination of the city’s 48 other departments, offices, and divisions.

Many city departments collect certain data for internal purposes such as strategic planning, performance monitoring and budgeting. That data may not serve to track citywide goals and desired outcomes identified in the comprehensive plan and its 11 elements. Community members have an important role in any successful urban strategy for achieving positive outcomes and higher levels sustainability. To increase accountability and encourage community participation, individuals must have easier access data, and the data must be understandable, actionable, reliable, and durable across systems.

A basic problem in data collection is the lack of a coordinated plan (between agencies and departments) for delivering services, infrastructure, and capital investment that identifies and supports the accommodation of growth within urban villages. It's true, that some CIP projects may not tie directly to urban villages, such as an arterial repaving project that extends well beyond the urban village boundary.

Some CIP projects may not tie directly to urban villages, such as an arterial repaving project that extends well beyond the urban village boundary. Where there are distinct investments made to public facilities around the city, they should be prioritized and shown to support growth demands and needs of the specific neighborhood Urban Village experiencing growth. In this way, it can be better demonstrated to the public how the city's planning efforts and strategic investments are working to balance growth with services, infrastructure, and amenities.

What Then, Should Be the Next Iteration of Neighborhood Planning?

At the neighborhood level in Seattle, it's not possible to fully assess the effectiveness of the original neighborhood plans and priorities, since they are no longer consistently tracked, and many priorities may have changed. The city's planning resources appear to have been shifted to light rail station areas and areas such as University District targeted for up-zoning. The new emphasis appears to be intended to encourage denser development that will increase ridership and support so-called "transit friendly communities."

To coordinate with future planning (Seattle 2035), the city should consider establishing a five-year Urban Village Strategic Plan tied the five-year CIP and the biennial budgeting process. A coordinated, more unified data collection and monitoring system across departments would allow the city to better channel public investments where they are needed most, based on the Urban Village strategy, neighborhood priorities, and citywide goals. This would serve to provide future decision-makers with a guidepost, and community members would be better informed about the outcomes.

Finally, in the plan update to accommodate future growth for the next 20 years, a review and analysis of existing urban village boundaries and designations may be timely and warranted. Is current zoned capacity sufficient to meet the city's growth trajectory largely within existing urban villages? How well can the existing urban villages, and limited land areas they represent, accommodate most of the 115,000 new jobs and 120,000 more people expected? Can growth be better balanced and distributed across the city, so that some neighborhoods are not overburdened with excessive growth while other neighborhoods see little growth or public investment?

Consideration should be given to:	
1	Establishing new urban villages in mixed use areas already zoned for greater density, but lacking infrastructure and amenities.
2	Making urban village boundary adjustments where needed to respond to growth patterns and linkages to transportation facilities.
3	Re-designating some urban villages from Hubs to Centers, and Residential to Hub urban villages.
4	Conducting a similar assessment for the Manufacturing and Industrial Centers.



Conclusion

The use of community indicators has great potential value in improving tracking and accountability, and informing outcomes. Subarea indicators can serve to identify problems not revealed at larger scales, including disparities between communities, and to help policymakers set priorities and track results.

However, practices are evolving nationwide, and there are inherent limitations to the use of community indicators. For some areas of public policy, citywide or regionally collected data may be wholly sufficient. We hesitate to speculate over the cause-and-effect results of the indicators. Rather, the SSNAP report provides discrete data in legible form, with limited interpretation, available for others to explore question, interpret, and form their own conclusions.

Seattle was just recognized as the nation's "Most Sustainable City" by STAR Communities, largely for its environmental leadership and sustainability achievements. At the same time, the STAR rating process identified social equity and environmental justice as key areas for improvement. We agree. As an urban innovator with a thriving and diversified economy, and progressive, highly engaged communities, Seattle has many advantages over other cities with similar urban problems. Over the next 20 years the Seattle 2035 comprehensive plan can set clear, actionable goals, measure them, track outcomes more strenuously, while working closely with community partners in areas of under-performance, particularly in the areas of economic opportunity, education, housing, and health. The city's civic and political leadership will need to prioritize resources and hone the necessary tools to better tackle these challenges.

We hope the information and findings contained in this report will lead to more probing questions, additional research, and ultimately improve the city's ability to meet the needs of all Seattle neighborhoods as part of a growing thriving city more equitably and sustainably.

"I believe there is a need for greater transparency and consistency in providing information and soliciting input from community leaders. That need is becoming more apparent each day."

– Mayor Ed Murray –

"The best way to predict the future is to plan for it." - Peter Drucker

OPEN QUESTIONS FOR THE FUTURE

1. What today, is our shared vision for the city of tomorrow, and how can we best accomplish it?
2. As an urban innovator, can Seattle establish a new paradigm for what it means to be a truly sustainable city?
3. Real progress toward a sustainable city can only be achieved through shared prosperity, community, and social equity—moving forward, how can it be assured?

APPENDICES

APPENDIX A

URBAN VILLAGE DEMOGRAPHICS

Table A1. Westwood-Highland Park Residential Urban Village demographics and other supplementary data.

Source: U.S. Census data aggregated for the urban villages by the Seattle Department of Planning and Development. Median household income is representative of corresponding census tracts.

Westwood-Highland Park Residential Urban Village	Benchmark Year	Current Year	% Change
Urban village boundary area (acres)	--	276	
Population	3,765 (1990)	4,606 (2010)	22.3%
Population density	13.6 (1990)	16.7 (2010)	
Employment	991 (1995)	1,366 (2012)	37.8%
Employment density	4 (1995)	5.6 (2012)	
Percent persons of color	39.7% (1990)	60.8% (2010)	
Median age	32.4 (2000)	33.2 (2010)	
Percent homeownership	38.3% (2000)	40.9% (2010)	
Residential growth—total finalized permits (net new units built)	--	289 (1995-2014)	
Median household income	--	\$54,717 (2010)	
Percent of occupied family households out of total occupied housing units	--	53.8% (2010)	

Table A2. Rainier Beach Residential Urban Village demographics and other supplementary data.

Source: U.S. Census data aggregated for the urban villages by the Seattle Department of Planning and Development. Median household income is representative of corresponding census tracts.

Rainier Beach Residential Urban Village	Benchmark Year	Current Year	% Change
Urban village boundary area (acres)	--	250	
Population	2,703 (1990)	3,583 (2010)	32.6%
Population density	10.8 (1990)	14.3 (2010)	
Employment	924 (1995)	1,026 (2012)	11%
Employment density	3.7 (1995)	4.1 (2012)	
Percent persons of color	77.6% (1990)	87.3% (2010)	
Median age	31 (2000)	31.7 (2010)	
Percent homeownership	28.3% (2000)	25.2% (2010)	
Residential growth—total finalized permits (net new units built)	--	88 (1995-2014)	
Median household income	--	\$50,634 (2010)	
Percent of occupied family households out of total occupied housing units	--	58% (2010)	

North Beacon Hill Residential Urban Village	Benchmark Year	Current Year	% Change
Urban village boundary area (acres)	--	131	
Population	2,531 (1990)	2,900 (2010)	14.6%
Population density	19.3 (1990)	22.1 (2010)	
Employment	359 (1995)	537 (2012)	49.5%
Employment density	2.74 (1995)	4.1 (2012)	
Percent persons of color	80.1% (1990)	70.9% (2010)	
Median age	37.6 (2000)	35.5 (2010)	
Percent homeownership	25.2% (2000)	26.8% (2010)	
Residential growth—total finalized permits (net new units built)	--	140 (1995-2014)	
Median household income	--	\$52,216 (2010)	
Percent of occupied family households out of total occupied housing units	--	46.6% (2010)	

Eastlake Residential Urban Village	Benchmark Year	Current Year	% Change
Urban village boundary area (acres)	--	200	
Population	3,602 (1990)	5,084 (2010)	41.4%
Population density	18 (1990)	25.4 (2010)	
Employment	4,444 (1995)	4,716 (2012)	6%
Employment density	22.2 (1995)	23.6 (2012)	
Percent persons of color	10.1% (1990)	20.5% (2010)	
Median age	31.8 (2000)	32.8 (2010)	
Percent homeownership	24.6% (2000)	28.2% (2010)	
Residential growth—total finalized permits (net new units built)	--	854 (1995-2014)	
Median household income	--	\$68,615 (2010)	
Percent of occupied family households out of total occupied housing units	--	22.6% (2010)	

Table A3. North Beacon Hill Residential Urban Village demographics and other supplementary data.

Source: U.S. Census data aggregated for the urban villages by the Seattle Department of Planning and Development. Median household income is representative of corresponding census tracts.

Table A4. Eastlake Residential Urban Village demographics and other supplementary data.

Source: U.S. Census data aggregated for the urban villages by the Seattle Department of Planning and Development. Median household income is representative of corresponding census tracts.

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Aurora-Licton Springs Residential Urban Village	Benchmark Year	Current Year	% Change
Urban village boundary area (acres)	--	327	
Population	4,709 (1990)	6,179 (2010)	31.2%
Population density	14.4 (1990)	18.9 (2010)	
Employment	2,734 (1995)	2,025 (2012)	-25.9%
Employment density	8.3 (1990)	6.19 (2010)	
Percent persons of color	21.5% (1990)	39.1% (2010)	
Median age	31.7 (2000)	30.8 (2010)	
Homeownership Rate	22.8% (2000)	37.2% (2010)	
Residential growth—total finalized permits (net new units built)	--	956 (1995-2014)	
Median household income	--	\$63,979 (2010)	
Percent of occupied family households out of total occupied housing units	--	39.3% (2010)	

Table A5. Aurora-Licton Springs Residential Urban Village demographics and other supplementary data.

Source: U.S. Census data aggregated for the urban villages by the Seattle Department of Planning and Development. Median household income is representative of corresponding census tracts.

West Seattle Junction Hub Urban Village	Benchmark Year	Current Year	% Change
Urban village boundary area (acres)	--	226	
Population	2,885 (1990)	3,788 (2010)	31.3%
Population density (people/acre)	12.8 (1990)	16.8 (2010)	
Employment	2,504 (1995)	2,878 (2012)	14.9%
Employment density (jobs/acre)	11.1 (1995)	12.8 (2012)	
Percent persons of color	15% (1990)	24.9% (2010)	
Median age	36.7 (2000)	37.6 (2010)	
Percent homeownership	26.7% (2000)	32.4% (2010)	
Residential growth—total finalized permits (net new units built)	--	1,180 (1995-2014)	
Median household income	--	\$68,615 (2010)	
Percent of occupied family households out of total occupied housing units	--	29.2% (2010)	

Table A6. West Seattle Junction Hub Urban Village demographics and other supplementary data.

Source: U.S. Census data aggregated for the urban villages by the Seattle Department of Planning and Development. Median household income is representative of corresponding census tracts.

Ballard Hub Urban Village	Benchmark Year	Current Year	% Change
Urban village boundary area (acres)	--	425	
Population	7,311 (1990)	10,078 (2010)	37.8%
Population density (people/acre)	17.2 (1990)	23.7 (2010)	
Employment	4,699 (1995)	5,334 (2012)	13.5%
Employment density (jobs/acre)	11.1 (1995)	12.5 (2012)	
Percent persons of color	11.6% (1990)	18.2% (2010)	
Median age	33.8 (2000)	33.2 (2010)	
Percent homeownership	16.5% (2000)	28.9% (2010)	
Residential growth—total finalized permits (net new units built)	--	2,736 (1995-2014)	
Median household Income	--	\$67,478 (2010)	
Percent of occupied family households out of total occupied housing units	--	26.2% (2010)	

Table A7. Ballard Hub Urban Village demographics and other supplementary data.

Source: U.S. Census data aggregated for the urban villages by the Seattle Department of Planning and Development. Median household income is representative of corresponding census tracts.

Lake City Hub Urban Village	Benchmark Year	Current Year	% Change
Urban village boundary area (acres)	--	142	
Population	2,111 (1990)	3,899 (2010)	85%
Population density (people/acre)	14.8 (1990)	27.5 (2010)	
Employment	1,688 (1995)	1,692 (2012)	.2%
Employment density (jobs/acre)	11.9 (1995)	11.9 (2012)	
Percent persons of color	25.2% (1990)	50.9% (2010)	
Median age	28.8 (2000)	32.3 (2010)	
Percent homeownership	17.1% (2000)	17.9% (2010)	
Residential growth—total finalized permits (net new units built)	--	1,125 (1995-2014)	
Median household Income	--	\$47,297 (2010)	
Percent of occupied family households out of total occupied housing units	--	31.9% (2010)	

Table A8. Lake City Hub Urban Village demographics and other supplementary data.

Source: U.S. Census data aggregated for the urban villages by the Seattle Department of Planning and Development. Median household income is representative of corresponding census tracts.

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University Community Urban Center	Benchmark Year	Current Year	% Change
Urban village boundary area (acres)	--	410	
Population	13,402 (1990)	16,977 (2010)	26.7%
Population density (people/acre)	32.7 (1990)	41.4 (2010)	
Employment	8,347 (1995)	8,062 (2012)	-3%
Employment density (jobs/acre)	20.4 (1995)	19.7 (2012)	
Percent persons of color	24.2% (1990)	40.8% (2010)	
Median age	22.3 (2000)	22.4 (2010)	
Percent homeownership	5.7% (2000)	6.8% (2010)	
Residential growth—total finalized permits (net new units built)	--	2,021 (1995-2014)	
Median household income	--	\$31,722 (2010)	
Percent of occupied family households out of total occupied housing units	--	N/A	

Table A9. University Community Urban Center demographics and other supplementary data.

Source: U.S. Census data aggregated for the urban villages by the Seattle Department of Planning and Development. Median household income is representative of corresponding census tracts.

Downtown Urban Center	Benchmark Year	Current Year	% Change
Urban village boundary area (acres)	--	952	
Population	12,193 (1990)	26,844 (2010)	120%
Population density (people/acre)	12.8	28.2	
Employment	138,150 (1995)	143,675 (2012)	3.9%
Employment density jobs/acre	145.2 (1995)	150.9 (2012)	
Percent persons of color	34% (1990)	40.5% (2010)	
Median age	39.7 (2000)	41.3 (2010)	
Percent homeownership	17.1% (2000)	19.8% (2010)	
Residential growth—total finalized permits (net new units built)	--	11,151 (1995-2014)	
Median household income	--	\$40,112 (2010)	
Percent of occupied family households out of total occupied housing units	--	N/A	

Table A10. Downtown Urban Center demographics and other supplementary data.

Source: U.S. Census data aggregated for the urban villages by the Seattle Department of Planning and Development. Median household income is representative of corresponding census tracts.

URBAN VILLAGE	DENSITY People per Acre (2010)	DENSITY RANKING	HOUSING BURDEN HHs pay over 30 % income on housing	HOUSING BURDEN RANKING	AVERAGE RENT 1 BEDROOM Dupre + Scott (2010)	AVERAGE RENT 1 BEDROOM RANKING
University Community	41.4	1	55%	1	\$1,206	5
Downtown	28.2	2	44%	3	1,330	2
Lake City	27.5	3	43%	4	985	7
Eastlake	25.4	4	33%	9	1,264	4
Ballard	23.7	5	36%	8	1,355	1
North Beacon Hill	22.1	6	40%	5	1,035	6
Aurora-Licton Springs	18.9	7	37%	7	896	9
West Seattle Junction	16.8	8	31%	10	1,272	7
Westwood-Highland Park	16.7	9	39%	6	1,011	3
Rainier Beach	14.3	10	46%	2	685	10
*Rankings are in order from highest to lowest						

Table A11. Urban village population density, housing burden, and average rent for a 1 bedroom data with rankings in order from highest to lowest.
Source: U.S. Census population data aggregated for the urban villages by the Seattle Department of Planning and Development, U.S. Census housing burden data by census tract, and average rent for all 1 bedroom units in 20+ unit complexes from Dupre + Scott Collected Survey Data

APPENDIX B

SUPPLEMENTARY DATA

Table B1. Inflow/outflow report for the City of Seattle labor market (primary jobs) for 2010 and 2011.

Source: Census Bureau’s Longitudinal Employer-Household Dynamics (LEHD) provided by PSRC.

*Similar data in the American Community Survey table Place of Work for Workers 16 Years and Over indicates a slightly higher percentage of Seattle residents living and working in the city.

INFLOW/OUTFLOW REPORT				
Selection Area: City of Seattle				
Labor Market: Primary Jobs				
	2011		2010	
	Count	Share	Count	Share
Employed in the Selection Area	453,284	100.0%	450,433	100.0%
Living in the Selection Area	278,566	61.5%	270,735	60.1%
Net Job Inflow (+) or Outflow (-)	174,718	-	179,698	-
In-Area Labor Force Efficiency (Primary Jobs)				
	2011		2010	
	Count	Share	Count	Share
Living in the Selection Area	278,566	100.0%	270,735	100.0%
Living and Employed in the Selection Area	172,123	61.8%	167,601	61.9%
Living in the Selection Area but Employed Outside	106,443	38.2%	103,134	38.1%
In-Area Employment Efficiency (Primary Jobs)				
	2011		2010	
	Count	Share	Count	Share
Employed in the Selection Area	453,284	100.0%	450,433	100.0%
Employed and Living in the Selection Area	172,123	38.0%	167,601	37.2%
Employed in the Selection Area but Living Outside	281,161	62.0%	282,832	62.8%
Outflow Job Characteristics (Primary Jobs)				
	2011		2010	
	Count	Share	Count	Share
External Jobs Filled by Residents	106,443	100.0%	103,134	100.0%
Workers Aged 29 or younger	26,465	24.9%	26,988	26.2%
Workers Aged 30 to 54	62,790	59.0%	60,521	58.7%
Workers Aged 55 or older	17,188	16.1%	15,625	15.2%
Workers Earning \$1,250 per month or less	14,976	14.1%	15,004	14.5%
Workers Earning \$1,251 to \$3,333 per month	29,518	27.7%	29,388	28.5%
Workers Earning More than \$3,333 per month	61,949	58.2%	58,742	57.0%

Workers in the “Goods Producing” Industry Class	14,318	13.5%	13,362	13.0%
Workers in the “Trade, Transportation, and Utilities” Industry Class	21,869	20.5%	21,730	21.1%
Workers in the “All Other Services” Industry Class	70,256	66.0%	68,042	66.0%
Inflow Job Characteristics (Primary Jobs)				
	2011		2010	
	Count	Share	Count	Share
Internal Jobs Filled by Outside Workers	281,161	100.0%	282,832	100.0%
Workers Aged 29 or younger	52,425	18.6%	52,284	18.5%
Workers Aged 30 to 54	168,864	60.1%	172,760	61.1%
Workers Aged 55 or older	59,872	21.3%	57,788	20.4%
Workers Earning \$1,250 per month or less	36,269	12.9%	34,875	12.3%
Workers Earning \$1,251 to \$3,333 per month	77,278	27.5%	77,603	27.4%
Workers Earning More than \$3,333 per month	167,614	59.6%	170,354	60.2%
Workers in the “Goods Producing” Industry Class	33,086	11.8%	38,864	13.7%
Workers in the “Trade, Transportation, and Utilities” Industry Class	55,577	19.8%	53,983	19.1%
Workers in the “All Other Services” Industry Class	192,498	68.5%	189,985	67.2%
Interior Flow Job Characteristics (Primary Jobs)				
	2011		2010	
	Count	Share	Count	Share
Internal Jobs Filled by Residents	172,123	100.0%	167,601	100.0%
Workers Aged 29 or younger	38,631	22.4%	38,574	23.0%
Workers Aged 30 to 54	101,803	59.1%	98,591	58.8%
Workers Aged 55 or older	31,689	18.4%	30,436	18.2%
Workers Earning \$1,250 per month or less	22,933	13.3%	22,896	13.7%
Workers Earning \$1,251 to \$3,333 per month	51,726	30.1%	51,422	30.7%
Workers Earning More than \$3,333 per month	97,464	56.6%	93,283	55.7%
Workers in the “Goods Producing” Industry Class	10,577	6.1%	11,441	6.8%
Workers in the “Trade, Transportation, and Utilities” Industry Class	24,349	14.1%	23,067	13.8%
Workers in the “All Other Services” Industry Class	137,197	79.7%	133,093	79.4%

Average weekday boardings data sourced from King County Metro. Boardings data is collected by Automated Passenger Counters (APCs) that are installed on 15-20% of Metro's buses. Data for analysis was surveyed during the Fall Service Change each year (October through mid-February). During the course of the service change, the APC buses are randomly assigned to metro bus trips. By the end of each service change, most trips are observed multiple times.

Data includes boardings and alightings on Metro-operated busses only, including some Sound Transit Routes that Metro operates. Data does not include Sound Transit Routes operated by Community Transit or Pierce Transit, nor does it include data from Link light rail or Sounder commuter trains. Data was compiled for the urban villages from stops were selected from a shapefile of stop locations provided by King County using QGIS; stops included those inside the boundaries of the urban village, as well as those within 100 meters of the boundary.

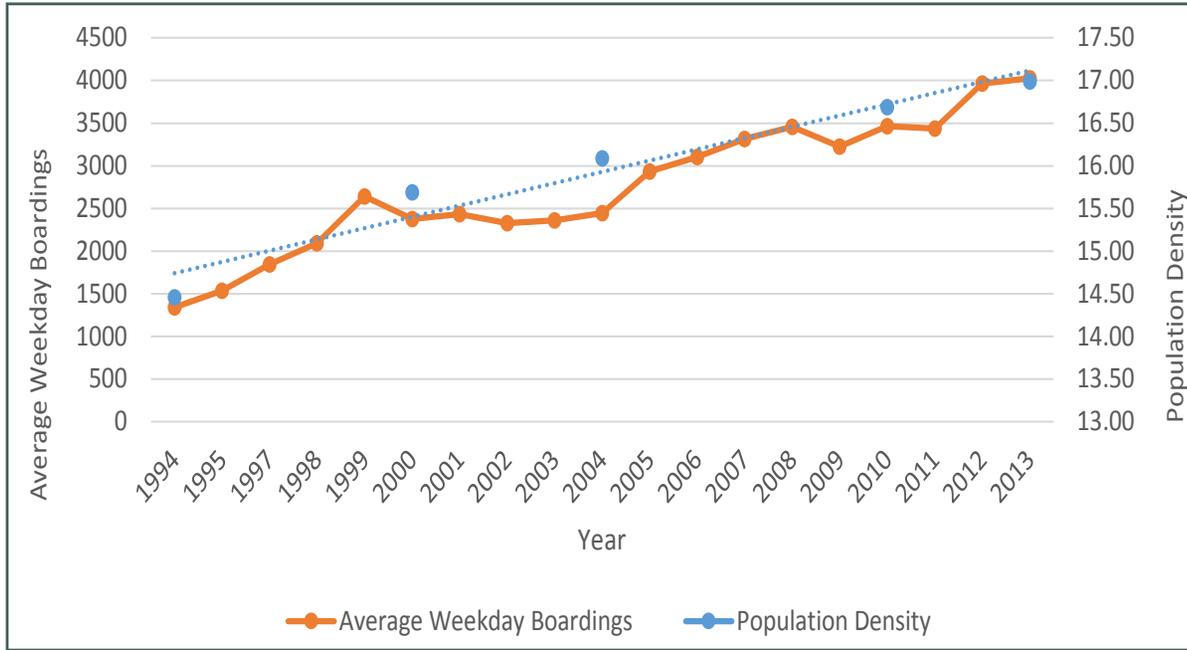


Figure B2. Westwood-Highland Park Residential Urban Village average weekday boardings and population density.

Source: King County Metro and U.S. Census Data.

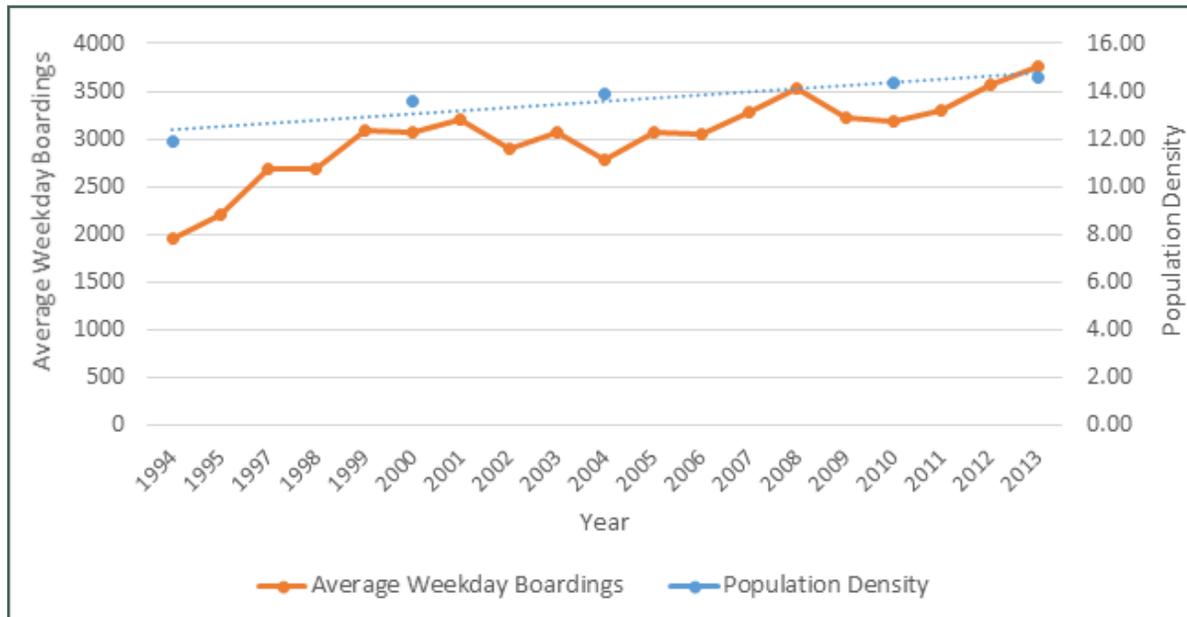


Figure B3. Rainier Beach Residential Urban Village average weekday boardings and population density.

Source: King County Metro and U.S. Census Data.



Figure B4. North Beacon Hill Residential Urban Village average weekday boardings and population density.

Source: King County Metro and U.S. Census Data.



Figure B5. Eastlake Residential Urban Village average weekday boardings and population density.

Source: King County Metro and U.S. Census Data.

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Figure B6. Aurora-Licton Springs Residential Urban Village average weekday boardings and population density.

Source: King County Metro and U.S. Census Data.



Figure B7. West Seattle Junction Hub Urban Village average weekday boardings and population density.

Source: King County Metro and U.S. Census Data.



Figure B8. Ballard Hub Urban Village average weekday boardings and population density.

Source: King County Metro and U.S. Census Data.



Figure B9. Lake City Hub Urban Village average weekday boardings and population density.

Source: King County Metro and U.S. Census Data.

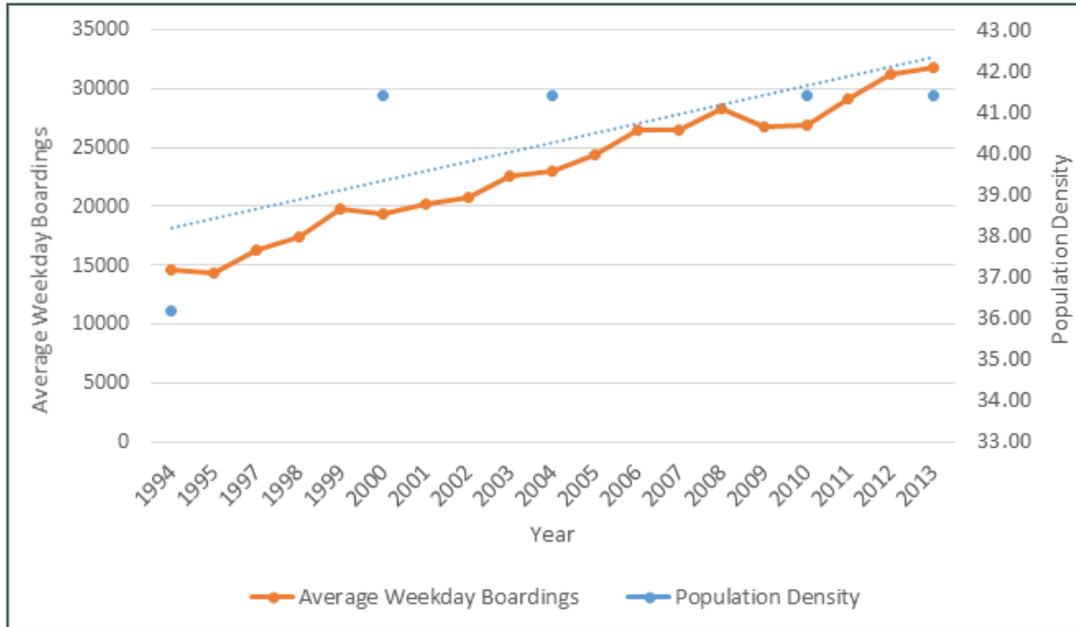


Figure B10. University Community Urban Center average weekday boardings and population density.

Source: King County Metro and U.S. Census Data.

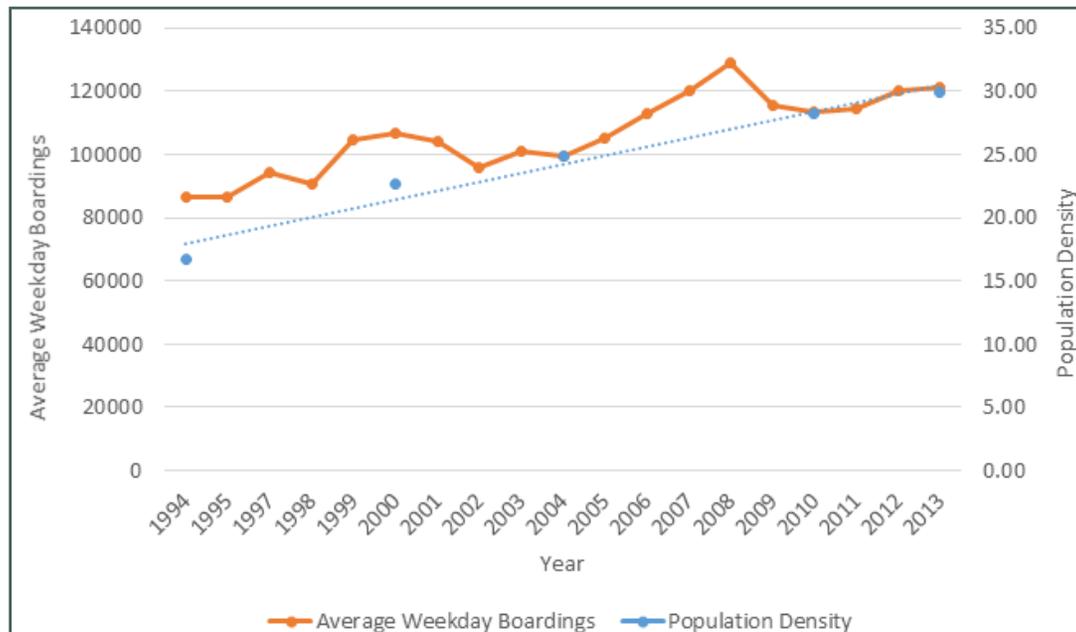


Figure B11. Downtown Urban Center average weekday boardings and population density.

Source: King County Metro and U.S. Census Data.

Mode Choice Goals for Work Trips to Seattle & its Urban Centers

Proportion of work trips made using Non-SOV Modes

Urban Center	2000*	2010 Goal	2020 Goal
Downtown	56%	62%	70%
First Hill/Capitol Hill	31%	37%	50%
Uptown/Queen Anne	33%	37%	50%
South Lake Union	30%	37%	50%
University District	56%	62%	70%
Northgate	26%	30%	40%
Seattle	39%	42%	45%

* 2000 mode choice numbers are from the U.S. Census for the year 2000 journey to work data by place of employment.

Mode Choice Goals for Residents of Seattle & its Urban Centers

Proportion of all trips made using Non-SOV Modes

Urban Center	2000*	2010 Goal	2020 Goal
Downtown	77%	80%	85%
First Hill/Capitol Hill	69%	75%	80%
Uptown/Queen Anne	64%	70%	75%
South Lake Union	65%	70%	75%
University District	60%	65%	70%
Northgate	50%	55%	60%
Seattle	53%	55%	60%

* 2000 mode choice numbers are preliminary estimates from the Puget Sound Regional Council Regional Travel Demand Model (2004 preliminary model update) for Home-Based Work and Home-Based Non-Work Trips.

Figure B12. Mode choice goals for the urban centers in Seattle.

Source: Seattle Comprehensive Plan Transportation Element

Table B2. Number of screenline locations used in the A2 Screenline Traffic Counts indicator for each SSNAP urban village study area.

Source: Seattle Department of Transportation GIS Data.

Number of Screenlines		
Urban Village	2000	2012
Westwood-Highland Park	30	16
Rainier Beach	17	4
North Beacon Hill	13	13
Eastlake	45	10
Aurora-Licton Springs	86	42
West Seattle Junction	15	8
Ballard	33	33
Lake City	17	12
University Community	235	71
Downtown	614	205

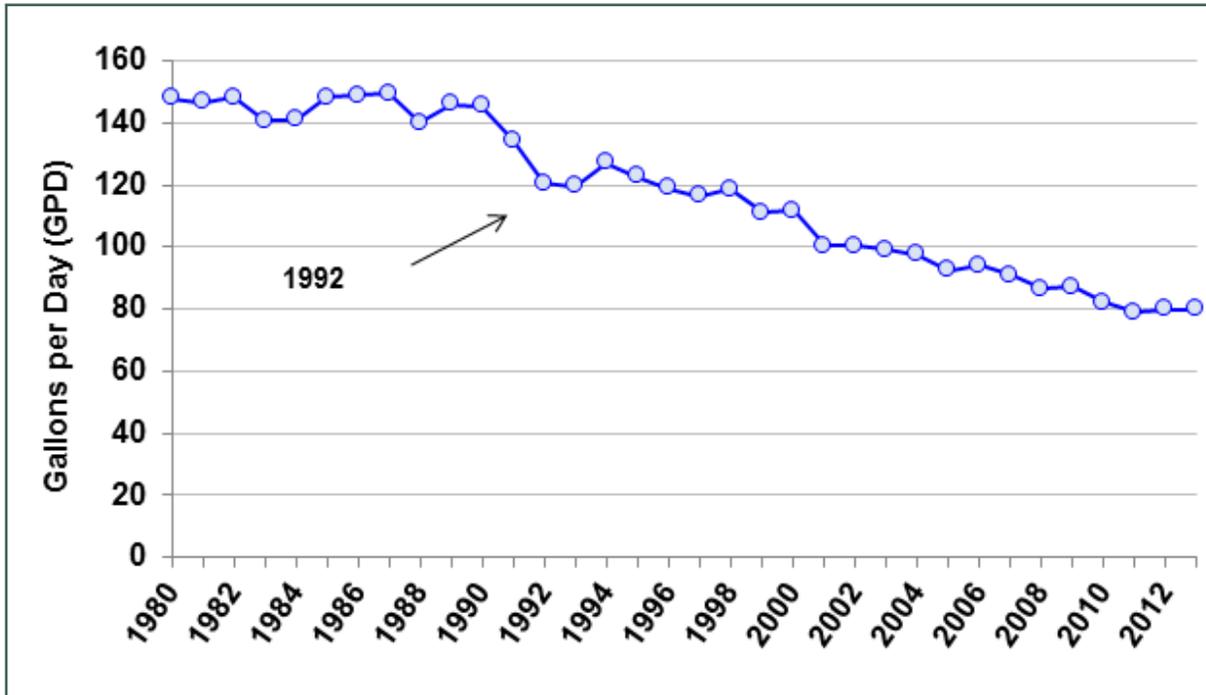


Figure B14. City of Seattle residential water consumption (gallons per day) per capita (1980-2012).

Source: Seattle Public Utilities.

After peaking in 1987 at 149 gpd, per capita water consumption in Seattle declined by almost half to just 80 gpd in 2013. A drought in 1992 led to mandatory water use restrictions and a sharp (but temporary) drop in consumption. At the same time, Seattle launched an aggressive conservation program and new state plumbing codes went into effect setting efficiency standards for all new toilets, shower heads and faucet aerators. A seasonal rate structure with inclining blocks was introduced in 1989 and the level of water and sewer rates increased rapidly during the 1990s and into the current decade. Finally, a new wave of conservation programs was begun in the year 2000 with the goal of reducing per person water consumption by 1% every year through 2010.

Residential Water Use urban village data collection methodology

Data Terms:

- Urban Village (10 total) GIS polygon layer
- DAP (Discrete Address Layer) GIS point layer
- Account Level Water Consumption data from CIDS extract 2004 – 2014

Logic:

- Extract water consumption data from CIDS database (DAP ID is an attribute to each record)
- Spatially overlay DAP points with Urban Village polygon layer – this identifies only the records within each urban village.
- Join CIDS data base to urban village layer via DAP ID

Steps:

1. DAP IDs by urban village used to create 10 different sets. Each set contains only the DAP IDs a single urban village.
2. Usage history: queried rate codes: WIR*, WID*, WIE*, WIU*, and WIA*. ("*" = rate code + any number, letter, or symbol).
3. Consumption history (refined to the above rate codes) subtotaled by year for 2004 through 2013.
4. Each urban village consumption data joined to each year (by DAP ID)
5. Obtained Total Residential Actual CCF for each Urban Village by year.

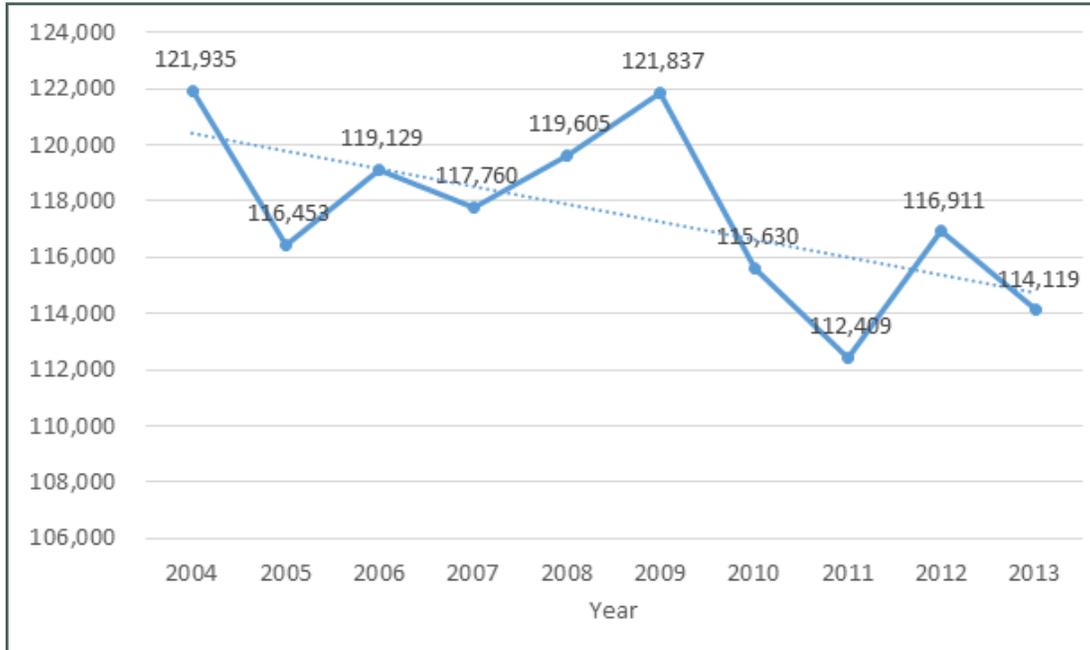


Figure B15. Westwood-Highland Park residential water consumption in 100 cubic feet (CCF).

Source: Seattle Public Utilities.

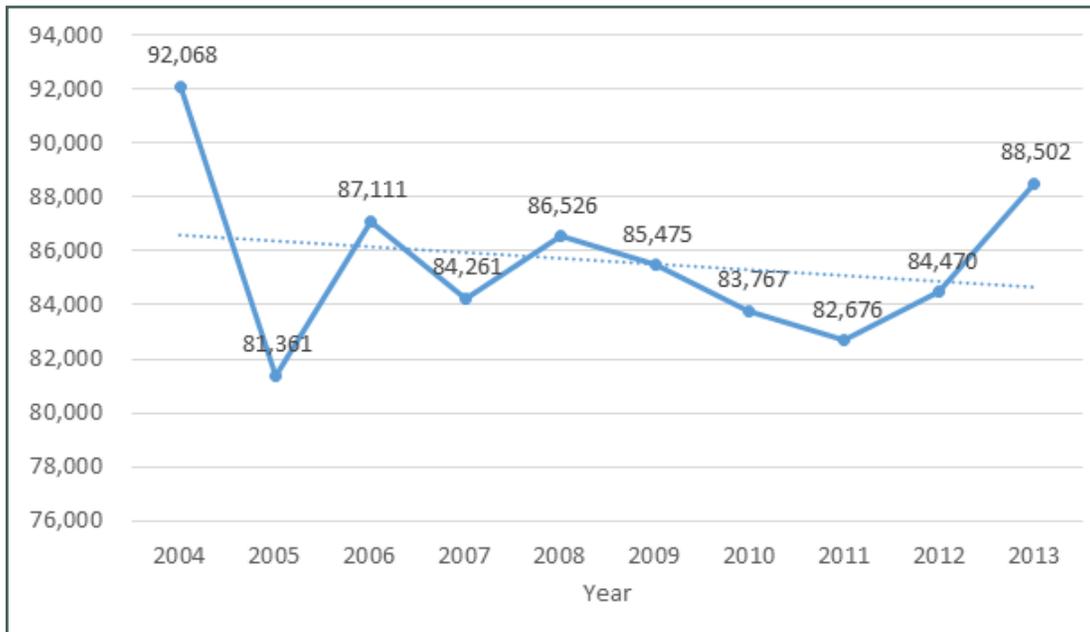


Figure B16. Rainier Beach residential water consumption in 100 cubic feet (CCF).

Source: Seattle Public Utilities.

SEATTLE SUSTAINABLE NEIGHBORHOODS ASSESSMENT PROJECT

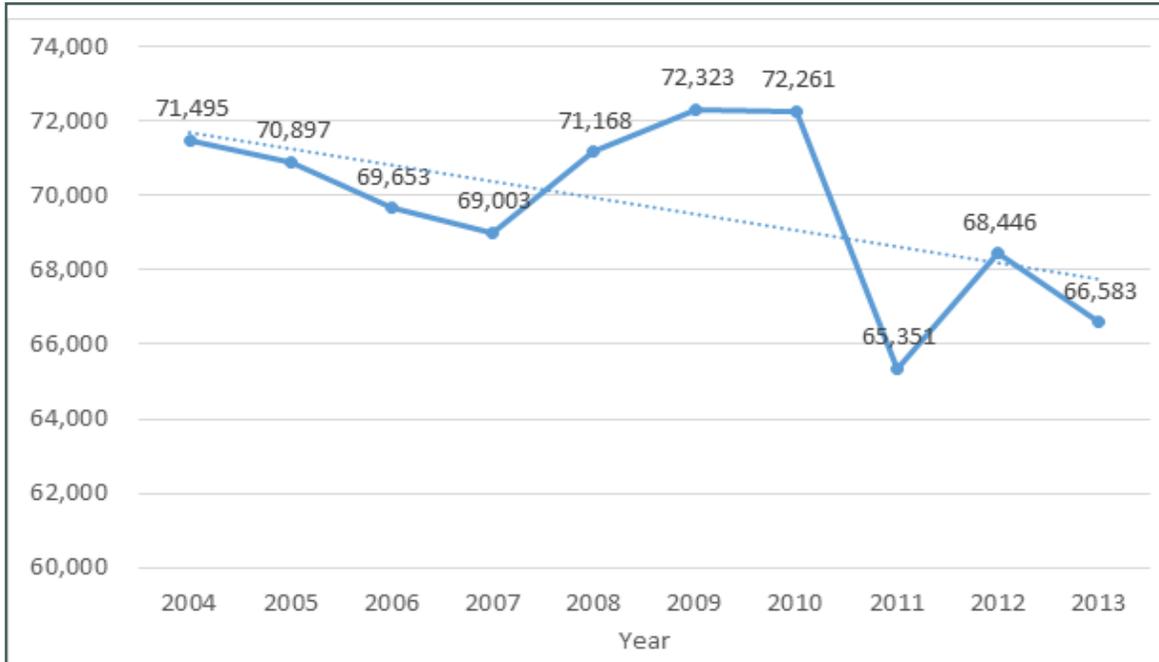


Figure B17. North Beacon Hill residential water consumption in 100 cubic feet (CCF).

Source: Seattle Public Utilities.

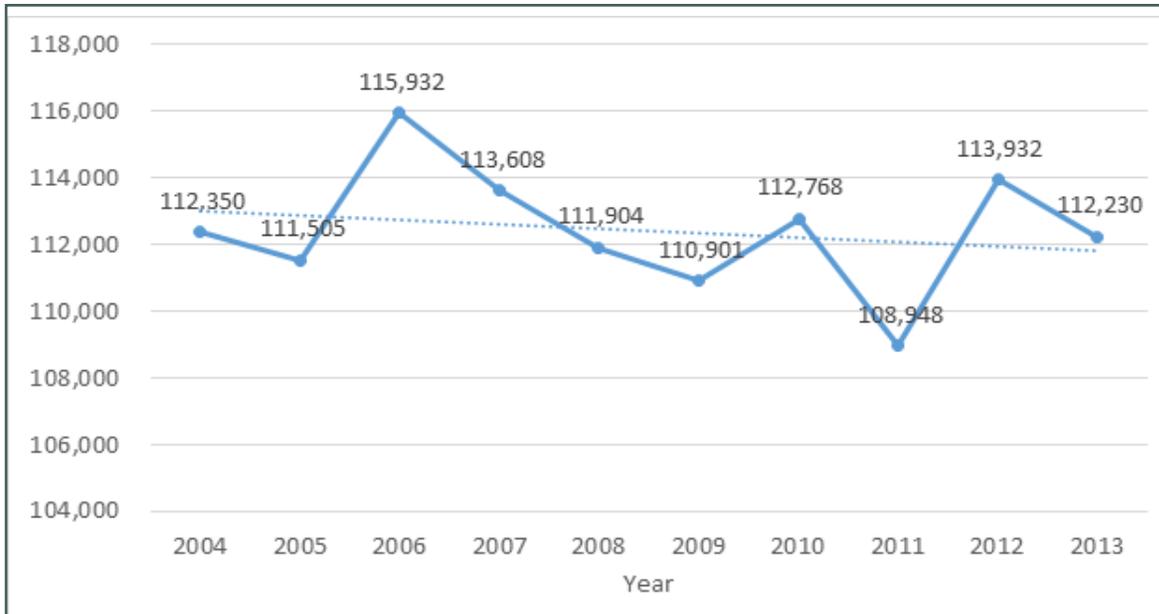


Figure B17. Eastlake residential water consumption in 100 cubic feet (CCF).

Source: Seattle Public Utilities.

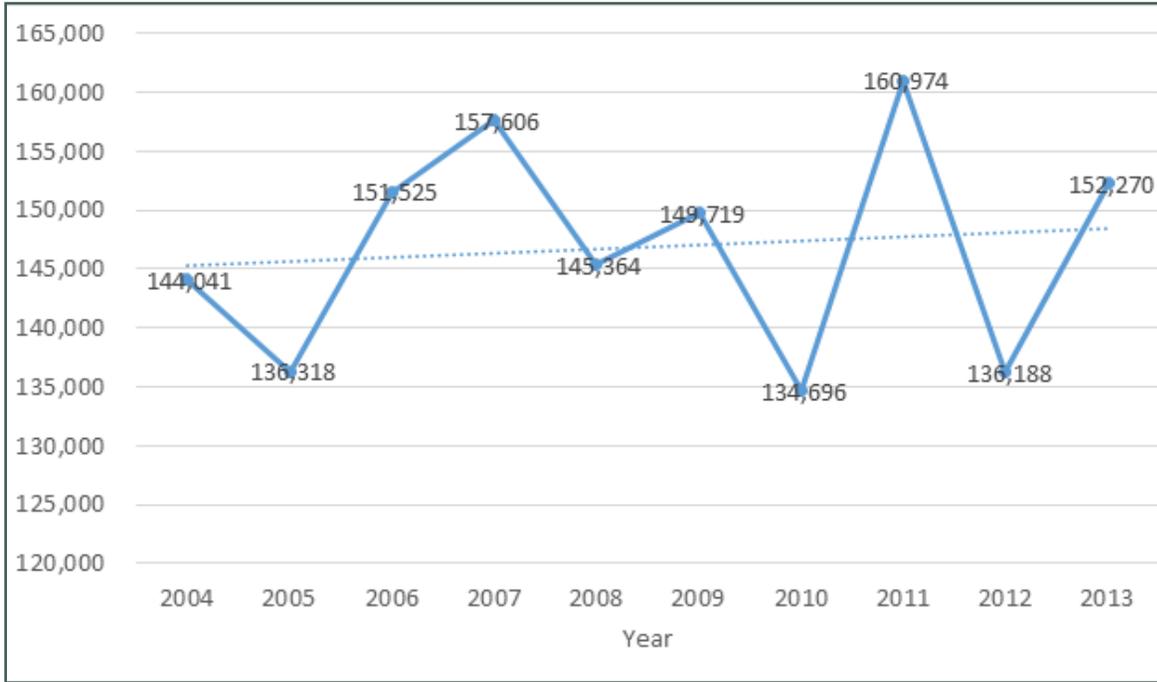


Figure B18. Aurora-Licton Springs residential water consumption in 100 cubic feet (CCF).

Source: Seattle Public Utilities.

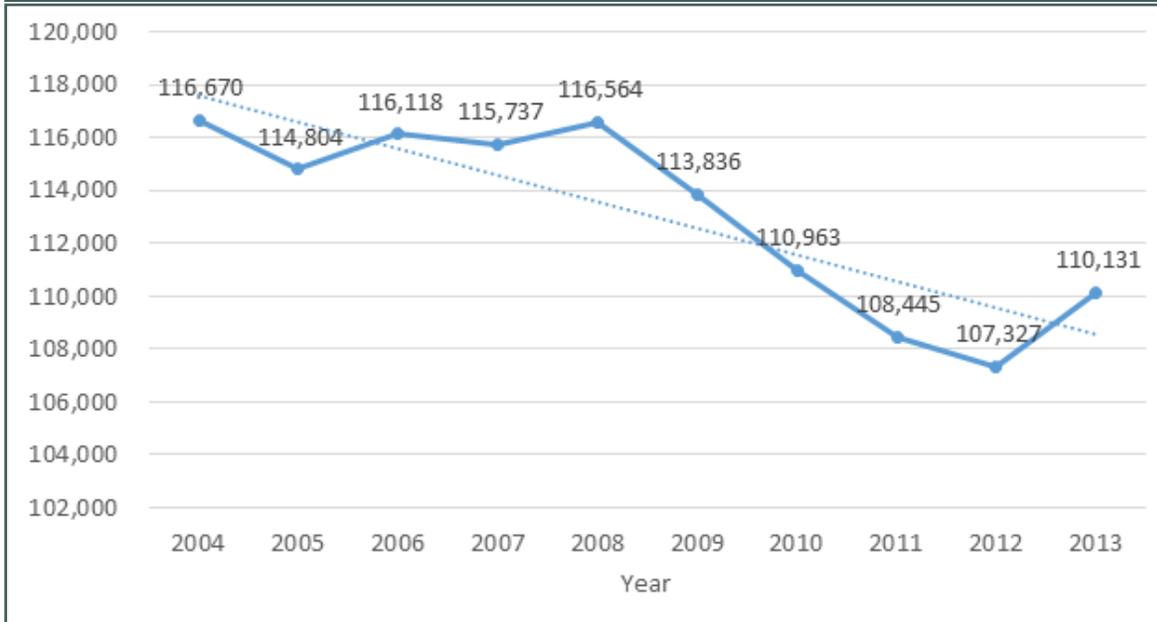


Figure B19. West Seattle Junction residential water consumption in 100 cubic feet (CCF).

Source: Seattle Public Utilities.

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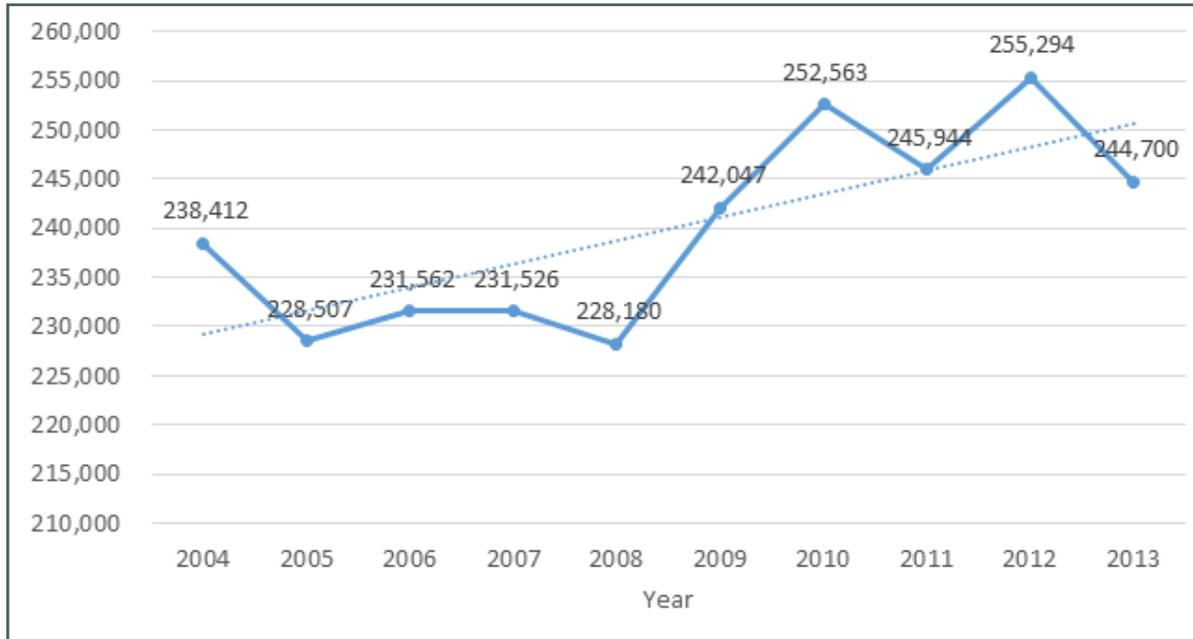


Figure B19. Ballard residential water consumption in 100 cubic feet (CCF).

Source: Seattle Public Utilities.

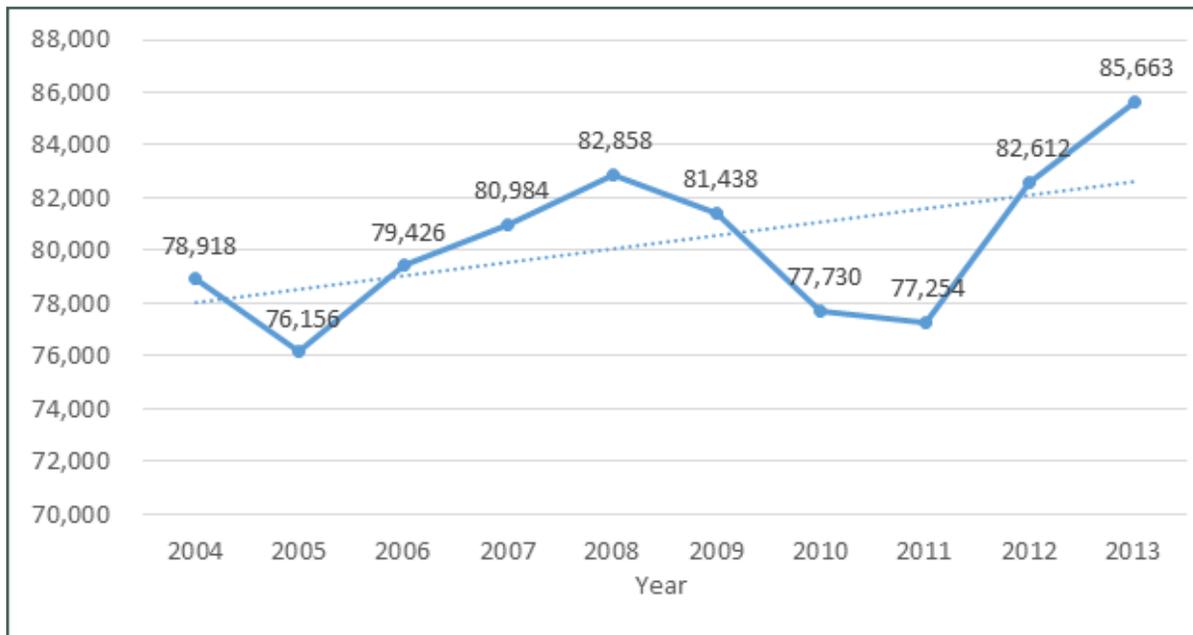


Figure B20. Lake City residential water consumption in 100 cubic feet (CCF).

Source: Seattle Public Utilities.

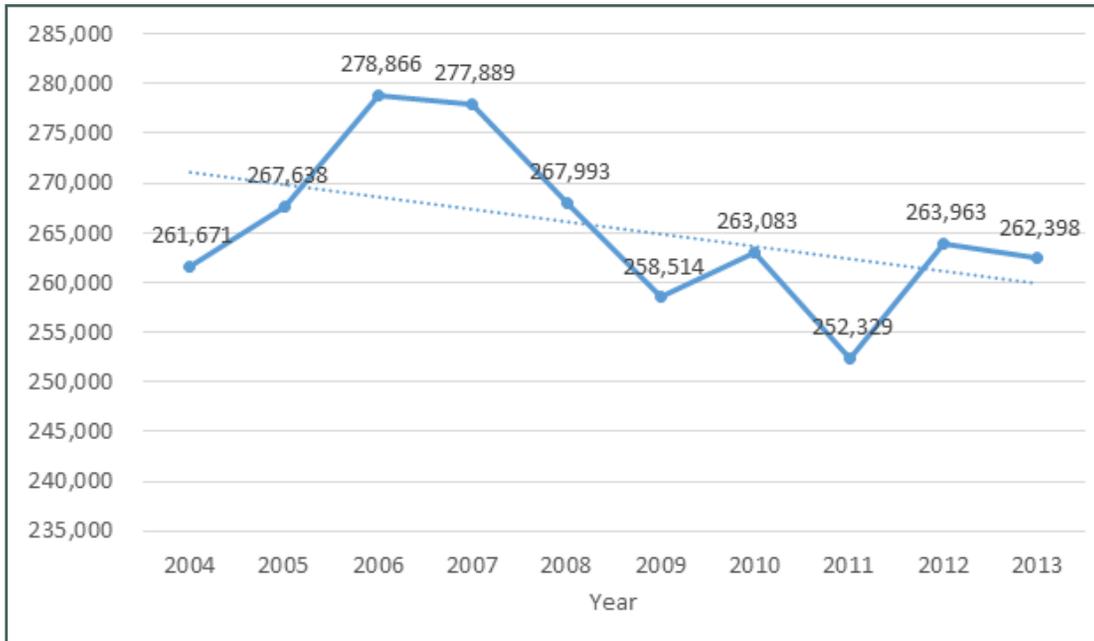


Figure B21. University Community residential water consumption in 100 cubic feet (CCF).

Source: Seattle Public Utilities.

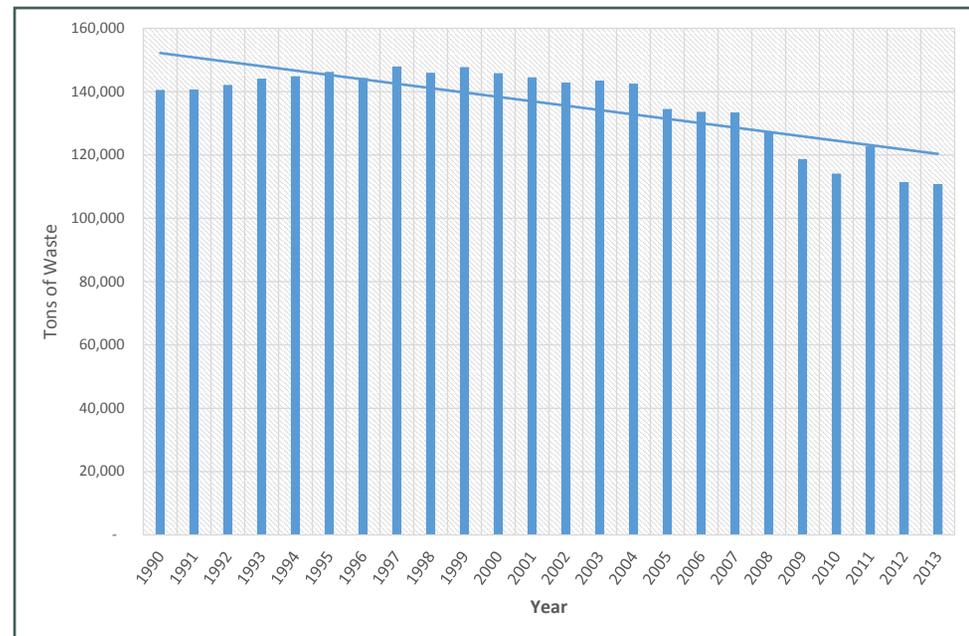


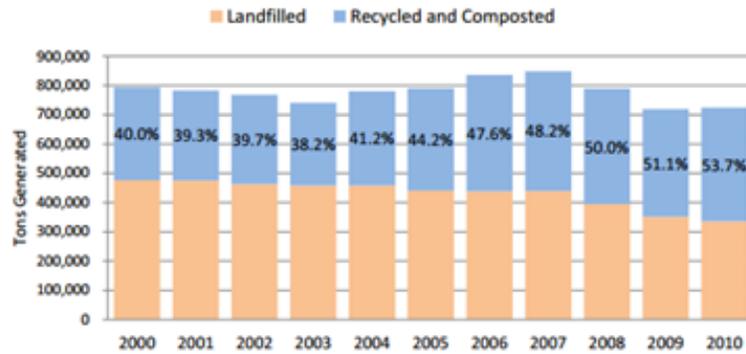
Figure B22. Citywide residential municipal solid waste tons.

Source: Seattle Public Utilities.

2.5.1 OVERALL MSW TRENDS

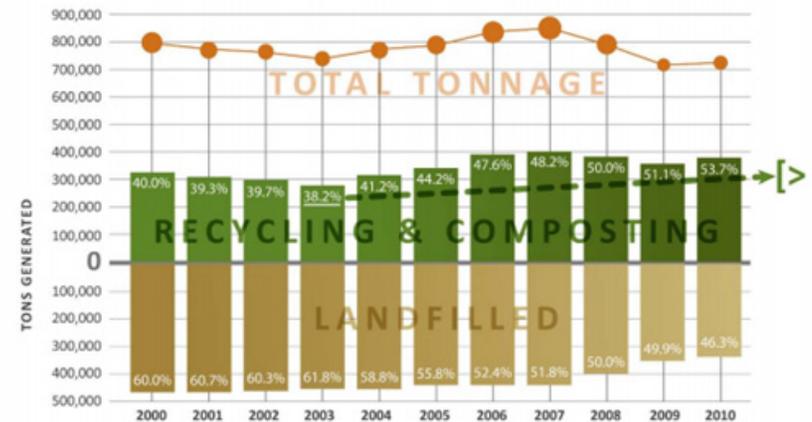
Seattle's overall MSW generation has generally followed economic trends, even as population has steadily increased in our city (Figure 2-1). The overall recycling rate declined the first few years of the past decade then has steadily climbed since 2003. SPU expects overall waste generation to increase gradually over the planning horizon of this Plan (Figure 2-2).

Figure 2-1
Seattle Overall MSW Tons Generated and Recycling Rate



Even with the most recent economic fluctuations, recycling has steadily increased since 2003, reaching 53.7% in 2010, Seattle's highest recycling rate yet.

Seattle's Recycling Rate Continues to Climb



Four municipal solid waste (MSW) sectors contribute to the total waste generated in Seattle. They are the single- and multi-family residential, self-haul, and commercial sectors. In terms of total generated tons, the commercial sector is the largest, followed by the single-family sector.

Figure B23. Overall MSW trends (2000-2010).

Source: Seattle Solid Waste Plan 2011.

Figure B24. Seattle Recycling Rate (2000-2010).

Source: Seattle Solid Waste Plan 2011.

Neighborhood and Community Arts Program (2007-2013)

The Neighborhood & Community Arts (NCA) program supports Seattle's neighborhood arts councils and community groups that produce events to promote arts and cultural participation and build community.

Cultural Facilities Partners (2012-2013)

Cultural facilities, including performing arts centers, museums, cinemas, galleries, music venues, and workshop and rehearsal spaces, create visibility for the arts and function as community gathering places.

Civic Partners (2006-2012)

The Civic Partner program awards funding to arts and cultural and heritage organizations in all disciplines with a minimum three-year history of serving Seattle residents and visitors. The City's investment is aimed at creating broad public access to a rich array of quality arts opportunities while promoting a healthy and diverse cultural community.

smART Ventures Partners (2006-2013)

smART ventures encourages innovation and widens cultural participation, particularly by individuals, organizations and communities that may not qualify for other funding programs. Projects are creative and diverse, and in 2012, over half of the 52 funded projects involved artists and communities of color or underserved communities such as the deaf or LGBTQ. Many served wide-ranging audiences including youth, seniors and the homeless.

Source: Office of Arts and Culture

Urban Village	Total Funding Amount
Westwood Highland Park	\$1,800
Rainier Beach	\$24,503
North Beacon	\$40,200
Eastlake	\$2,780
Aurora	\$12,250
West Seattle	\$26,567
Ballard	\$50,205
Lake City	\$3,200
University Community	\$163,130
Downtown	\$901,315

Table B3. Total funding amount.

Source: Office of Arts and Culture.

SEATTLE SUSTAINABLE NEIGHBORHOODS ASSESSMENT PROJECT

Table B4. Average rent for all 1 bedroom units in 20+ unit complexes
Source: Dupre + Scott Collected Survey Data.

Year	Aurora	Lake City	University District	Westwood-Highland Park	Down-town	Rainier Beach	West Seattle	Ballard	Eastlake	North Beacon Hill	Average for the Year
Spring 1997	\$834	\$758	\$830	\$806	\$1,054	\$680	\$897	\$770	\$1,013	\$681	\$832
Spring 1998	\$832	\$810	\$865	\$881	\$1,132	\$707	\$922	\$804	\$1,067	\$739	\$876
Spring 1999	\$845	\$842	\$903	\$895	\$1,195	\$762	\$963	\$853	\$1,115	\$715	\$909
Spring 2000	\$834	\$872	\$918	\$883	\$1,243	\$769	\$987	\$845	\$1,133	\$777	\$926
Spring 2001	\$822	\$854	\$921	\$895	\$1,351	\$787	\$996	\$872	\$1,131	\$754	\$938
Spring 2002	\$817	\$898	\$950	\$923	\$1,322	\$791	\$1,037	\$882	\$1,085	\$781	\$949
Spring 2003	\$793	\$903	\$918	\$885	\$1,301	\$856	\$925	\$861	\$1,032	\$808	\$928
Spring 2004	\$770	\$832	\$932	\$855	\$1,240	\$720	\$947	\$865	\$973	\$768	\$890
Spring 2005	\$752	\$780	\$890	\$824	\$1,288	\$700	\$944	\$853	\$989	no value	\$891
Spring 2006	\$729	\$781	\$936	\$825	\$1,266	no value	\$914	\$879	\$1,018	\$760	\$901
Spring 2007	\$801	\$836	\$932	\$859	\$1,352	\$606	\$926	\$836	\$1,038	\$799	\$898
Spring 2008	\$810	\$868	\$1,031	\$871	\$1,422	\$617	\$906	\$940	\$1,058	\$812	\$933
Spring 2009	\$860	\$928	\$1,127	\$939	\$1,439	\$628	\$1,001	\$1,099	\$1,225	\$916	\$1,016
Spring 2010	\$853	\$842	\$1,075	\$881	\$1,323	\$633	\$1,260	\$1,064	\$1,190	\$874	\$1,000
Spring 2011	\$800	\$838	\$1,090	\$847	\$1,365	\$616	\$1,137	\$1,129	\$1,108	\$862	\$979
Spring 2012	\$801	\$822	\$1,073	\$870	\$1,424	\$662	\$1,236	\$1,123	\$1,206	\$849	\$1,006
Spring 2013	\$856	\$853	\$1,094	\$927	\$1,545	\$706	\$1,220	\$1,249	\$1,248	\$896	\$1,059
Spring 2014	\$896	\$985	\$1,206	\$1,011	\$1,673	\$685	\$1,272	\$1,355	\$1,264	\$1,035	\$1,138
Average for UV 1997 - 2014	\$817	\$850	\$983	\$882	\$1,330	\$701	\$1,027	\$960	\$1,105	\$813	\$948

Table B5. Elementary schools corresponding to each urban village that were used for the schools and academic performance indicator.

Urban Village	Elementary School(s)
Rainier Beach	Dunlap Elementary Southshore Elementary (Opened 2007)
North Beacon Hill	Beacon Hill International School
Westwood Highland Park	Roxhill Elementary
Eastlake	TOPS at Seward K-8 School
Aurora-Licton Springs	Daniel Bagley Elementary (outside of boundary)
Lake City	Olympic Hills Elementary
Ballard	Adams Elementary Salmon Bay K-8 School (Opened 2004)
West Seattle Junction	Schmitz-Park
University Community	John Stanford International School Bryant Elementary (Opened 1997)
Downtown	<i>There is not an Elementary School within the Downtown urban village</i>

Table B6. Urban village to census tract match up used to request data that was not available at the urban village level.

Urban Villages	Census Tracts
Downtown	72, 73, 80.01, 80.02, 81, 82, 83, 84, 85, 91, 92
University District	43.01, 43.02, 44, 52, 53.01, 53.02
Ballard	47, 33, 32
West Seattle Junction	105, 98
Lake City	1, 7
Aurora-Licton Springs	13, 18
Eastlake	61, 66
North Beacon Hill	100.02, 94
Rainier Beach	118
Westwood Highland Park	114.01, 114.02

APPENDIX C

MAPS

Figure C1. Downtown Urban Center.

Source: Department of Planning and Development.



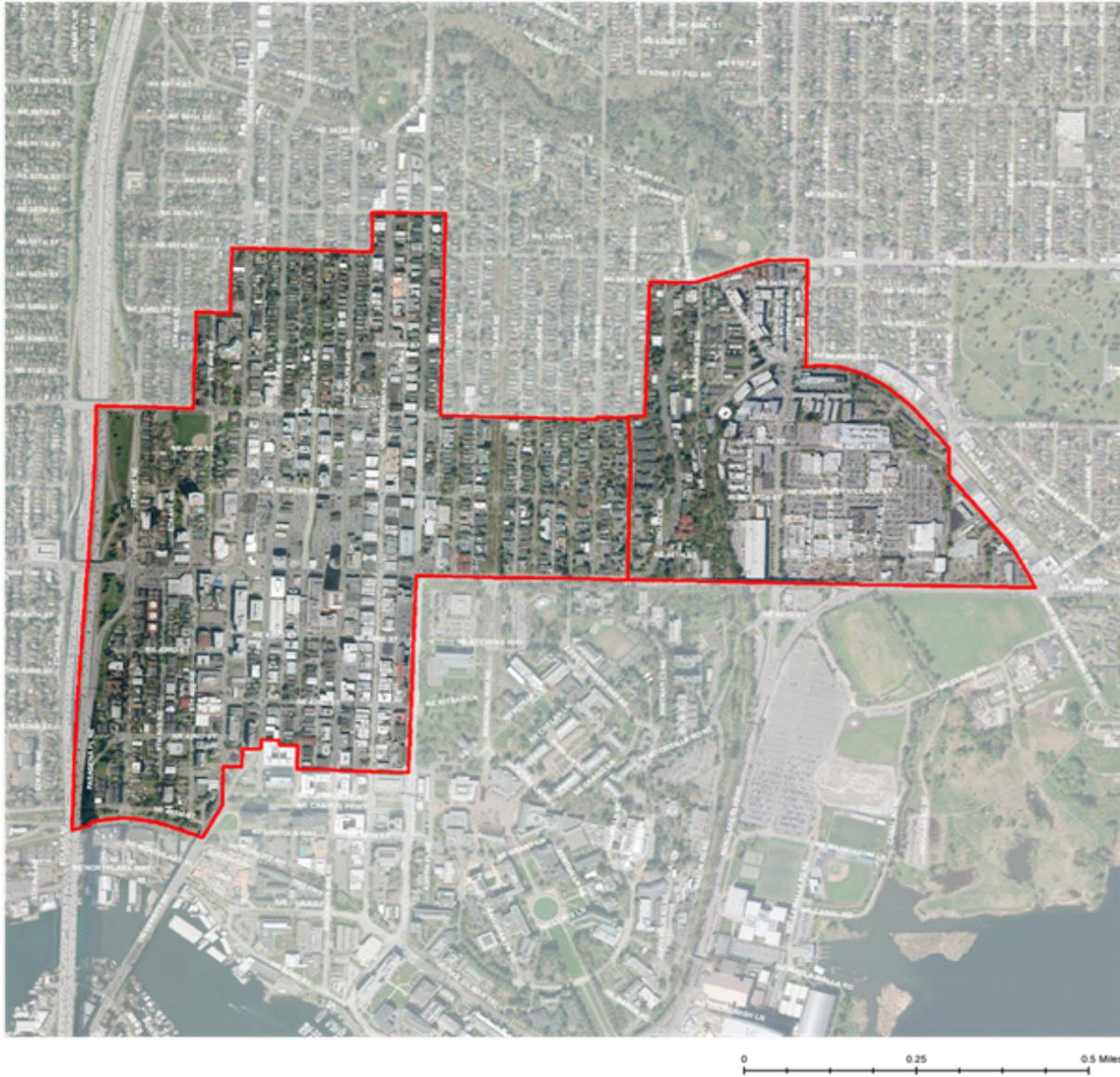


Figure C2. University Community Urban Center.

Source: Department of Planning and Development.

Figure C4. Ballard Hub Urban Village.

Source: Department of Planning and Development.



Figure C5. Lake City Hub Urban Village.

Source: Department of Planning and Development.



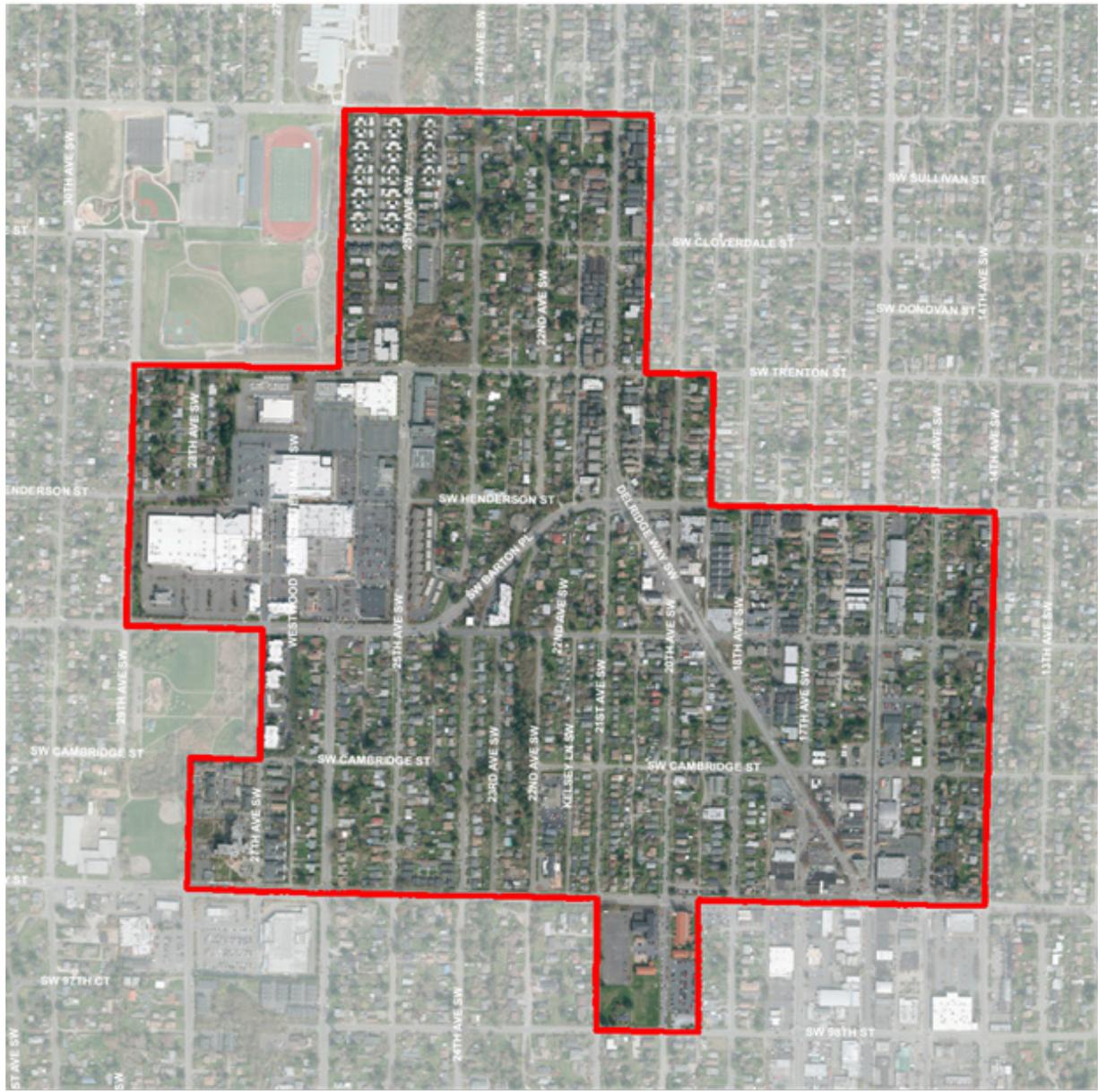


Figure C6. Westwood-Highland Park Residential Urban Village.

Source: Department of Planning and Development.

Figure C7. Rainier Beach Residential Urban Village.

Source: Department of Planning and Development.





Figure C8. North Beacon Hill Urban Village.

Source: Department of Planning and Development.

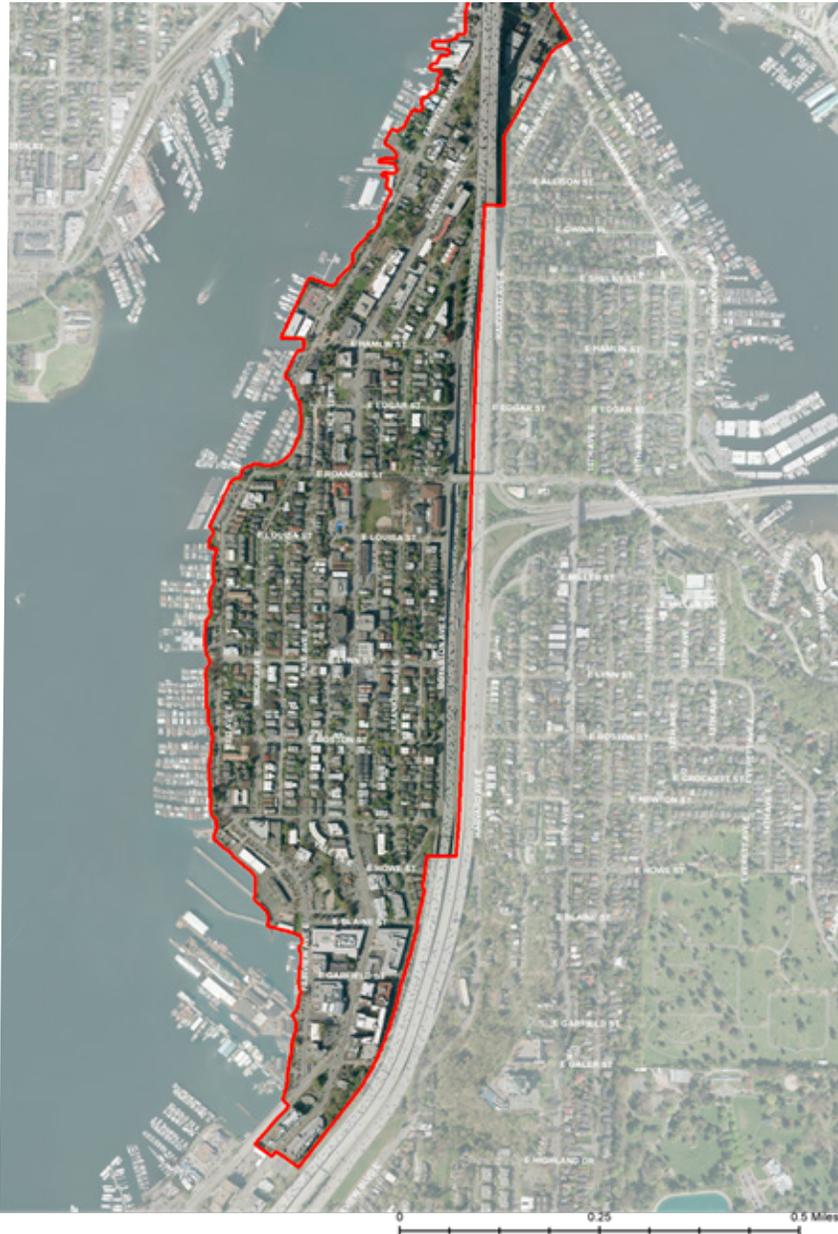


Figure C9. Eastlake Residential Urban Village.

Source: Department of Planning and Development.

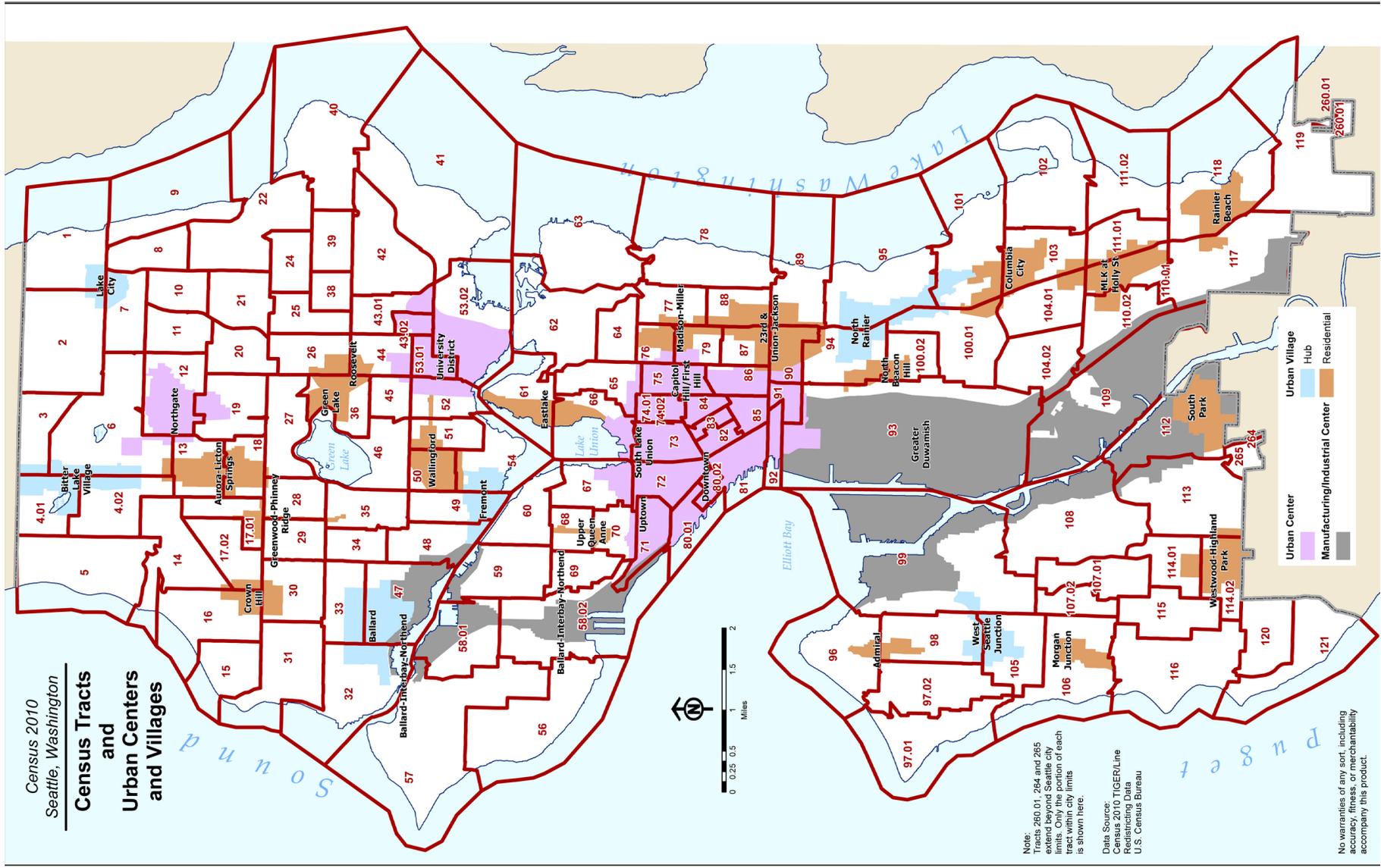


Figure C12. Census Tracts and Urban Villages Map.
 Source: Seattle Department of Planning and Development.

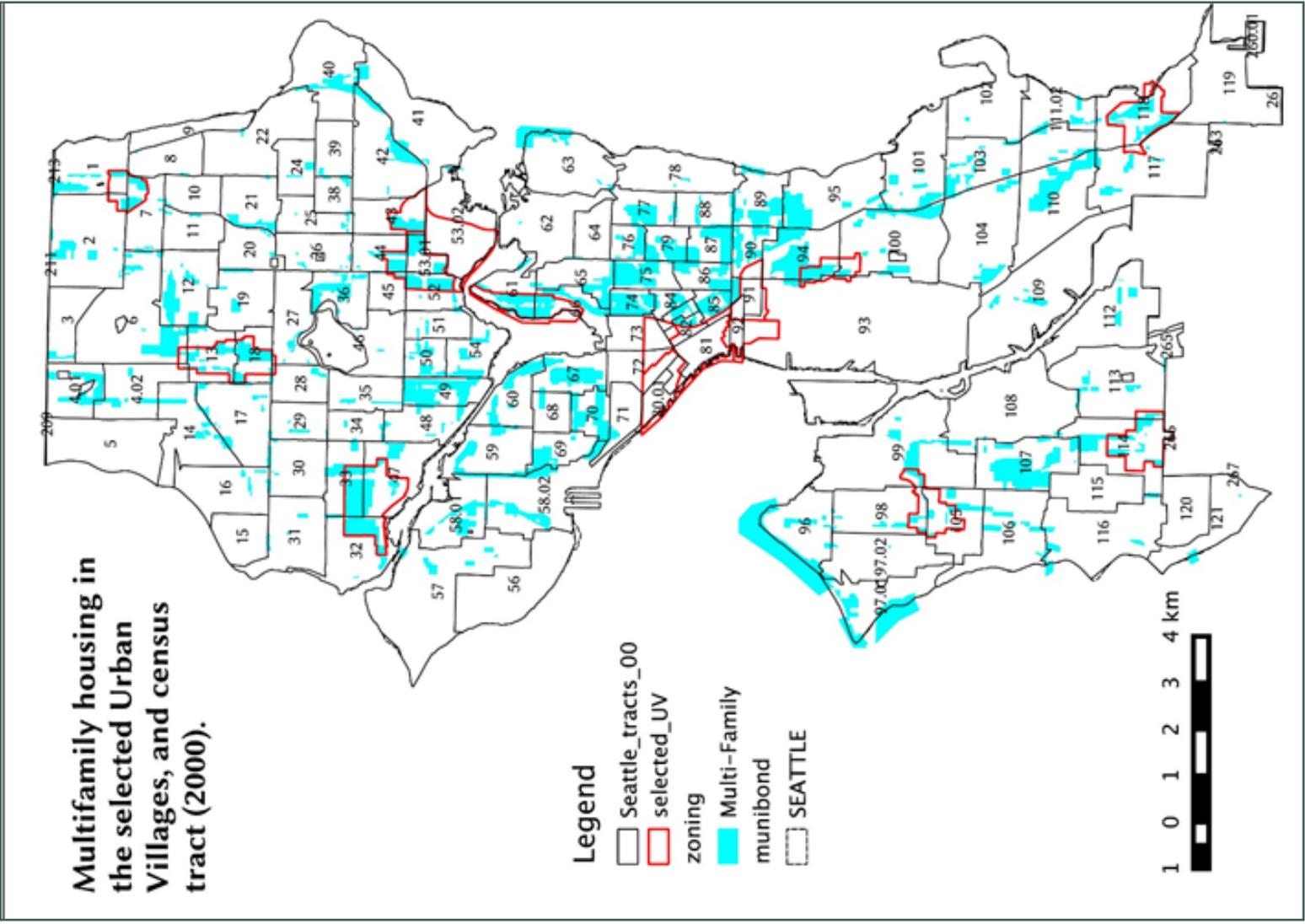


Figure C14. Multifamily housing in the selected urban villages and census tracts. Source: WAGA GIS.

APPENDIX D

SOURCES AND REFERENCES

Neighborhood/Community Indicator Resources:

- Community Indicators Consortium (CIC), 2014
- National Neighborhood Indicators Partnership (NNIP), 2014
- City-data.com (neighborhood data platform)
- The Community Indicators Handbook
- Northwest Center for Livable Communities
- Office of Sustainable Housing and Communities
- Neighborhood Sustainability Indicators Guidebook, 1999
- U.S. EPA Green Communities Indicators
- Partnership for Sustainable Communities—HUD, DOT, and EPA
- Resilient Cities Annual Global Forum on Urban Resilience & Adaptation
- Project for Public Space—Placemaking for Communities
- Traditional Neighborhood Design (TND) Rating Standards Version 2.2 (2005)

Standards for Community/Neighborhood Sustainability:

- STAR Community Rating Systems, 2013
- LEED for Neighborhood Development
- International Organization for Standardization (ISO) Certified City-Wide Performance Measures, 2014
- Complete Street Rating System
- American Planning Association for Sustainability Policy Guide
- Global Community Initiatives EarthCAT

- The United Nations Urban Environmental Accords

Precedent Studies and Reports Reviewed

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- The Madison Sustainability Plan—Sustainable Madison
- Denver Sustainable Neighborhoods Program
- St. Louise Sustainable Neighborhood Initiative
- The City of San Antonio Neighborhood Sustainability Assessment, 2012
- San Francisco Sustainable Communities Index
- Indianapolis Indy Indicators
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- Newark Community Needs Assessment, 2009
- Using Smart Growth Strategies to Create More Resilient Communities in Washington D.C.
- Iowa City Sustainability Assessment, 2007
- Indicators for a Sustainable San Mateo County, 2013
- Greater Portland Pulse, 2011
- Cascadia Scorecard Sightline Institute, 2004
- City of Minneapolis Sustainability Report 2012
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- City of Glendale Quality of Life Indicators, 2002
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- Genuine Progress Indicator: Moving Beyond GDP, Center for Sustainable Economy and the Institute for Policy Studies' "Genuine Progress Project"
- Local Government Commission Ahwahee Principles for Resource-Efficient Communities

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- Family-Sized Housing White Paper & Action Agenda, Seattle Planning Commission, 2014
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- Planning for a Successful Process: Updating Seattle's Neighborhood Plans, 2008
- The Geography of Opportunity Mapping to Promote Equitable Community Development and Fair Housing in King County, WA, Kirwan Institute & Puget Sound Regional Council, 2010
- King County, WA Indicators Data Matrix, Kirwan Institute 2010
- King County, WA Benchmark Program
- Seattle Solid Waste Plan, 2011

Workshops & Events Attended:

- Green Tools King County Sustainable Cities Roundtable EcoDistricts Training—Lynne Barker, Development Director of EcoDistricts
- OSE Climate Community Forum, May 5, 2014
- SCALLOPS Spring Forward, May, 2014
- Seattle Neighborhoods Summit, 2014
- City Neighborhood Council (CNC) Meeting, June 30, 2014
- City Neighborhood Council Neighborhood Planning Committee Meeting, July 15, 2014
- Seattle Comprehensive Plan 2035 Forum—Hosted by Transportation Choices Coalition & Futurewise

A SPECIAL THANK-YOU TO ALL THE PEOPLE WHO CONTRIBUTED TO THE SSNAP REPORT. THIS REPORT WOULD NOT HAVE BEEN POSSIBLE WITHOUT THE ADVICE, GUIDANCE, INFORMATION, KNOWLEDGE AND INSIGHT.

WE THANK YOU!

Sustainability Interview Response Contacts:

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Data Source Contacts:

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- Krista Bunch, Public Relations, City of Seattle
- Kristy Grainger, Financial Planning, Seattle City Light
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- Jill Simmons, Office of Sustainability and Environment
- Joel Sisolak & Alex Brennan, Capitol Hill EcoDistrict Team
- John Fox, Seattle Displacement Coalition
- Karen Gordon, Department of Neighborhoods
- Laura Benjamin, Puget Sound Regional Council, Assistant Planner

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Photo Sources

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4	Harbor Island	Peter Steinbrueck Photography
10	Pinehurst Townhouses	Peter Steinbrueck Photography
12	Green Lake Park BirchTrees	Peter Steinbrueck Photography
13	Montage	Peter Steinbrueck Photography Chinatown Youth Dragon Dancers, Cabiri Dancers aerial performance at Green Lake, Seattle Center Fountain, City Hall Plaza
15	Aurora-Licton Springs Park	Licton Springs Habitat Restoration Phase II Pro Parks Project Information: www.seattle.gov/parks
15	University District Farmers Market	Peter Steinbrueck Photography
16	Montage	Peter Steinbrueck Photography Chief Seattle Mural at Wilson Pacific by native artist Andrew Morrison, native blanket tapestry by Dale Chihuli, Museum of Glass
17	Olympic Sculpture Park	Seattle Art Museum
18	Photo Mantage	Peter Steinbrueck Photography
19	Green Lake Lily Pads	Peter Steinbrueck Photography
20	Regional Growth Centers Map	Puget Sound Regional Council
21	Montage	Peter Steinbrueck Photography Mason Steinbrueck RC Aerial Photography
29	Montage	Peter Steinbrueck Photography Olympic Sculpture Park, Seattle Children’s Master Plan, Family Musicians at Green Lake
30	Sustainlane Seattle Indicators Chart	How Green is Your City? Sustainlane US City Rankings, 2008
33	Montage, Urban Village Aerial Boundaries	Seattle Department of Planning and Development

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35	Crown Hill Park	Peter Steinbrueck Photography
40	Seattle I-5 Traffic	Unknown source
41	Montage, Construction and Development	Peter Steinbrueck Photography South Lake Union, Pioneer Square Village
42	Montage	Peter Steinbrueck Photography Chinatown Gate and King Street Station, Seattle Central Library, Capitol Hill Branch Library, Rainier Beach High School
43	Downtown – Pioneer Square, First Avenue	Peter Steinbrueck Photography
44	Montage University Community	Peter Steinbrueck Photography
45	Montage, West Seattle Junction	Peter Steinbrueck Photography
46	Montage, Ballard	Peter Steinbrueck Photography
46	Montage, Lake City	Peter Steinbrueck Photography
47	Montage, Westwood-Highland Park	Peter Steinbrueck Photography
48	Montage, Rainier Beach	Peter Steinbrueck Photography
48	Montage, North Beacon Hill	Peter Steinbrueck Photography
49	Montage, Eastlake	Peter Steinbrueck Photography
49	Montage, Aurora-Licton Springs	Peter Steinbrueck Photography
54	Montage, Eco-pathways	Seattle Public Utilities Sea-Streets Project
55	Cascade Playscape	Peter Steinbrueck Photography
56	Downtown Bus Tunnel	Sound Transit
60	Downtown Traffic	I-Sustain multi-modal capacity study
61	Illustration, Residential Passive Energy Strategies	Mithun
62	Boundary Dam	Seattle City Light
63	Cedar River Watershed	Seattle Public Utilities

SEATTLE SUSTAINABLE NEIGHBORHOODS ASSESSMENT PROJECT

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67	Seattle First Methodist Church	Peter Steinbrueck Photography
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74	Seattle Neighborhood Farmers Market Logo	Seattlefarmersmarkets.org
80	Nathan Hale Raiders Game	Peter Steinbrueck Photography
85	Ravenna Woods	Peter Steinbrueck Photography
86	Green Seattle Partnership Volunteer, Tree Canopy	Peter Steinbrueck Photography
96	Graduation Day	Peter Steinbrueck Photography
98	Montage, Unemployment	Unknown Sources
100	Seattle Food Banks Collage	Lake City, West Seattle, Ballard, Rainier Valley, University District Food Banks
100	Tent City	University of Washington Daily Newspaper
103	Full Page Photo Collage	Peter Steinbrueck Photography
108	San Antonio Neighborhood Map	San Antonio Neighborhood Sustainability Report
109	San Francisco Neighborhood Indicators	www.sfindicatorproject.org
109	Minneapolis Sustainability Report	www.ci.minneapolis.mn.us/sustainability/reports/sustainability_livingwell
111	DataHaven	www.ctdatahaven.org
113	Montage	Peter Steinbrueck Photography Seattle Community Council Federation, Seattle Neighborhoods Summit, Seattle Neighborhood Greenways, SDOT Pedestrian Safety Workshop
116	Community Life Banner	Peter Steinbrueck Photography
118	Pioneer Square Sidewalk Stroller	Peter Steinbrueck Photography
122	Seattle 2035	DPD, 2035.seattle.gov
172	Montage, Student Life	Peter Steinbrueck Photography
176	Montage, Maps and Seattle Aerial	SDOT, SPU

