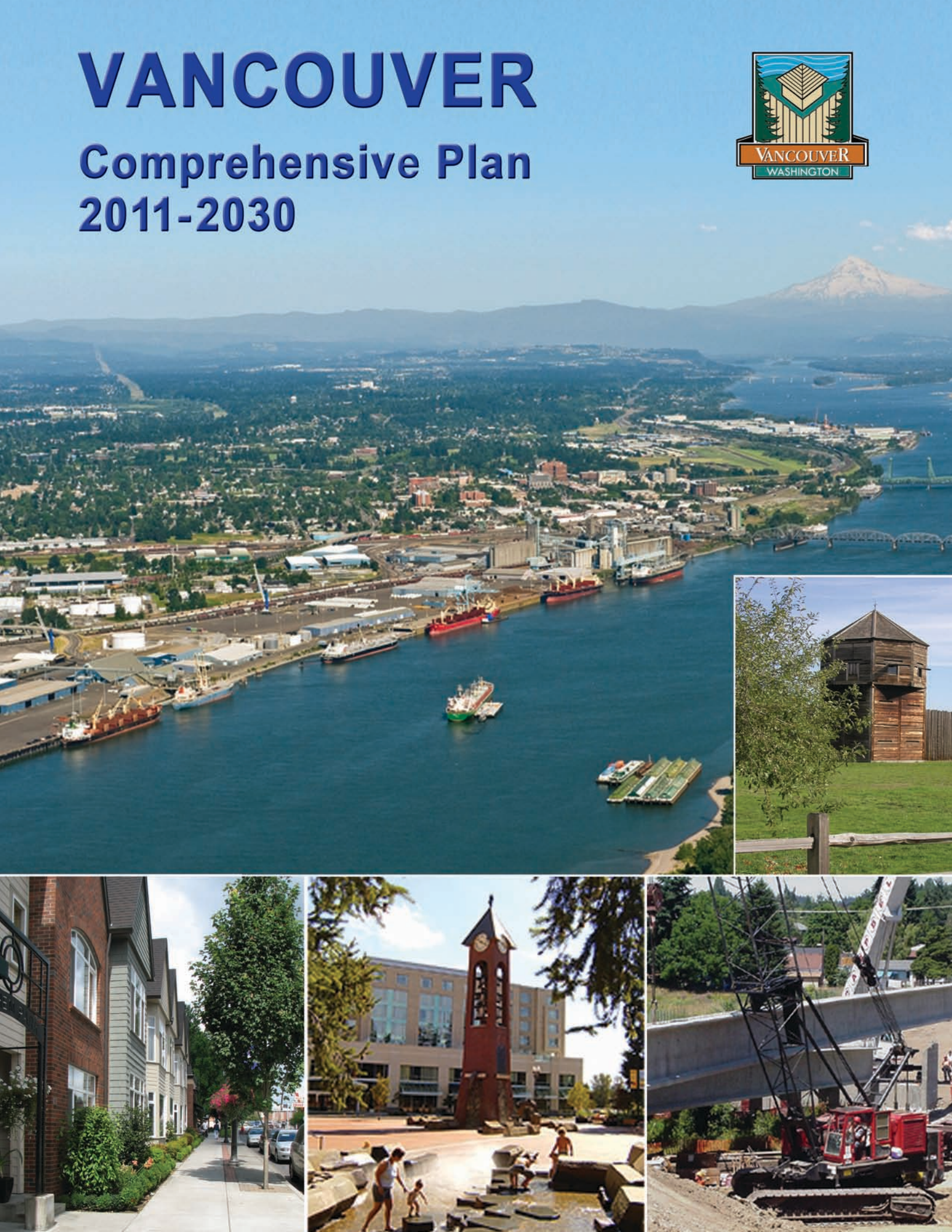
VANCOUVER

Comprehensive Plan 2011-2030

VANCOUVER
WASHINGTON



Vancouver Comprehensive Plan 2011-2030

2011 Acknowledgements

MAYOR Tim Leavitt

VANCOUVER CITY COUNCIL
Jeanne Harris
Jeanne Stewart
Larry Smith
Pat Campbell
Jack Burkman
Bart Hansen

CITY MANAGER Eric Holmes

VANCOUVER PLANNING COMMISSION
Esther B. Schrader, Chair
Robert Haverkate, Vice Chair
Lisa F. Willis
Dave Moriuchi
John S. Lee
Mario Raia
Erik Paulsen

COMMUNITY DEVELOPMENT DEPARTMENT
Laura Hudson, Community Development Director
Matt Ransom, Manager, Long Range Planning
Bryan Snodgrass, Project Manager, Comprehensive Plan 2011-2030
Jennifer Campos
Chad Eiken
Marian Lahav
Bryan Monroe
Sandra Towne
Phil Wuest

City of Vancouver Long Range Planning
415 W. 6th St, Vancouver, WA 98668-1995, PO Box 1995
www.cityofvancouver.us/compplan
www.cityofvancouver.us

Contents

Preface.....i, ii, iii

Chapter 1 Community Development
Text.....1-3
Policies.....1-14

Chapter 2 Economic Development
Text.....2-3
Policies.....2-7

Chapter 3 Housing
Text.....3-3
Policies.....3-8

Chapter 4 Environment
Text.....4-3
Policies.....4-10

Chapter 5 Public Facilities and Services
Summary Text.....5-3
Transportation.....5-6
Transit.....5-18
Airport.....5-21
Public water.....5-22
Sanitary sewer.....5-25
Stormwater.....5-29
Parks and recreation.....5-32
Fire and emergency services.....5-39
Police.....5-42
Schools.....5-46
Library services.....5-50
Solid waste facilities and services.....5-51
General government.....5-53
Public Facilities and Services Policies.....5-55

Chapter 6 Annexation
Text.....6-3
Policies.....6-5

Chapter 7 Implementation
Text.....7-3
Policies.....7-5

Appendices
Appendix A: Community Framework Plan and Growth Management Act Goals
Appendix B: Vancouver Shoreline Management Master Program Goals
Appendix C: Growth Assumptions
Appendix D: Capital Facilities Funding Summary
Appendix E: Other Plans and Documents Adopted by Reference

Preface

VANCOUVER'S VISION

Birthplace of the Pacific Northwest, Vancouver is the heart of southwest Washington, connecting people and places throughout the region. The mighty Columbia River is the link to our past and a key to our future. We are a friendly city for all ages, incomes, abilities and backgrounds, with proud, unique neighborhoods. We are dedicated to preserving our heritage and natural beauty while welcoming the opportunities change brings to our lively metropolitan community. We are the most livable city in the Pacific Northwest. Residents and businesses across our city are passionate about building a safe, thriving and sustainable community together."

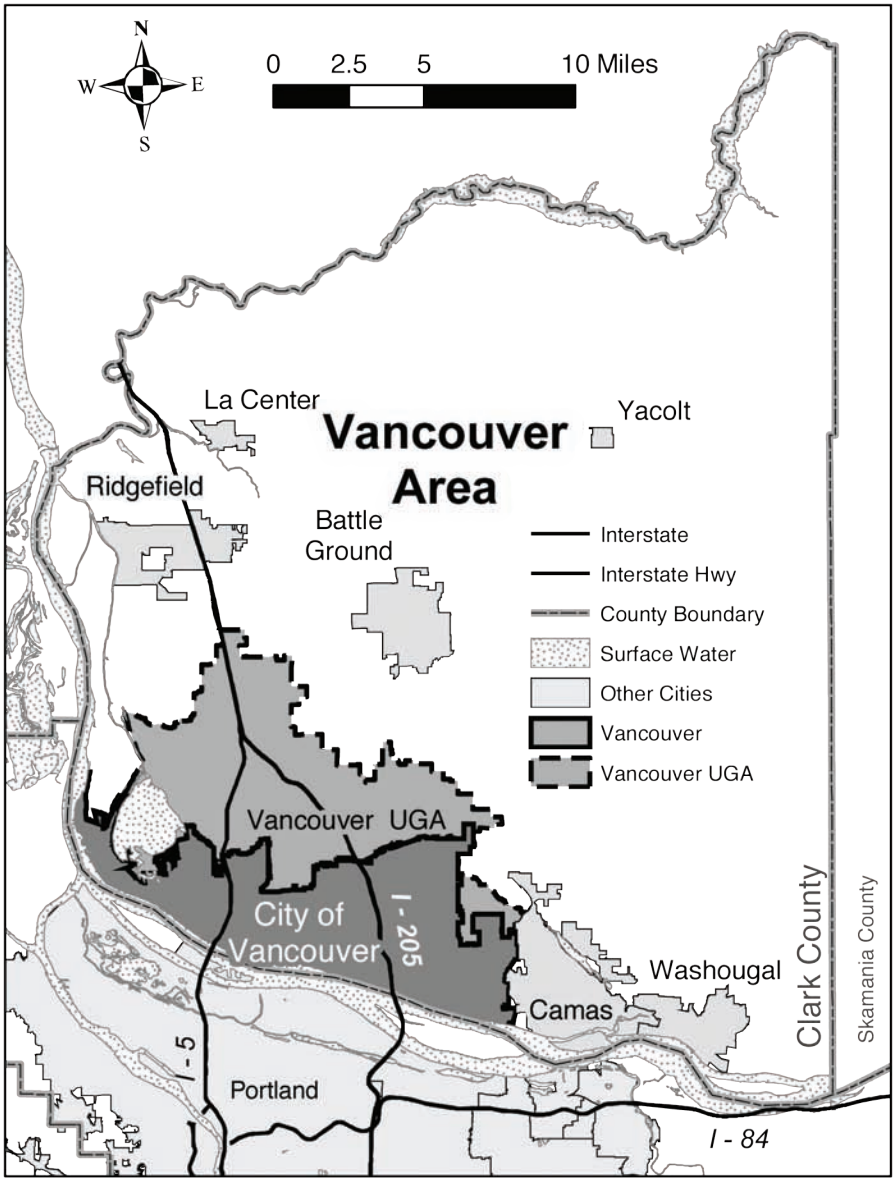
- Vancouver Strategic Plan Community Vision, adopted in 2008

Vancouver is one of the oldest inhabited areas in the Pacific Northwest. Native American presence along the Columbia River dates back more than 10,000 years. The first permanent European settlement in the Northwest was Fort Vancouver, established in 1825. The City of Vancouver developed around the fort and continued to grow throughout the nineteenth and twentieth centuries. There were rapid, temporary population influxes with the arrival of industrial workers during the First and Second World Wars. Steadier growth occurred in the post-war years, spurred by the construction of Interstate 5 (I-5) in 1965 and I-205 in 1983. During the 1990s, the population almost tripled from in-migration and the annexation of Cascade Park, the largest annexation in state history. Vancouver in 2011 is a thriving and diverse community with a population of 162,000 persons, covering approximately 50 square miles.

Vancouver's comprehensive plan

Vancouver's first comprehensive plan under the Washington Growth Management Act was adopted in 1994. It established a vision of a livable urban area with growth tied to the ability to provide services, and a range of residential options, including more intensive development in urban centers. The Vancouver Comprehensive Plan was completely rewritten in 2004, following an extensive public process involving Clark County, local cities, stakeholders, and the community at large. A more modest update was completed in 2011. The next major update is anticipated in 2016.

The intent of the comprehensive plan is to present a clear vision for Vancouver's future over the next 20 years—a vision that can be easily understood, evaluated, and implemented. The plan contains policy direction relating to growth and development, environmentally sensitive areas, historic



Vancouver and surrounding area. Source: Vancouver GIS

20-year planning period, and will become subject to the Vancouver comprehensive plan if and when this occurs. The Vancouver comprehensive plan is intended to coordinate development and to smooth the transition of services between the incorporated and unincorporated urban areas as annexation is considered.

How the comprehensive plan relates to local and state plans and laws

Growth Management Act

The Vancouver comprehensive plan is consistent with the requirements of the GMA, adopted in 1990 and since amended. The GMA requires counties and cities meeting certain population and growth criteria to adopt and maintain comprehensive plans. Among other requirements, plans must ensure that projected growth in urban areas between be accommodated through a range of urban densities, that capital facilities keep pace with the growth, and that critical environmental areas are protected.

places, public services, and other issues. Plan policies are implemented through subarea plans and provisions of the Vancouver Municipal Code and other local standards.

The jurisdiction of the Vancouver Comprehensive Plan is the land within Vancouver's city limits (see maps; above and on page 1-12). Unincorporated areas in the Vancouver Urban Growth Area (UGA) are governed by Clark County. Vancouver UGA lands are anticipated to be annexed to the City over the

Community Framework Plan

The *Community Framework Plan*, adopted by Clark County and its cities in 1993 and updated in 2000 and 2001, provides guidance to local jurisdictions on regional land use and service issues. The Vancouver comprehensive plan is consistent with the concepts put forward in the *Community Framework Plan* that development will occur at varying

densities throughout the region, and that more intensive development will occur at various centers or nodes.

Vancouver Strategic Plan

Updated by the Vancouver City Council in 2008, the Vancouver Strategic Plan contains policy objectives in six areas of strategic commitment: A Healthy, Livable and Sustainable Vancouver; Transportation Mobility and Connectivity; Financial Health and Economic Vitality; A Safe and Prepared Community; Accountable, Responsive City Government; and an Active and Involved Community. The Vancouver Comprehensive Plan is consistent with the relevant portions of the Vancouver Strategic Plan.

Vancouver Zoning Code

Under state law, the direction set by Vancouver's comprehensive plan must be implemented in related City standards contained in the Vancouver Municipal Code (VMC). Chapter 20 of the VMC contains the Vancouver Zoning Code.

What's in the comprehensive plan?

Chapter 1, *Community Development*, describes the vision for land use and development of the built environment.

Chapter 2, *Economic Development*, describes what will be done to enhance job growth and retention.

Chapter 3, *Housing*, describes what will be done to ensure that adequate housing will be available for all economic segments of the community.

Chapter 4, *Environment,* describes how sensitive environmental resources will be protected.

Chapter 5, *Public Facilities and Services*, describes how roads, water, sewer, parks, and other public facilities and services will be provided.

Chapter 6, *Annexation*, guides potential growth of the City into surrounding unincorporated areas.

Chapter 7, *Implementation*, describes how the comprehensive plan will be implemented and updated.

The comprehensive plan also contains a glossary and five technical appendices.

- **Appendix A** contains the *Community Framework Plan* and the base planning goals of the Growth Management Act.
- **Appendix B** lists the goals of Vancouver's Shoreline Master Program.
- **Appendix C** explains the growth forecasts and underlying assumptions used in this comprehensive plan.
- **Appendix D** contains a detailed summary of funding for the capital facilities plan described in Chapter 5.
- **Appendix E** lists other, separately bound documents that are adopted by reference as part of the comprehensive plan.

CHAPTER 1

Community Development

The Community Development chapter is the central part of the Vancouver Comprehensive Plan. The buildings and structures that make up the built environment are where people live, work, shop, and interact. Ensuring that different land uses work together to form compatible and cohesive neighborhoods, business districts and subareas is essential to community livability, and to Vancouver's ability to provide efficient public services. This chapter describes current land uses, development patterns, and neighborhoods in Vancouver, and directs how future development should occur over the next 20 years.

Specifics

- **Vancouver in 2011**
- **Neighborhood Associations**
- **Recent demographic trends**
- **Growth capacity estimates**
- **Enhancing centers and corridors**
- **Facilitating connected neighborhoods and communities**
- **Planning for an aging population**
- **Public health and sustainability**
- **Comprehensive plan land use designation map**
- **Community development policies**

Vancouver's land use in 2011

As of 2011, the City of Vancouver had a population of 162,300 persons, living in an area of approximately 50 square miles. Original Native American settlement in the area dates back to prehistoric times. Current development patterns reflect the past 150 years and have been greatly influenced by the access provided by the Columbia River, and Interstates 5 and 205.

Downtown Vancouver and the adjacent Vancouver barracks and reserve are the historical heart of the city, and have enjoyed a renaissance in recent years led by the adoption of the Esther Short Redevelopment Plan. Additional public improvements and continued commercial, residential, and institutional revitalization are planned with a goal of establishing a vibrant, diversified downtown. West and northwest of downtown along the Columbia River are a mix of larger industrial properties, including Port of Vancouver facilities and environmentally sensitive lowlands areas near Vancouver Lake. East of downtown along the Columbia River are new waterfront residences, mixed commercial and residential uses, and governmental facilities. Larger homes front the river farther to the east.

A mix of uses are found along Main Street, St. Johns Road, and Fourth and Mill Plain Boulevards. Fourth Plain Boulevard is home to a growing number of businesses serving residents of different ethnicities. Near State Route 500 and Interstate 205 is a major commercial and residential activity center, including the Westfield Mall complex, other large retail and commercial users, and apartments. Burnt Bridge Creek, running east-west through the center of the city, contains the Lettuce Fields and extensive open spaces and recreational trails. Farther to the south and east are established single-family residential neighborhoods.

The newest and fastest growing areas in Vancouver are east of I-205, much of which was annexed to the City in 1997. Mill Plain Boulevard and 164th and 192nd Avenues, the primary transportation corridors in the eastern area, are lined with commercial and multi-family housing developments. A range of new public and private investment is anticipated in these areas. East of 162nd Avenue are a number of recently planned residential and mixed-use neighborhoods near the former Hewlett-Packard and Columbia Tech Center light industrial campuses, and in the Riverview Gateway subarea.

Vancouver is a city of neighborhoods (See **Figure 1-1**) . The City of Vancouver formally recognizes 64 neighborhood associations that include almost 90 percent of the city's population. Most neighborhoods have developed Neighborhood Action Plans (NAPs), identifying issues of local concern such as public safety, traffic, housing, and land use and recommending solutions. NAPs are not formally adopted as part of the comprehensive plan, but they are consistent with the plan's direction and are submitted for review and acceptance by the Vancouver City Council.

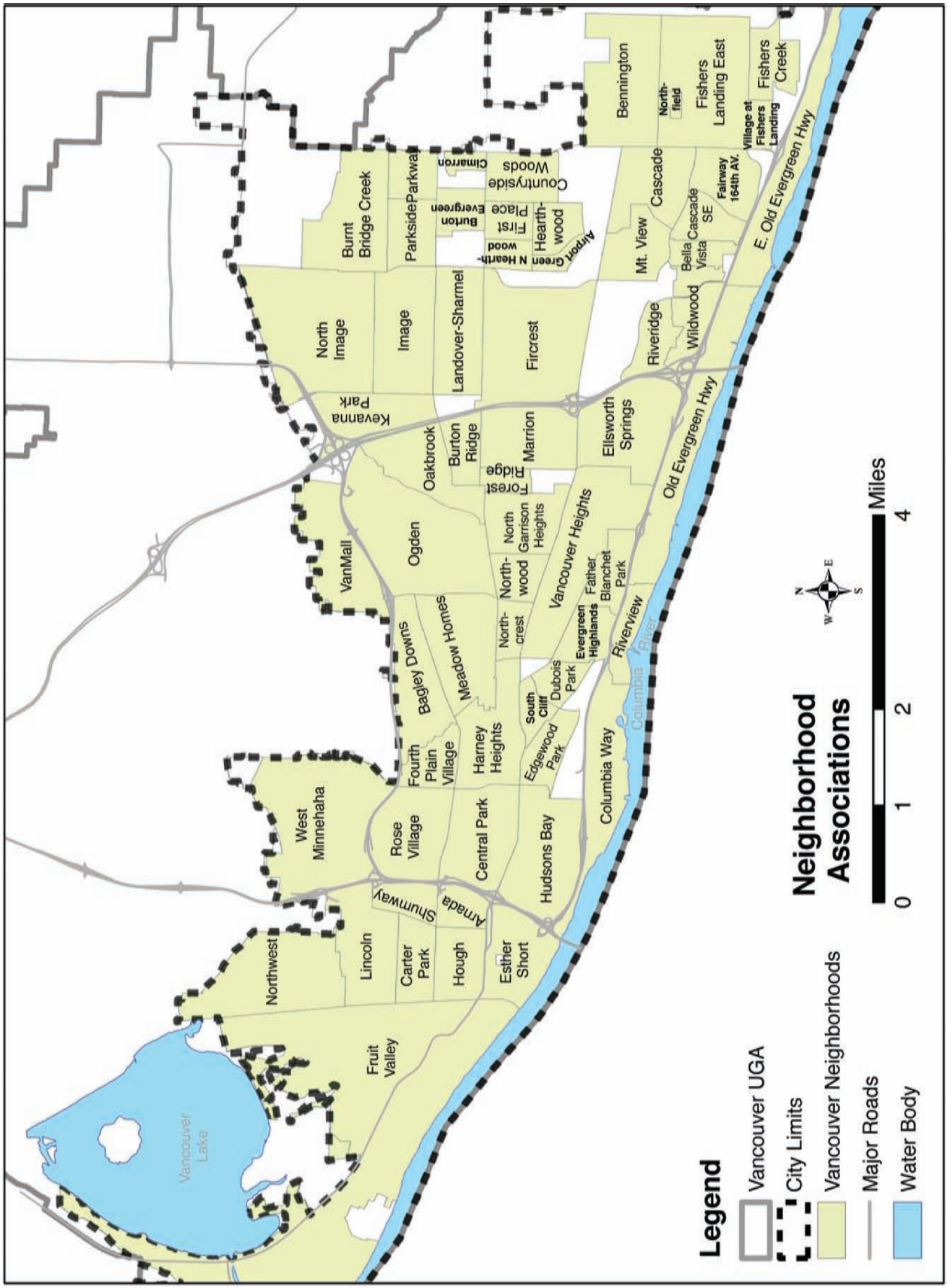


Figure 1-1. Recognized neighborhood associations in the City of Vancouver. Source: City of Vancouver GIS.

Table 1-1. City of Vancouver demographics.

Category	2000	2010
White	80.3%	76.2%
Hispanic	6.3%	10.4%
African-American	2.5%	2.8%
Asian	4.5%	5.0%
Native American	1.0%	0.8%
Pacific Islander/Hawaiian	0.5%	0.9%
Other	4.9%	3.9%
Under 18 years	26.7%	24.0%
Over 64 years	10.8%	12.7%
Single-person households	27.6%	29.6%

Source: US Census., American Community Survey

Tables 1-1 to **1-3** provide a statistical snapshot of local demographics and land use indicators.

Table 1-1 highlights Vancouver demographics, and illustrates trends towards a more diverse, and older population. **Table 1-2** compares 2011 land consumption and density data for the City of Vancouver and the unincorporated VUGA. The city and Vancouver Urban Growth Area (VUGA) are similar in size, but the city has been developed more densely, and has less remaining undeveloped land. More of the VUGA is zoned for residential development, particularly single family housing.

Table 1-3 compares recent residential densities among local jurisdictions. It indicates that Vancouver developed more densely than other Clark County urban areas during the late 1990s, but less densely than the Portland region. It also indicates that the unincorporated portion of the Vancouver UGA has developed considerably less densely than the City.

Table 1-2. 2011 Vancouver City and UGA land use and density

Category	City of Vancouver		Unincorporated Vancouver UGA	
Size	50 square miles		56 square miles	
Population	162,300 persons		141,100 persons	
Jobs	74,000 jobs		29,200 jobs	
Gross Density	3,310 persons per square mile		2,331 persons per square mile	
Land Use Inventories	**Area Zoned**	**Gross Vacant and Underutilized Lands**	**Area Zoned**	**Gross Vacant and Underutilized Lands**
Single Family Residential	17,109 acres	1,024 acres (20%)	20,799 acres	6,372 acres (61%)
Multi-Family Residential	3,325 acres	466 acres (10%)	2,641 acres	1,188 acrs (11%)
Commercial	3,398 acres	579 acres (11%)	2897 acres	1,599 acres (15%)
Industrial	6,407 acres	2,928 acres (59%)	4,335 acres	1341 acres (13%)
Other (Public Facilities, Open Space)	3,986 acres	_	5,301 acres	_

Sources: Clark County and Vancouver GIS; Washington OFM; Vancouver Long Range Planning

Table 1-3. Comparing Densities in nearby Jurisdictions

City/Area	Overall Population per square mile	Percentage of new units from 2007-11 that are single-family homes	Average density of new single-family home lots
City of Vancouver	3,310	50%	6.8 units/acre
Unincorporated Vancouver UGA	2,331	92%	5.7 units/acre
Other Clark County Cities	1,775	75%	3.0 unit/acre
City of Portland	4,015	28%*	N.A.

* 2000-2010
Source: Washington OFM; Clark County permit summaries, City of Portland

Direction for the future

Maintaining and enhancing livability

Livability involves balancing protection of open space and environmental resources, with promoting efficient development patterns that can be served by a range of transportation options. It also involves making full and efficient use of available land before expanding into undeveloped areas. The Vancouver comprehensive plan emphasizes preserving or enhancing the unique character and function of individual neighborhoods, commercial districts and other places which make Vancouver a special place to live. The community development policies, listed at the end of this chapter, are intended to help maintain and enhance the livability of Vancouver during the inevitable changes the City will undergo. Planning for change, rather than reacting to it, is one of the plan's underlying principles.

Table 1-4. 2011 population and employment and projected future capacity (within 2011 boundaries)

	2011		2030	
	Population	**Employment**	**Population**	**Employment**
City of Vancouver	162,300 persons	74,000 jobs	202,300 persons	139,200 jobs
Unincorporated VUGA	141,100 persons	29,200 jobs	227,700 persons	72,900 jobs
Total VUGA	303,400 persons	103,200 jobs	430,000 persons	212,100 jobs

Sources: Vancouver Long Range Planning calculations based on County VBLM inventory, County and City VBLM assumptions, Washington OFM and ESD base data. Employment includes jobs covered in Washington Employment Security Department inventories. Non-covered jobs are estimated to account for approximately 3-4% of covered totals. Projected growth in population and employment includes long term redevelopment capacity in downtown Vancouver, Section 30, Riverview Gateway, and other identified subareas and development nodes. See Appendix C for details

Planning for growth

Vancouver and the region will continue to grow over the 20-year planning period. Although some changes will occur throughout Vancouver, most new growth will be focused in identified urban centers and corridors rather than spread uniformly throughout the city.

Table 1-4 estimates existing Vancouver population and employment in 2011, and capacity for additional growth through 2030. As of 2011 there were approximately 162,000 persons and 74,000 jobs in the City of Vancouver, and capacity to accommodate an additional 41,000 persons and 65,000 jobs. Approximately half of this capacity is through long term development of vacant or underutilized lands, and half through anticipated redevelopment of built areas.

The unincorporated portion of the VUGA has more available residential land than the city, and greater population growth capacity. Together the existing VUGA and City have an estimated land capacity to accommodate 430,000 persons by 2030, approximately 15% more than the long term allocation adopted by Clark County for these areas in 2007. For information on the assumptions used to develop growth capacity estimates, see Appendix C. Annual rates of growth are likely to vary widely from year to year depending on economic conditions and other factors.

Enhancing urban centers and corridors

Implementation of this plan will focus on areas in or near urban centers and corridors. These areas are expected to contain a mixture of employment, housing, and cultural opportunities, as many of them do now. The type and intensity of activities and development at each will vary depending on local circumstances. As Vancouver changes, these areas can serve as community focal points, building on the unique characteristics of individual districts. The areas can also provide opportunities for growth where services can be provided more efficiently.

The City will involve local citizens and businesses in developing focused subarea plans for these areas as the comprehensive plan is implemented.

Figure 1-2 highlights centers and corridors in the City of Vancouver where subarea planning has occurred, or is planned. The areas shown are not intended to depict the precise boundaries of centers and corridors – those are established through subarea planning.

Completed subarea plans include:

- Vancouver Central City Vision Plan (2007),
- Fourth Plain Corridor Subarea Plan (2007),
- Central Park Plan Update (2008),
- Lower Grand Employment Area Subarea Plan (2008),
- Riverview Gateway Subarea Plan (2009),
- Section 30 Urban Employment Center Subarea Plan (2009),
- Fruit Valley Subarea Plan (2010), and the
- 112th Avenue Subarea Plan (2011).

These subarea plans are adopted as part of the Comprehensive Plan by reference. Copies are available digitally at the Vancouver Community Development Department, Long Range Planning Division website, or may be requested in hardcopy form from the Long Range Planning offices. Master Plans have also been approved for future development of the former Evergreen Airport, and the Columbia Tech Center.

Centers and corridors identified for future subarea planning include areas near the Westfield (Vancouver) Mall, MacArthur Blvd, the Southwest Washington Medical Center (SWMC), Upper Main St, St Johns Blvd, lower 164th Avenue, and the Columbia Business Center. The timelines shown for future planning efforts are approximate and subject to adjustment as market conditions and other factors evolve.

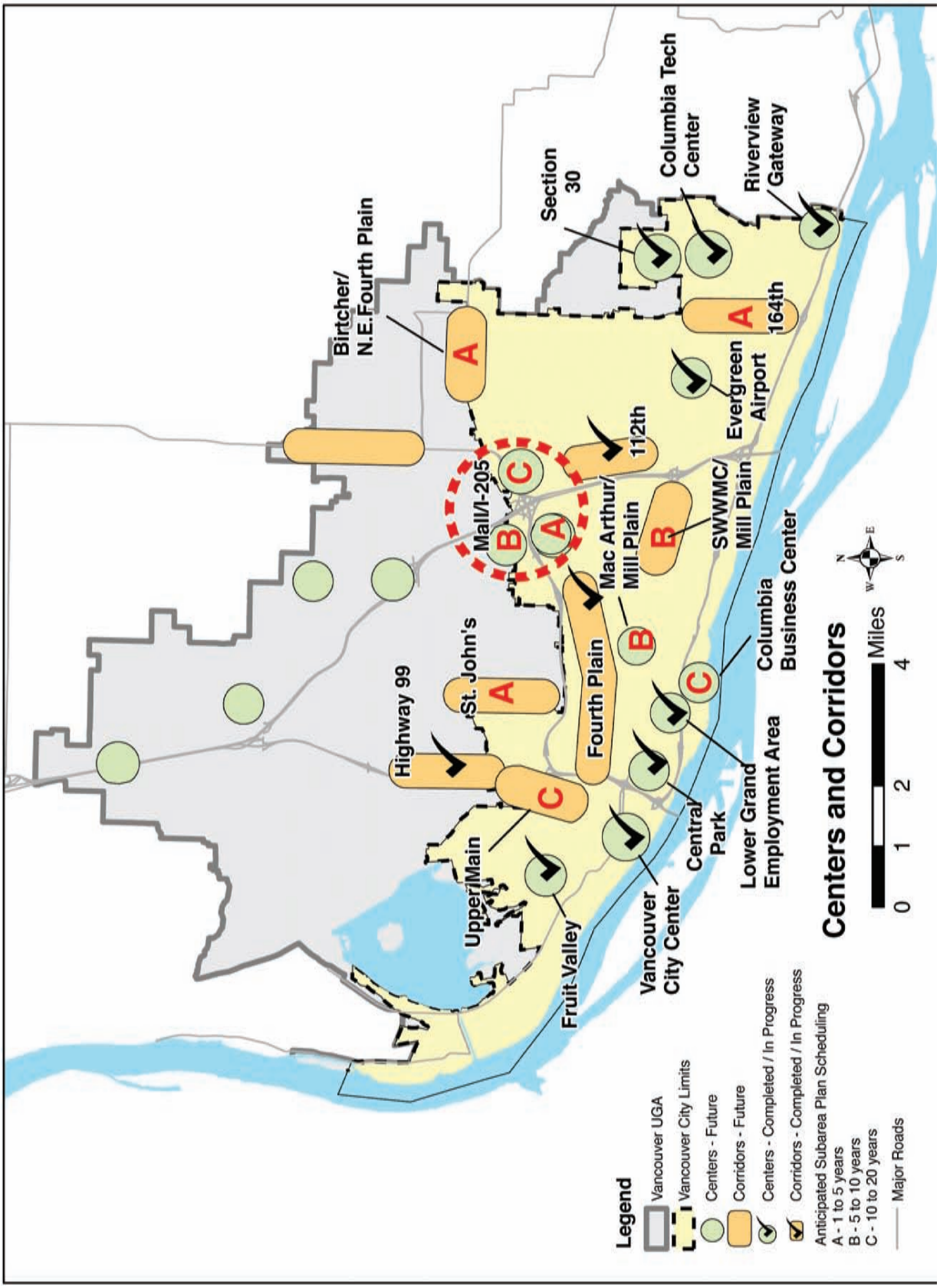


Figure 1-2. Comprehensive land use map showing designated types and intensities of land use allowed throughout the City of Vancouver. Source: City of Vancouver GIS.

In the unincorporated portion of the Vancouver Urban Growth Area, Clark County has completed a subarea plan for the Highway 99 corridor immediately north of Vancouver city limits and is in the process of developing additional subarea plans in the surrounding Three Creeks special planning area. These areas are not anticipated to be annexed to the City of Vancouver until approximately 2020 or later.

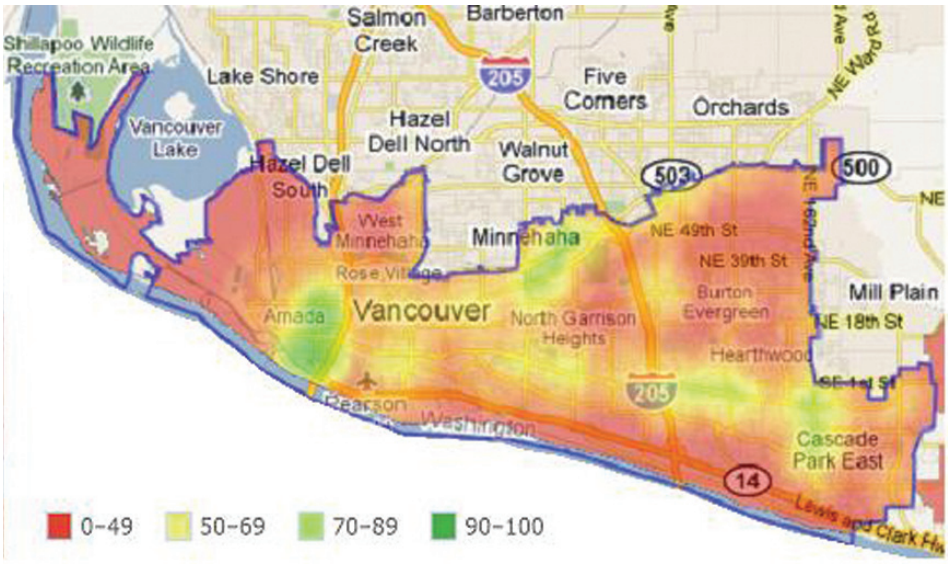
Development within centers and corridors that have existing services is generally more efficient and cost effective than elsewhere, and can in turn support additional service investments. For transit service, the Institute of Traffic Engineers manual and C-Tran recommends that housing densities of at least 7 units per acre are needed to support service every ½ hour, or at least 80-200 employees per acre in non-residential areas. To support service every 10 minutes, 15 housing unit per acre or 200-500 employees per acre is recommended.

Facilitating connected neighborhoods and communities

The Comprehensive Plan envisions Vancouver neighborhoods that have restaurants, stores, public facilities, and employment opportunities near the residents that use them, and a network of roads, sidewalks, and bike paths to reach these destinations easily. This concept is also known as the "20-minute neighborhood", and is based on the idea is that encouraging more accessible public and private amenities nearby can help maintain or enhance the convenience, livability and distinctiveness of individual neighborhoods. It can also provide a wider range of transportation choices including shorter drives, walking, transit, or other options, and can generally promote opportunities for community interaction and social cohesion.

Data for this concept is available at the website Walk Score, which calculates the proximity of stores and other land use destinations to housing, Vancouver's citywide score in 2011 is estimated at 50 on a scale of 0 to 100, slightly ahead of the average for midsize and larger Washington cities (48), and the scores for the cities of Battle Ground (49) and Camas (36). The City of Portland received a score of 67. Walk Score reflects proximity of various land uses, not sidewalk condition or measures of connectivity. A score below 50 indicates most trips require a car. **Figure 1-3** illustrates how Walk Scores vary within Vancouver. Green areas with mixes of land use that are most conducive to walking or short drives are in downtown and areas to the north, near portions of Fourth Plain Blvd, and portions of Mill Plain Blvd east of I-205.

Figure 1-3. Areas in Vancouver with land use mixes conducive to walking (100 best)



Source: Walk Score (http://www.walkscore.com/WA/Vancouver)

Promoting public health

Recent scientific research has highlighted how the built environment influences the health of local residents. Low-density, single-use communities with limited walking options have been shown to have higher levels of obesity than more compact, walkable areas, even when other factors are accounted for (Salis; Anderson & Schmidt). Almost two-thirds (64%) of Vancouver adults were obese or overweight in 2011 according to the Clark County Public Health Department. The Growth Management Act was amended in 2009 to require land use elements of local comprehensive plans to promote physical activity. The Vancouver Comprehensive Plan contains policies encouraging commercial and public services to be located near housing, with appropriate sidewalk connections and paths to encourage walking.

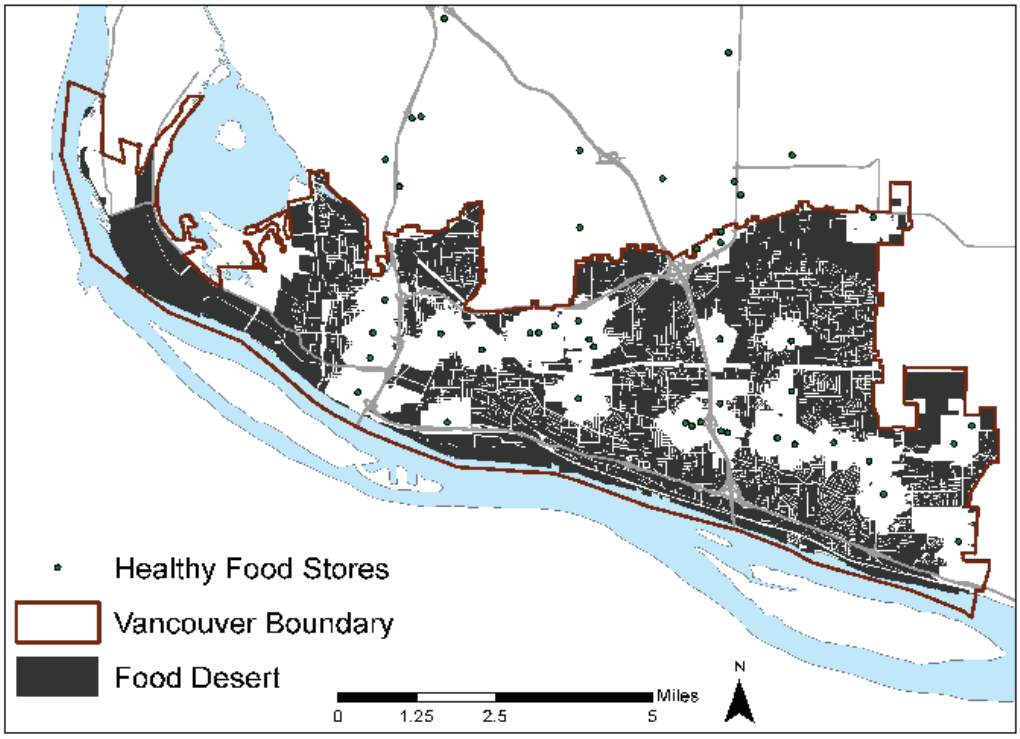
The importance of nearby grocery stores or other sources of fruits, vegetables or fresh meat has also been the subject of health studies. Neighborhoods lacking these options have been shown to have higher levels of obesity. Similarly, areas with high concentrations of fast food have been shown to contribute to obesity, particularly in children. **Figure 1-4** shows Vancouver "food deserts", areas that are more than ½ mile from the nearest supermarket or smaller source of fresh food. The Vancouver Comprehensive Plan promotes the recruitment and retention of supermarkets or other fresh food stores in areas lacking them, and encourages growing food at home, or in community gardens.

Fostering sustainability

Sustainability, generally defined as meeting today's needs without compromising the ability of future generations to meet their's, is one of the City's core strategic commitments. The 2009 Creating a more Sustainable Vancouver Plan includes a range of goals and strategies directed at City operations and the community at large to reduce greenhouse gas emissions (GHG), and facilitate efficient energy and resource use. Following the Sustainable Vancouver Plan, inventories were completed in 2007 which estimated total annual private and public emissions in Vancouver at 3.2 million metric tons of Carbon Dioxide Equivalent. Approximately 1/3 of these were attributed to local energy consumption; 1/3 from local transportation activity, primarily auto traffic, and 1/3 from the outside production and transport of goods and food that are then consumed locally. (http://www.cityofvancouver.us/upload/images/PublicWorks/CoV-CommunityInventory-6pager-010810-final.pdf)

Sustainability can be promoted in the construction of individual buildings, based on the materials used, and provisions made for energy usage and production during

Figure 1-4. Areas in Vancouver further than ½ mile from nearest source of healthy food



Source: Clark County Public Health Department

the lifetime of the building. In 2009 the City of Vancouver partnered with Clark County and the Cascadia Region Green Building Council to identify and remove regulatory barriers to construction of affordable and sustainable single family housing. The Comprehensive Plan adopts and incorporates these plans and studies by reference, and provides additional policy direction.

Planning for an aging population

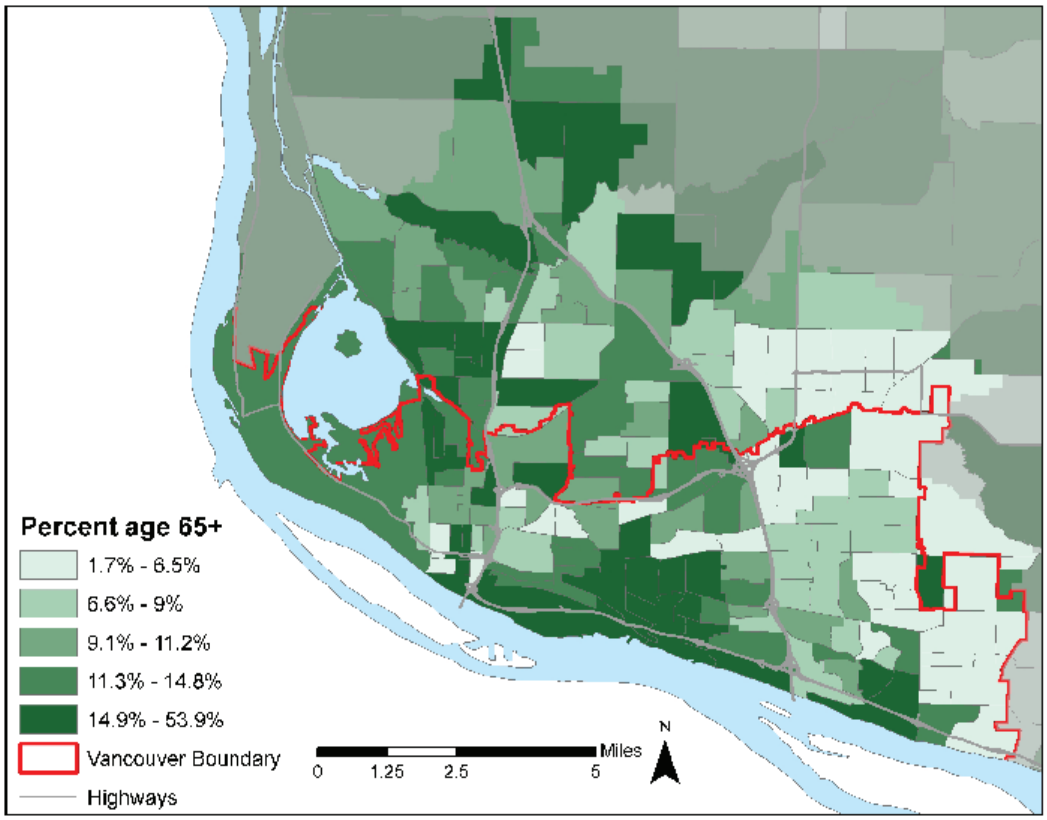
Vancouver, like other communities, faces significant demographic shifts during the next twenty years. In 2011, the first year that baby boom generation seniors will become eligible for retirement, one in six Vancouver residents was 65 years or older. Over the next 15 years the number of residents 65 years or older countywide is projected to grow three times as fast as the overall population, and the number of residents 85 or older is projected to grow twice as fast. In response, the Vancouver Comprehensive Plan and implementing zoning standards strive to ensure opportunities are provided for adequate senior housing for a range of age, income and health needs, and to ensure opportunities for appropriate conventional housing as needed to accommodate seniors. Provisions are also needed to help seniors age in place in existing homes.

Beyond housing issues, the Comprehensive Plan should facilitate integrated communities where commercial, medical, social and other services used by seniors are located nearby, and that road and sidewalk design, signage and lighting address senior safety considerations. **Figure 1-5** shows the areas in Vancouver with the highest proportion of seniors.

The comprehensive plan land use map

Figure 1-6 is a simplified version of the Vancouver comprehensive plan land use map, which officially designates the type and intensity of land uses allowed on individual properties throughout the City of Vancouver. Designations applied by Clark County in the unincorporated VUGA are also indicated. Poster-sized copies of the comprehensive plan land use designation map showing actual designations on all properties are available from the City's Website (www.ci.vancouver.wa.us).

Figure 1-5. Areas in Vancouver with higher proportion of seniors



Source: Clark County Public Health Department

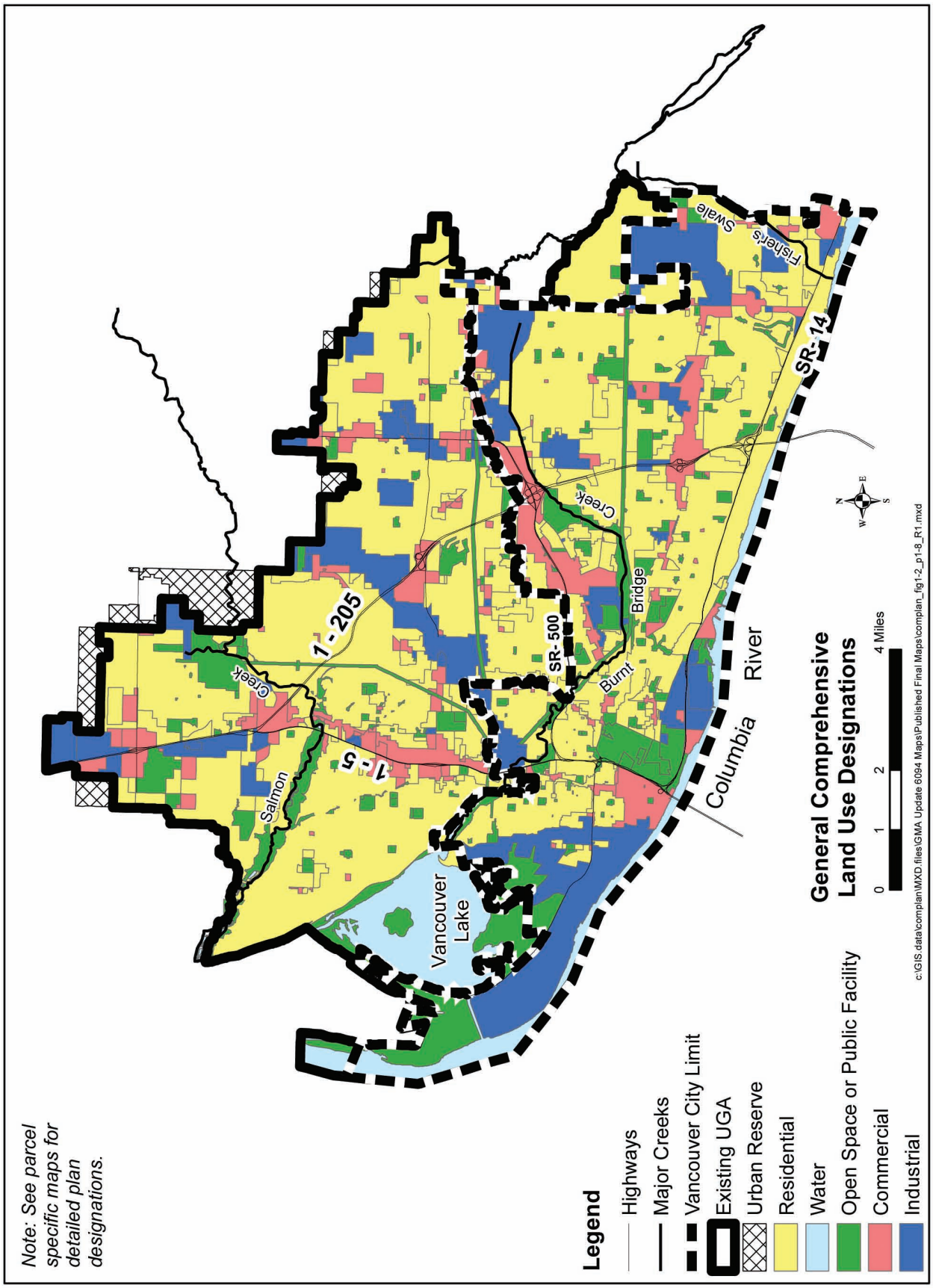


Figure 1-6. Comprehensive land use map showing designated types and intensitities of land use allowed throughout the City of Vancouver.
Source: City of Vancouver GIS

Table 1-5. Vancouver comprehensive plan land use designations

Comprehensive Plan designation	Corresponding Zoning	General Intent
Residential		
Urban Lower Density	R-2, R-4, R-6, R-9	Predominantly single-family detached residential development, with some allowances for duplexes, townhouses, and single-family homes on small lots using infill standards
Urban Higher Density	R-18, R-22. R-30, R-35, MX	Predominantly apartments and condominiums, with some allowance for attached housing (such as duplexes, townhouses, and small-lot single-family homes) and mixed use
Commercial		
Commercial and Mixed Use	CN Neighborhood Commercial	Small scale commercial uses and services primarily for nearby residences. Designated areas are typically less than 2 acres in size. These areas provide services within walking distance for the frequent needs of the surrounding residents and are generally small areas designed to be compatible with the surrounding residentially zoned neighborhoods.
	CC Community Commercial	Medium scale commercial uses and services, typically serving more than one neighborhood. Designated areas are typically between 2 and 10 acres in size, located near collector or arterial street intersections
	CG General Commercial	Medium to larger commercial use and services serving large sections of urban areas and beyond. Designated areas are typically in urban activity centers or along major travel routes connecting activity centers. General Commercial areas provide a full range of goods and services necessary to serve large areas and the traveling public. These areas are generally located at interchanges, along state highways and interstates, and adjacent to major and minor arterial roadways.
	CX City Center intensity	Specific to downtown Vancouver. A mix of generally higher commercial, residential, institutional uses envisioned
	WX Waterfront Mixed Use	A mix of residential, commercial, office and recreation uses along the Columbia River
	CPX Central Park Mixed Use	Specific to Vancouver Central Park. A mix of open space, recreation, educational, governmental, and public service uses developed according to policies and guidelines contained in the master plan document “A Park for Vancouver: A Concept Plan” (as amended).
	MX Mixed Use	A mix or residential, commercial, office and recreation uses
	RGX Riverview Gateway (1)	Specific to the Riverview Gateway subarea at the intersection of 192nd Avenue and SR-14. A mix of residential, mixed use, office, and light industrial uses
Industrial		
Industrial	OCI Office-Campus-Industrial	Combination of light industry, office, & limited supporting commercial uses
	IL Light Industrial	Light manufacturing, research, warehousing, and industrial services, with provisions for office uses. Generally clean uses not involving outdoor storage, noise or odors or use of rail or marine transport.
	IH Heavy Industrial	Intensive industrial manufacturing, service, production or storage often involving heavy truck, rail or marine traffic, or outdoor storage and generating vibration, noise and odors.
	A Airport	General Aviation airports and accessory uses
Other		
Open Space	P Park, GW Greenway, NA Natural Area	Areas intended for parks, greenways and natural areas
Public Facilities	All zones	Areas developed with schools, fire stations, colleges, hospitals and other large facilities serving the public

(1) RGX Riverview Gateway is also consistent with Low Density and High Density Residential, and Industrial Comprehensive Plan designations

Community Development policies

The City of Vancouver adopts the following policies to guide land use and development in the city over the next 20 years. These policies are consistent with and implement Policy Sections 1.0, 2.0, and 12.0 of the Community Framework Plan, adopted by Clark County and local jurisdictions, and planning policies 36.70.A.020(1), (2)and (13) of the Washington Growth Management Act (see Appendix A).

CD-1 Citywide land supplies
Establish land supplies and density allowances that are sufficient to accommodate adopted long-term City of Vancouver population and employment forecast allocations.

CD-2 Efficient development patterns
Encourage efficient development throughout Vancouver to ensure achievement of average density of 8 units per acre set by countywide planning policies. Encourage higher density and more intense development in areas that are more extensively served by facilities, particularly transportation and transit services.

CD-3 Infill and redevelopment
Where compatible with surrounding uses, efficiently use urban land by facilitating infill of undeveloped properties, and redevelopment of underutilized and developed properties. Allow for conversion of single to multi-family housing where designed to be compatible with surrounding uses.

CD-4 Urban centers and corridors
Achieve the full potential of existing and emerging urban activity centers and the corridors that connect them, by:

(a) Promoting or reinforcing a unique identity or function for individual centers and corridors

(b) Planning for a compact urban form with an appropriate mix of uses

(c) Working with stakeholders to develop flexible standards to implement the vision for that center or corridor

(d) Encouraging innovative, attractive private development that efficiently uses available land and resources

(e) Establishing connectivity within each center and to other areas to provide accessibility

(f) Providing a range of transportation options

(g) Investing in public facilities and amenities to enhance livability

CD-5 Mixed-use development
Facilitate development that combines multiple uses in single buildings or integrated sites.

CD-6 Neighborhood livability
Maintain and facilitate development of stable, multi-use neighborhoods that contain a compatible mix of housing, jobs, stores, and open and public spaces in a well-planned, safe pedestrian environment.

CD-7 Human scale, accessible development, and interaction
Facilitate development that is human scale and encourages pedestrian use and human interaction.

CD-8 Design
Facilitate development and create standards to achieve the following:

(a) Increased streetfront use, visual interest, and integration with adjacent buildings

(b) Improved pedestrian connections and proximity of uses within developments

(c) Enhanced sense of identity in neighborhoods and subareas

(d) Publicly and/or privately owned gathering spaces facilitating interaction

CD-9 Compatible uses
Facilitate development that minimizes adverse impacts to adjacent areas, particularly neighborhoods.

CD-10 Complementary uses
Locate complementary land uses near one another to maximize opportunities for people

to work or shop nearer to where they live.

CD-11 Archaeological and historic resources
Protect and preserve cultural, historic and archaeological resources. Promote preservation, restoration, rehabilitation, and reuse of historically or architecturally significant older buildings. Continually increase knowledge and awareness of historic and archaeological resources, further developing the city's identity and allure. Work with Clark County to maintain state Certified Local Government Status.

CD-12 Integrated area planning
Promote cohesive, integrated planning of areas and sites through use of subarea planning, master planning, and planned developments, or other methods.

CD-13 Land use reassessment
Assure consistency of overall land use and capital facilities plans by reevaluating Vancouver's land use plan if funding is inadequate to provide necessary public facilities and services to implement the plan.

CD-14 Connected and integrated communities
Facilitate the development of complete neighborhoods and subareas containing stores, restaurants, parks and public facilities, and other amenities used by local residents.

CD-15 Public Health and the built environment
Promote improved public health through measures including but not limited to the following:

(a) Develop integrated land use and street patterns, sidewalk and recreational facilities that encourage walking or biking

(b) Recruit and retain supermarkets and other stores serving fresh food in areas otherwise lacking them. Discourage supermarkets and fresh food stores that do relocate from using non-compete clauses that prevent timely replacement of similar uses. Encourage stores that locate near sensitive populations or underserved areas to offer healthy food choices

(c) Assess and promote opportunities for growing food in home or community gardens. Consider guidelines for service provision levels.

(d) Coordinate with Clark County Public Health to better integrate health impacts and land use and public facilities and service planning

CD-16 Sustainability
Facilitate sustainable land use development though measures including but not limited to the following:

(a) Develop integrated land use patterns and transportation networks that foster reduced vehicle miles traveled and associated greenhouse gas emissions

(b) Develop individual buildings that minimize energy and resource consumption. Encourage home based efficiencies such as insulation retrofits, efficient water and air heating systems, and use of solar panels or other forms of energy capture.

(c) Implement recommendations of the Vancouver-Clark County Sustainable Affordable Residential Development Report

CD-17 Aging Populations
Update policies, standards, and practices as necessary to accommodate anticipated aging of the local population, though measures such as:

(a) Develop integrated land use patterns and transportation networks that facilitate shorter vehicular trips, walking, or use of public transportation

(b) Review standards for specialty housing to ensure they are consistent with anticipated age-related housing needs

(c) Review standards and designations of conventional single and multi-family housing to ensure they are consistent with anticipated needs, including provisions for aging in place

(d) Review standards for roads and sidewalk design, signage, and lighting to address senior safety issues

Tracking the Comprehensive Plan

- As of 2008, 14% of existing Vancouver housing units were located within ½ miles of a full service grocery store, 47% within ½ mile of a convenience store, 69% within ½ mile of a park, 35% within ½ mile of a school, and 72% within ½ mile of a bus stop

- From 2007 to 2011, new Vancouver single and multi-family housing averaged a total density of 8.8 units per acre in city limits, and 6.1 units per acre in unincorporated portions of the Vancouver UGA. Single family units accounted for 50% of new units in city limits, and 8% in the VUGA.

- As of 2010, 74.5 of Vancouver residents surveyed reported that overall livability in the City was high or very high

For more information:

The Clark County Comprehensive Plan contains policy guidance for the unincorporated VUGA. Clark County also maintains comprehensive plan and zoning maps regulating the unincorporated area. Contact Clark County Long Range Planning or visit Clark County's Web site http://www.clark.wa.gov/planning/comp_plan/index.html

- *The Community Framework Plan contains policy guidance for regional growth issues in Clark County. See Appendix A.*
- *The Vancouver Comprehensive Plan Implementation Monitoring Report (2010) contains information on recent local trends and existing conditions. Clark County also tracks development data at http://www.clark.wa.gov/planning/comp_plan/monitoring.html*
- *The 2009 Creating a Sustainable Vancouver Plan is available at (http://www.cityofvancouver.us/upload/images/PublicWorks/VancouverSustainabilityPlanFINALWeb_090109.pdf)*
- *Code and Regulatory Barriers to the Living Building Challenge for Sustainable, Affordable, Residential Development http://www.cityofvancouver.us/upload/images/Planning/Sustainability/CTED_Grant/Report_1_only.pdf*

CHAPTER 2

Economic Development

Economic development is one of the cornerstones of the Vancouver comprehensive plan because it is a central factor in a community's ability to sustain itself. A strong and diverse economy provides employment and a tax base that supports public services and a livable community. Although most economic activity is in the private sector, local government's role is to establish parameters for private markets, provide necessary services, and participate in economic development in some circumstances.

This chapter describes Vancouver's economy in 2011 and what direction the city's economic development should take during the next 20 years.

Specifics

- **Data on the composition of the Vancouver economy**
- **Economic indicators: unemployment, poverty, income, and sales levels**
- **Available land for commercial and industrial development**
- **Vancouver's economic development tools and programs**
- **Economic development policies**

Vancouver's economy in 2011

Vancouver's economy is broadly diversified, with minor concentrations in health care, retail trade, K-12 education, and manufacturing. As of 2010, there were an estimated 74,000 jobs within the City of Vancouver covered by unemployment insurance and an estimated 2,800 additional uncovered jobs, primarily corporate officers or employees of private schools and religious organizations. There were also an estimated 29,000 additional jobs in the unincorporated portion of the Vancouver Urban Growth Area (VUGA). The City of Vancouver and VUGA together account for 83% of all jobs in Clark County.

Table 2-1 illustrates the share of jobs by economic sector in Clark County, and how these changed since 2000. Most sectors maintained a consistent share of the economy during the previous decade. Manufacturing declined with the closing of Hewlett Packard, the Vanalco aluminum smelter, and loss of other electronics jobs. Construction job losses were particularly heavy following the 2008 recession. Health care employment increased with expansions at the Southwest Washington Medical Center and the new Salmon Creek hospital, while government employment grew primarily due to new and expanded schools. In the near future, local manufacturing employment is projected to continue to decline slowly through 2018, while increases are anticipated in health care, and professional and business services sectors. **Table 2-1** also includes local wage data. Current pay in most sectors is comparable to the Vancouver median household income of $45,701, except wholesale trade which is higher, and retail trade and leisure and hospitality which are considerably lower.

Table 2-2 lists major individual employers in the Vancouver area as of 2010. Most are located in Vancouver or the Vancouver UGA. These larger businesses, however, represent only a small portion of local firms, which are primarily small to mid-sized. In 2008 three-quarters of businesses countywide had fewer than 10 employees, and 95% had fewer than 50 (US Economic Census). Small and mid-sized employers have largely driven previous economic expansion in the region. (*Portland Institute of Metropolitan Studies, 1999.*

The redevelopment Vancouver's economy is linked to the larger global, national, and state economies, and especially to the Portland area and Southwest Washington region. Approximately 70,000 Clark County workers, 1/3 of the local labor force, are employed in Oregon. Many work in transporta-

Table 2-1. Percentage of jobs by economic sector in Clark County

	Manufacturing	Construction and mining	Transportation and utilities	Wholesale trade	Retail trade	Finance insurance, and real estate	Professional and business services	Health Care	Leisure and hospitality	Gov't
2000	14.8%	8.1%	2.9%	3.8%	11.6%	4.2%	10.7%	10.8%	9.8%	17.0%
2010	9.0%	6.1%	3.0%	4.2%	11.7%	4.6%	11.7%	14.8%	9.5%	19.6%
Projected Annual Job Growth Rate to 2018	-0.5%	0.5%	1.5%	1.8%	1.1%	0.8%	2.6%	3.1%	1.5%	1.3%
Annual local wage (2010)	$51,062	$47,348	$41,724	$60,334	$26,434	$47,226	$50,109	$46,256	$16,521	$46,463
Taxable Sales (2010)	$16.5 million	$169.9 million	$4.9 million	$70.9 million	$53.1 million	$30.8 million	$42.5 million	_	$133.7 million	_

Source: Washington Employment Security Division (ESD)

Table 2-2. Largest Vancouver Area Employers, 2010

Company	Location	Employees	Product/Service
Vancouver School Distrct	Vancouver	3,412	Pre K-12 education
Evergreen School District	Vancouver	3,224	K-12 education
Southwest Washington Medical Cntr	Vancouver	2,625	Hospital
Hewlett-Packard	Vancouver	1,800 *	Inkjet printer R&D and
Clark County	Vancouver, VUGA	1,600	Local government
Fred Meyer Stores	Countywide	1,405	Grocery and retail
City of Vancouver	Vancouver	1,100	Local government
Battle Ground School District	Battle Ground	1,006	K-12 education
WaferTech	Camas	950	Silicon wafer fabrication
Wells Fargo	Vancouver	942	Bank
S E H America Inc.	Vancouver	842	Silicon wafer fabrication
Legacy Salmon Creek	Vancouver UGA	830	Hospital
Safeway Inc.	Countywide	775	Grocery
Vancouver Clinic	Vancouver	767	Medical offices
Clark College	Vancouver	748	Higher education
Camas School District	Camas	654	K-12th grade education
Kaiser Permanente tal	Vancouver	624	Hospital
Dick Hannah Dealerships	Vancouver	545	Auto dealerships
Georgia-Pacific Corp.	Camas	501	Pulp and paper manufacturing
Frito-Lay	Vancouver	500	Potato chips
Northwest Natural Products	Vancouver	437	Dietary supplements and vitamins
Columbia Machine Inc.	Vancouver	415	Concrete, palletizing equipment
RS Medical	Vancouver	400	Electrical stimulators
Carlisle Interconnect	Vancouver	338	Wire and cable interconnections
Nautilus Inc.	Vancouver	300	Fitness Equipment

Sources: CREDC, 2009 City of Vancouver Comprehensive Annual Financial Report
*2009 data

tion and warehousing industries near the Port of Portland, Portland Airport, and Swan Island. Approximately 12,000 Oregonians work in Clark County (Washington ESD). Economic activity is also linked, as an estimated 1/3 of retail sales purchases by Clark County residents are made in Oregon to take advantage of the lack of a sales tax. Conversely, the absence of income taxes in Washington has also attracted some relocation of higher income Oregon residents. Portland and southwest Washington are also linked by a range of common interests and resources. Both areas are served by the I-5 and I-205 freeways and bridges, and the Portland International Airport, and the implications for freight transportation as well as personal mobility that these involve. In a global and national economic setting, both are perceived as parts of a single region, with opportunities for joint economic development and branding.

Vancouver and the region were particularly impacted by the global recession beginning in 2008. 7%

of nonfarms jobs in Clark County were lost, similar to statewide loss rates but worse than the nation. Local jobs continued to be lost after employment improved nationally in 2010. Construction and development-related industries were particularly hard hit, as well as lower paying jobs in all sectors of the local economy. **Table 2-3** shows comparative economic performance indicators.

Table 2-3. Local, regional, and state economic performance indicators.

Indicator	Vancouver	Clark County	City of Portland	Washington
Unemployment rate (February 2011)	13.4%	12.9%	N.A.	9.2%
Percentage of residents below poverty (2009)	15%	12%	16%	12%
Median household income	$45,701	$56,074	$50,203	$56,548
Taxable Retail sales per capita (2010 Q4)	$3,794	$ 2,536	N.A.	$3,985

Source: US Bureau of Labor Statistics; American Community Survey; Washington ESD and Dept. of Revenue.
*2009 data

Table 2-4 shows a breakdown of gross vacant and underutilized commercial and industrial land in the Vancouver area (See Chapter 1, Community Development, for more on proposed land uses and development capacity.) The City Vancouver area has a disproportionate share of vacant industrial land in Clark County and the larger bi-state region. Almost half of the Vancouver industrial inventory is located in the Columbia Gateway area of the Port of Vancouver. Permitting timelines for commercial or industrial developments in the City of Vancouver in 2010 averaged 78 days from receipt of a complete application to land use approval decision or public hearing. Economic development is also supported by business recruitment, creation, expansion and retention, and assistance in the

Table 2-4. Gross vacant and underutilized commercial and industrial land for Vancouver and the VUGA for 2011.

Land use category	City of Vancouver	Unincorporated Vancouver UGA	Total VUGA
Commercial	579 acres	1,599 acres	2,178 acres
Industrial	2,928 acres	1,341 acres	4,269 acres
Total	3,507 acres	2,940 acres	6,447 acres

Sources: CREDC, 2009 City of Vancouver Comprehensive Annual Financial Report *2009 data

Economic development tools and programs

Economic development is largely driven by private market conditions, but can be influenced by local government in several ways. In addition to providing overall policy guidance in the Comprehensive Plan, the City of Vancouver strives to provide adequate overall land supplies for new economic development, to protect industrial or other targeted lands from conversion to other development, and to provide for a timely and cost-effective permitting processes. Vancouver also supports economic development through provision of roads, utilities, and other infrastructure and services, and by maintaining a high quality of life.

development review process. The City of Vancouver has an Economic Development Services division, and directly supports the Columbia River Economic Development Council (CREDC). The City also partners with the Greater Vancouver Chamber of Commerce, and other groups in their efforts to recruit and retain businesses. Vancouver is also a member of the Regional Economic Development Partners with other jurisdictions from the Portland metropolitan area. The City of Vancouver also coordinates with outside agencies and organizations to provide economic development grants or financing to the extent available under state law. Washington does not allow Tax Increment Financing (TIF) or comparable property tax redistribution programs as extensively as Oregon or other states. Limited TIF legislation was passed in 2002, and supplemented by Local Infrastructure Financing Tool (LIFT) program in 2006 and the Local Revitalization Financing (LRF) program in 2009.

These economic development activities are applied in targeted areas as well as citywide. The revitalization of downtown Vancouver began with the Esther Short Redevelopment Plan and Planned Action ordinance which provided zoning and environmental clearance, and also supported substantial public investments. These included the renovation of Esther Short Park, street and utility upgrades, and the Hilton Hotel development and other public-private partnerships. These regulatory and economic development assistance actions were then extended southward to encompass the former Boise Cascade complex and adjacent riverfront lands through adoption of the Vancouver Central City Vision Subarea Plan in 2006. The plan envisions development of residential, mixed use and office construction, resulting in an additional 8500 downtown jobs when the area is fully developed.

Concentrated economic development is also planned in the section 30 and Riverview Gateway subareas in eastern Vancouver. Both areas are former mining sites served by recent construction of 192nd Avenue and existing major roadways. The plans envision a mix of employment and housing when completed. 5,400 and 3,100 new jobs are projected respectively. Significant capacity for long term job growth also exists in the Fourth Plain subarea , and at the Southwest Washington Medical Center, Port of Vancouver, Columbia Tech Center, Columbia Business Center, and former Evergreen Airport sites. See the Community Development chapter of this document for further information subarea planning in identified centers and corridors.

Direction for the future

Economic development is one of the cornerstones of the Vancouver Comprehensive Plan. The goal is to increase jobs, particularly family wage jobs, for local residents, and to reduce the number of residents who commute to Oregon for work, shopping, and entertainment. The City would like to provide a ratio of at least one local job for every Vancouver household. Providing land and public services that are adequate for job growth is an important part of the strategy. The City must be a good steward of land designated for job growth, which includes

using the land efficiently and limiting conversion to other uses. The City must also ensure the timely permitting of family-wage jobs and other priority economic development projects. A sound economy will also provide revenues for the City to support facilities and services desired by residents (parks, trails, police protection, fire protection, etc.).

Vancouver will work with local organizations and agencies to further economic development, including implementation of the Columbia River Economic Development Council's (CREDC) Clark County Economic Development Plan. Areas of emphasis will include establishing Vancouver and Clark County as an information technology growth center; expanding the economic development influence of local higher education institutions; making the area a hub for international investment in the Pacific Northwest; investing in infrastructure and amenities needed to attract new businesses and employees; and continued targeting of recruitment, expansion, and entrepreneurship efforts.

Economic Development policies

The City of Vancouver adopts the following policies to increase the number of jobs for local residents and reduce the need for residents to commute to Oregon for work, shopping, and entertainment. These policies are consistent with and implement Policy Section 10.0 of the Community Framework Plan, adopted by Clark County and local jurisdictions, and planning policy 36.70.A.020(5) of the Washington Growth Management Act (see Appendix A).

EC-1 Jobs-housing balance
Increase the ratio of jobs to residents in the City of Vancouver and the region.

EC-2 Family-wage employment
Promote the formation, recruitment, retention and growth of businesses that provide a wide range of employment opportunities, particularly family-wage employment. Prioritize family-wage employment in land use policies and practices.

EC-3 Public revenue enhancement
Promote development that enhances revenue generation for public services.

EC-4 Industrial and business park sanctuaries
Provide an adequate supply of industrial and/or business park areas with opportunities for family-wage employment and revenue generation.

EC-5 No net loss of employment capacity
Restrict zone changes or legislative land use approvals that would lessen long-term capacity for high-wage employment unless accompanied by other changes within the same review cycle that would compensate for the lost capacity or unless the proposed change would promote the long-term economic health of the city.

EC-6 Efficient use of employment land
Maximize utilization of land designated for employment through more intensive new building construction and redevelopment and intensification of existing sites.

EC-7 Regional focus
Work with the larger Portland-Vancouver region to leverage opportunities, unique site availability, and marketing to promote the region nationally and globally to attract new business.

EC-8 Small business support
Support the growth of new and expanding small business through efficient permitting, incentives, and communication.

Tracking the Comprehensive Plan

- As of 2009, the median household income in the City of Vancouver was $45,701. 15.1% of Vancouver residents had incomes below the federal poverty level (American Community Survey)

- As of 2011, there was approximately 1 job per 2.2 persons in Vancouver

For further information:

- *The Columbia River Economic Development Council (CREDC) provides business services, and economic and demographic data. The Greater Vancouver Chamber of Commerce also provides business services. Consult CREDC or the Chamber of Commerce directly or visit their Web sites (www.credc.org and www.vancouverusa.com).*
- *The Clark County Comprehensive Plan (2007) provides information and policies on economic development issues for unincorporated Clark County. Information about potential costs and job growth implication of developing specific subareas is contained in the Clark County Focused Public Investment Report (2003). Contact Clark County Long Range Planning or visit the Clark County Web site (http://www.co.clark.wa.us/longrangeplan/review/review-info.html).*
- *For information about City of Vancouver economic development projects and programs, contact the Vancouver Economic Development Staff or visit the City's Web site (www.ci.vancouver.wa.us/vancmo/econ-dev/downtown.shtm).*

CHAPTER 3

Housing

Adequate, safe, and affordable housing for all residents is essential to the health of a community. This chapter includes inventories of Vancouver housing in 2011, and an assessment of future needs.

Specifics

- **Existing Vancouver housing stock, types, and conditions**
- **Housing tenure and affordability in Vancouver and the region**
- **Housing costs by zoning district**
- **Constrains on housing production**
- **Housing programs and plans to provide adequate housing**
- **Housing policies**

Vancouver's population, households, and housing in 2011

Population

Vancouver is home to 162,300 persons as of 2011. The city continues to grow, although more slowly in recent years because of the economic recession and relative scarcity of land as the city fills out within its borders. Future growth is anticipated through the development of remaining vacant land, redevelopment of built or partially built areas, and annexations in the unincorporated Vancouver Urban Growth Area (VUGA).

Housing

Types of housing. Because people need different types of housing at different stages of their lives, it is important to provide a variety of types of housing— apartments for young people just starting out on their own, single-family homes for families with children, townhouses and apartments for active retirees not interested in maintaining large homes, and assisted living for the elderly. As the baby boom generation ages over the next 20 years, there is likely to be a greater need and demand for smaller units, retirement homes, and assisted living. **Table 3-1** depicts the range of housing types in the City of Vancouver. Single-family housing is the most common type, accounting for the 57% of all units in 2010. **Table 3-1** does not include group quarters housing, such as nursing homes, other

Table 3-1. Vancouver housing stock in 2011

Housing Type	Units	Vacancy Rate (2009)	Persons per household
Single-Family	40,008 (57%)	6%	2.7
2-unit multi-family	4,625 (7%)	8%	2.6
3-4 unit multi-family	3,831 (5%)	7%	2.2
5+ unit multi-family	19,969 (28%)	10%	2.1
Manufactured housing	1,918 (3%)	7%	1.9
Totals	70,351	6%	2.5

Source: OFM Census, City of Vancouver permit records. American Community Survey

care or correctional facilities, or dormitories. These accounted for approximately 2,080 residents in 2010. See **Figure 1-2** in the Community Development chapter for generalized locations of single and multi-family housing in Vancouver.

Housing condition. Three-quarters of Vancouver housing units were built after 1970, and most are structurally sound. Approximately one percent lack complete plumbing or kitchen facilities, while slightly less than 2% lack telephone service. 2.3% of residences are occupied by more than one person per room, an indication of overcrowding (American Community Surevey, 2009). According to the Clark County/Vancouver Consolidated Housing and Community Development Plan, 2000-2004, 7.1 percent (7,660 dwelling units) in Clark County were in fair or badly worn condition in 1999. Three census tracts located in north-central Vancouver (410.05, 417 and 418) were identified as low-income areas and as having high concentrations of housing in need of repair or replacement. Housing that is more than 25 years old usually needs new roofs, mechanical and electrical repairs, and cosmetic improvements such as new paint and wallpaper. Households with low incomes have the most trouble keeping up with maintenance and repairs.

Housing Tenure. In 2009 47 percent of housing units in Vancouver were owner-occupied. Vancouver homeownership levels are below Clark County's overall (64%) and the City of Portland's (53%). Home ownership can stabilize neighborhoods and

communities, and allow individuals and families to build wealth over time. However, for some over-leveraged households, ownership can represent a financial risk, and can limit the ability to relocate in response to changing labor markets or other needs. A majority (54%) of Vancouver households, both renters and owners, have lived in their homes for fewer than 5 years, a turnover rate that is similar to Portland, and slightly higher than in Clark County. (American Community Survey) A household is defined as an individual or group living together in a singe housing unit, whether related or not.

Housing Costs and Affordability. Housing affordability remains a significant problem facing Vancouver and other jurisdictions, as increasing numbers of local citizens face housing costs beyond their disposable incomes. **Table 3-2** indicates that almost half of Vancouver households spend more than 30% of their income on owning or renting housing, a threshold level recognized by the state and federal government as overly burdensome, and requiring households to cut back on other essentials such as health care, transportation, or food. **Table 3-2** also illustrates how affordability problems are not locally unique. The share of Vancouver households paying more than 30% of their income for housing is similar to the Clark County, Portland and Washington state estimates, and local poverty levels are similar to Portland.

The Growth Management Act requires local jurisdictions to demonstrate that regulations allow and encourage housing for all economic segments of the community. **Table 3-3** provides a breakdown of local households by income ranges, and the general share of Vancouver housing they can afford to buy or rent without having to spend more than 30% of their income. Housing affordability is a challenge for middle class households and the working poor as well as at the lowest income levels. Only one in five Vancouver homes were affordable to own for households earning the median annual income of $45,701 or less, which by definition is half of all Vancouver households as of 2009. A household earning the moderate income level of $36,560 or less could only afford one in 10 local owner-occupied units, or 58% of rental units. Almost 40% of local households were at or below this income level in 2009. A couple earning minimum wage would each need to work over 40 hours each per week to achieve this income. The **Table 3-2** statistics only compare annual incomes and housing costs, and do not account for the additional challenge to home-ownership of making the initial downpayment.

At the poverty level, defined as $22,050 in annual income for a family of four in 2009, only about 3% of Vancouver owner-occupied units and 14% of rental units were affordable. 10% of Vancouver families and 15% of individuals were at or below this level in 2009. Female-headed households were the most likely to be in poverty.

Table 3-3. Compariative housing affordability

	City of Vancouver	Clark County	City of Portland	Washington State
Percent owned	47%	64%	54%	64%
Median Assessed Value (owner occupied units)	$234,200	$260, 600	$296,100	$287,200
Share of owner-households paying 30% or more of income for housing	42%	42%	41%	41%
Gross rent	$842	$869	$867	$911
Share of renter households paying 30% or more of income for housing	49%	54%	52%	50%
Median household income	$45,701	$56,074	$50,203	$56,548
Individuals in poverty	15%	12%	16%	12%

Source: American Community Survey, 2009

Table 3-3. Vancouver household income ranges and affordable housing

Household Income Range	Share of Vancouver households	Share of Local owner occupied housing they can afford*	Share of local rental housing they can afford
Median ($45,701)	50%	21%	77%
Middle (95% of median)	47%	18%	75%
Moderate (80% of median)	40%	10%	58%
Low (50% of median)	22%	3%	14%
Extremely Low (30% of median)	11%	1%	4%

Source: American Community Survey, 2009
* Based on 30% of income

Table 3-4 illustrates the relationship between affordability of middle income single family housing and zoning requirements. In the City of Vancouver and the Vancouver UGA, homes are larger and more expensive in zones requiring larger minimum lot sizes, particularly in the zones with 10,000 and 20,000 square foot minimum lot sizes. The national recession beginning in 2008 impacted Vancouver housing markets significantly. From the beginning of 2005 to the beginning of 2007, median sales prices of Vancouver homes and condominiums rose from approximately $190,000 to $260,000, only to decline back to $190,000 as of the end of 2010. (City-Data.com). The pace of new housing construction in Vancouver declined from 880 units permitted in 2007 to 193 units in 2010. As of 2010, local foreclosure rates were improving but remained high. In Clark County 3,867 homes countywide were in foreclosure, the third highest rate among Washington counties. (Columbian)

Table 3-4. Size and cost of newer single family housing by zoning district

	Minimum Lot Size Required	Median Assessed Value	Median House Size
City of Vancouver			
R-9	5,000 s.f.	$217,336	1,947 s.f.
R-6	7,500 s.f.	$225,444	1,986 s.f.
R-4	10,000 s.f	$263,232	2,341 s.f
R-2	20,000 s.f.	$443,423	3,286 s.f.
Vancouver UGA			
R1-5	5,000 s.f.	$208,760	2,084 s.f.
R1-6	6,000 s.f.	$210,689	2,126 s.f.
R1-7.5	7,500 s.f.	$244,617	2,325 s.f.
R1-10	10,000 s.f	$303,437	2,665 s.f.
R1-20	20,000 s.f.	$378,200	2,876 s.f.

Source: Clark County Assessor Data of single family housing built since 2000

Constraints on housing production.

There are relatively few constraints to production of the housing needed to accommodate anticipate population growth in

Vancouver and Clark County, but much new housing is unlikely to be affordable to middle to lower income households. Basic building materials and construction labor are readily available.

Local land costs rose significantly during the 1990 and early 2000 high-growth years, but land cost remains a relatively small portion of overall housing cost. Land availability has decreased, particularly in the relatively higher density single or multi-family zoning districts, which allow for more affordable housing. In 2011 as the economy slowly recovers from a recession, overall housing production remains challenged by economic uncertainty and difficulties in obtaining development project financing. **Table 3-5** estimates the breakdown of cost components of a typical local 1,500 square foot single family home. Land and infrastructure cost shares have likely risen since the data was originally compiled.

Table 3-5. Major cost percentages of building single-family housing.

Category	Cost
Materials and labor	52%
Developer overhead	13%
Land	10%
Infrastructure	8%
Permits and fees	7%
Profit	10%
Total	100%

Source: County/City of Vancouver Consolidated Housing and Community Development Plan, 2000-2004

Housing Programs and Plans

Almost all housing in Vancouver is privately developed, but influenced by local government policies and standards. Local land supplies and zoning standards partially determine the amount, general type, and density of new housing construction, and building codes help to ensure housing safety and durability.

Providing housing affordable to low to moderate income households and special needs populations typically requires direct subsidies and involvement by public or non-profit sectors. Major agencies and programs in Vancouver include the following:

Vancouver Housing Authority (VHA)

VHA has served as the designated public housing provider in Clark County since 1942, and in 2010 provided rental housing and housing assistance to approximately 12,500 residents countywide. VHA owns or manages approximately 1,000 units, provides voucher assistance to for private rental of 2,300 units, and provides 1900 units of workforce housing for families. VHA also owns or manages 300 special needs units for assisted living, shelters, or persons with mental illness.

Community Development Block Grant (CDBG) Program

The City of Vancouver manages a local grant program to allocate approximately $1 million annually in federal Housing and Urban Development funds targeted for assisting low and moderate income populations. Local CDBG program activities related to housing include neighborhood revitalization, affordable housing assistance, and assistance to homeless residents. Specific housing-related actions include property acquisition, demolition, or relocation; housing rehabilitation, limited public facility or service construction or provision; energy conservation activities.

HOME Investment Partnership (HOME)

The City of Vancouver also annually allocates federal funds to create affordable low-income housing under the HOME program. Projects include assistance with home buying or renting, housing rehabilitation loans, or direct development of affordable rental housing.

Housing Rehabilitation Program

Vancouver also operates an owner-occupied housing rehabilitation program providing up to $25,000 to moderate income homeowners, and an emergency repair grants of up to $5000 for low income mobile homeowners.

Non-profit Organizations

Local non-profit organizations involved in low income or special needs housing provision or assistance include: Affordable Community Environments; Columbia Non-Profit Housing; Community Housing Resource Center; Council for the Homeless; Evergreen Habitat for Humanity; Janus Youth; Second Step Housing; Share.

2009-2013 Housing and Community Development Consolidated Plan

To guide local housing provision and set priori-

ties for local expenditure of federal CDBG and HOME funds, the City of Vancouver periodically produces a Consolidated Housing Plan. The 2009 Plan provides an analysis of community needs and establishes priority objectives and long-range strategies to guide the allocation of housing and community development resources. It is updated annually through an "Action Plan" with information on projects and funding for the upcoming year, and supported by an annual performance report.

2007 10-Year Homeless Plan

Pursuant to state requirements to develop plans to end homelessness, in 2007 Vancouver, Clark County and area non-profit organizations adopted a 10-year homeless plan. The plan requires completing annual one-day counts of homeless persons. As of January 2011 there were 650 sheltered homeless persons in Clark County, 187 unsheltered persons, and 834 persons living temporarily with family or friends.

Direction for the future

Vancouver will work with public agencies, nonprofit organizations and private housing developers to provide a range of housing types for local residents in safe, livable neighborhoods. This will involve working to provide adequate low-income and special needs housing, striving to improve overall housing affordability and neighborhood and community livability. Vancouver will coordinate with other jurisdictions in Clark County to provide a fair share of low-income and special needs housing.

There is an estimated long term capacity for approximately 16,500 additional housing units in the City of Vancouver, and for approximately 34,500 new units in the unincorporated Vancouver UGA as of 2011, based on existing land supplies and anticipated redevelopment opportunities. Multi-family units account for slightly more than half (54%) of this capacity within city limits, and slightly more than one-third (39%) in the remainder of the Vancouver UGA. See the Land Capacity Analysis in Appendix C, for details. This capacity is fully sufficient to accommodate projected total population growth, and there are a range of zoning designations that allow for different densities and housing types.

Housing policies

The City of Vancouver adopts the following policies to ensure an adequate supply of housing for all economic segments of the community. These policies are consistent with and implement Policy Section 2.0 of the *Community Framework Plan*, adopted by Clark County and local jurisdictions, and planning policy 36.70.A.020(4) of the Washington Growth Management Act (see Appendix A).

H-1 Housing options
Provide for a range of housing types and densities for all economic segments of the population. Encourage equal and fair access to housing for renters and homeowners.

H-2 Affordability
Provide affordable housing by formulating innovative policies, regulations and practices, and establishing secure funding mechanisms. Target affordability programs toward households with incomes below the median.

H-3 Housing improvement
Encourage preservation, rehabilitation and redevelopment of existing housing stock. Support neighborhood based improvement efforts.

H-4 Innovative zoning
Encourage innovative housing policies that provide for affordable housing and maintain neighborhood character.

H-5 Housing placement near services and centers
Facilitate siting of higher density housing near public transportation facilities and in designated centers and corridors.

H-6 Special needs housing
Facilitate housing for special needs populations dispersed throughout Vancouver and the region. Such housing may consist of residential-care facilities, shelters, group homes, or low-income housing, and should be located near transportation and other services such as health care, schools, and stores.

H-7 Home ownership
Promote opportunities for home ownership and owner occupancy of single- and multifamily housing.

H-8 Public-private partnerships
Facilitate enhanced partnerships between public, private, and non-profit sectors to address affordable housing.

H-9 Funding for housing
Pursue funding mechanisms to support affordable housing involving local, state, and federal agencies.

Tracking the Comprehensive Plan

- As of March 2011, the median home value in Vancouver was $164,000, 8.9% lower than one year before (Zillow)
- As of 2009, a Vancouver household with a median annual income of $45,701 could afford to own 21% of local owner-occupied homes, and rent 77% of local renter occupied homes without paying more than 30% of their income (American Community Survey)

For further information:

- *The City of Vancouver Consolidated Housing and Community Development Plan, 2009–2013 contains information and policy guidance for housing. http://www.cityofvancouver.us/upload/images/Planning/CDBG/UPDATEDVancouverConPlan.pdf*

  Contact City of Vancouver Community Services for information on this document or City housing and neighborhood programs. http://www.cityofvancouver.us/cdbg.asp?menuid=10461&submenuid=18584

- *The 2007 Clark County Comprehensive Plan provides information and policies on housing in unincorporated Clark County, including the Vancouver UGA. Contact Clark County Long Range Planning or visit Clark County's Web site*

- *Contact the Vancouver Housing Authority for information on Vancouver area affordable housing projects (www.vhausa.com)*

CHAPTER 4

Environment

This chapter contains a basic description of Vancouver's natural environment, and recommendations for protecting and enhancing it while contributing to a growing economy and a livable city.

Specifics

- **Description of water, earth, landscape, habitat, and airshed as of 2011**
- **Environmental regulations and programs**
- **Future direction**
- **Environmental policies**

Introduction

Vancouver's natural environment consists of water, air, earth, and the range of animals, plants, fish, birds, and other organisms that inhabit these areas. How well these components interact determines the health of the local environment, and impacts Vancouver's economy and quality of life.

One example of the way components interact is how exhaust from cars and trucks affects the rest of the environment. While the ability that people have to move about in motorized vehicles contributes positively to the economy, exhaust from the vehicles affects the environment negatively in several ways. Toxic substances in the exhaust directly harm humans, animals and plants. Killing or damaging plants reduces the amount of oxygen they release. The toxic substances settle on surfaces and are carried by rain into lakes, streams and wetlands, harming fish and other water creatures. Wetlands that are degraded by the substances lose some of their natural ability to filter pollutants out of incoming water. The environmental degradation creates economic costs.

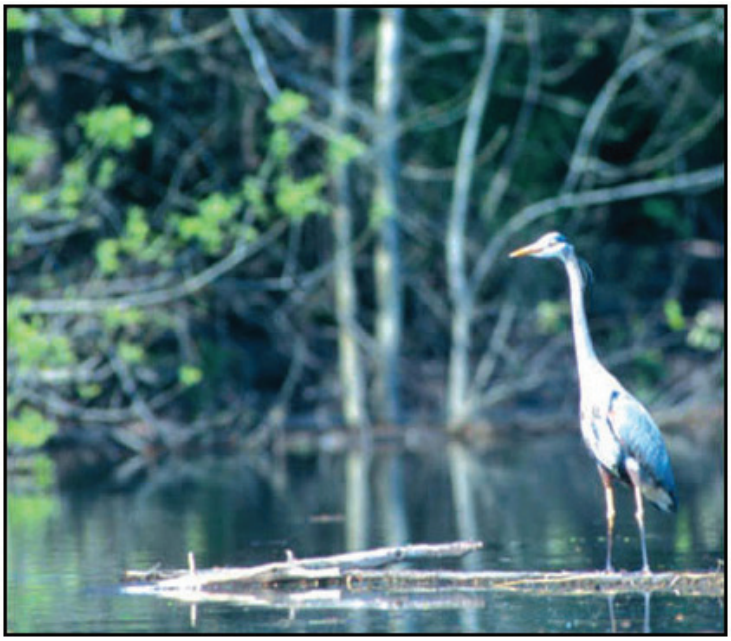
Vancouver's natural environment in 2011

Vancouver's natural environment is typical of an urban area west of the Cascade mountains. Much of the area has been altered by development, but valuable streams, lakes, shorelines, wetlands, and forested areas remain.

Water resources

Vancouver has an abundance of water resources typical of Western Washington. Major water bodies, floodplains, and wetlands are shown in **Figure 4-1**. Major surface waters include the Columbia River, Vancouver Lake and the adjacent lowlands, and Burnt Bridge Creek. Significant wetlands include the Water Resources Education Center Wetlands along the Columbia River, the restored wetlands in the Burnt Bridge Creek Greenway, and those near Vancouver Lake. Water quantity and quality is important for fish and wildlife habitat, and human recreation and health. All Vancouver drinking water comes from local groundwater.

Urban development inevitably involves replacement of some forests, grasslands, or wetlands with impervious surfaces such as buildings, roads, and parking lots which do not allow rainwater to pass directly through to the ground. Increasing impervious surface areas increases flooding, and decreases replenishment of groundwater. Urban stormwater runoff from impervious surfaces picks up toxic substances and bacteria, which can then damage groundwater, lakes, rivers, and streams. Vancouver area water bodies exceeding state water quality standards are tracked by the Washington Department of Ecology, and noted in **Table 4-1** at the end of this chapter. Much of the pollution comes from activities on surrounding land. Wastes from pets, wild animals, and failing septic systems contribute bacteria. Soil from erosion and fertilizers contribute phosphorus and nitrogen, both of which cause excess growth of plants and microscopic animals.



Priority species in the Vancouver area include bald eagles, western grey squirrel, chum salmon, chinook salmon, coho salmon, steelhead, great blue heron, peregrine falcon, purple martin, and leopard dace. Bull Trout, along with chum and coho salmon and steelhead, are also listed under the federal Endangered Species Act (ESA). The Columbia River, Lake Vancouver, Burnt Bridge Creek and their shores are the primary habitat for most listed species.

Vancouver also includes important migration habitat. The Vancouver Lake Lowlands and areas further north are within the Pacific flyway, and local Columbia River floodplains and wetlands are part of the larger Lower Columbia region fish migration route. These support migrating fish, and wintering waterfowl, neotropical birds, and shorebirds.

The organisms use oxygen from the water, reducing the amount available for salmon and other native animals. Toxic metals from street runoff cling to soil particles that can be carried into the waterbodies. Other pollutants, such as motor oil, are transported by stormwater. Although the City has substantially improved the greenway along Burnt Bridge Creek there are still stretches of banks that lack sufficient vegetation and shading, which can lead to increased water temperatures and diminished water quality.

Fish and wildlife habitat

Most typical urban wildlife in Vancouver has adapted to living in the tree canopy, parks and other open spaces, and in wetlands, streams, rivers and lakes. Priority habitats and species have been identified and mapped by the Washington Department of Fish and Wildlife (WDFW) to ensure protection and management. (http://wdfw.wa.gov/conservation/phs/). Priority habitats in Vancouver include riparian areas (any areas adjacent to streams, rivers and lakes), freshwater wetlands, oak woodlands, and other areas that are biologically diverse, important to fish or wildlife with mostly native vegetation, or have relatively undisturbed or unbroken tracts that connect habitat areas.

Landscape

Trees help beautify Vancouver in addition to improving air and water quality, conserving energy by providing shade, and providing habitat for many species. Vancouver's landscape is a reflection of the effort to preserve existing trees and other vegetation and to add new vegetation. Historic trees in the city help preserve its character. Vancouver was named a "Tree City USA" for the 21st time in 2010. 1,161 trees were planted in 2010 as part of the City's Canopy Restoration Program, which are estimated to intercept over 800,00 gallons of stormwater per year and absorb over 11,000 pounds of airborne pollutants when they mature. Tree canopy currently covers 19% of Vancouver's citywide surface area. The program goal is 28% (2010 Vancouver Urban Forestry Program Annual Report).

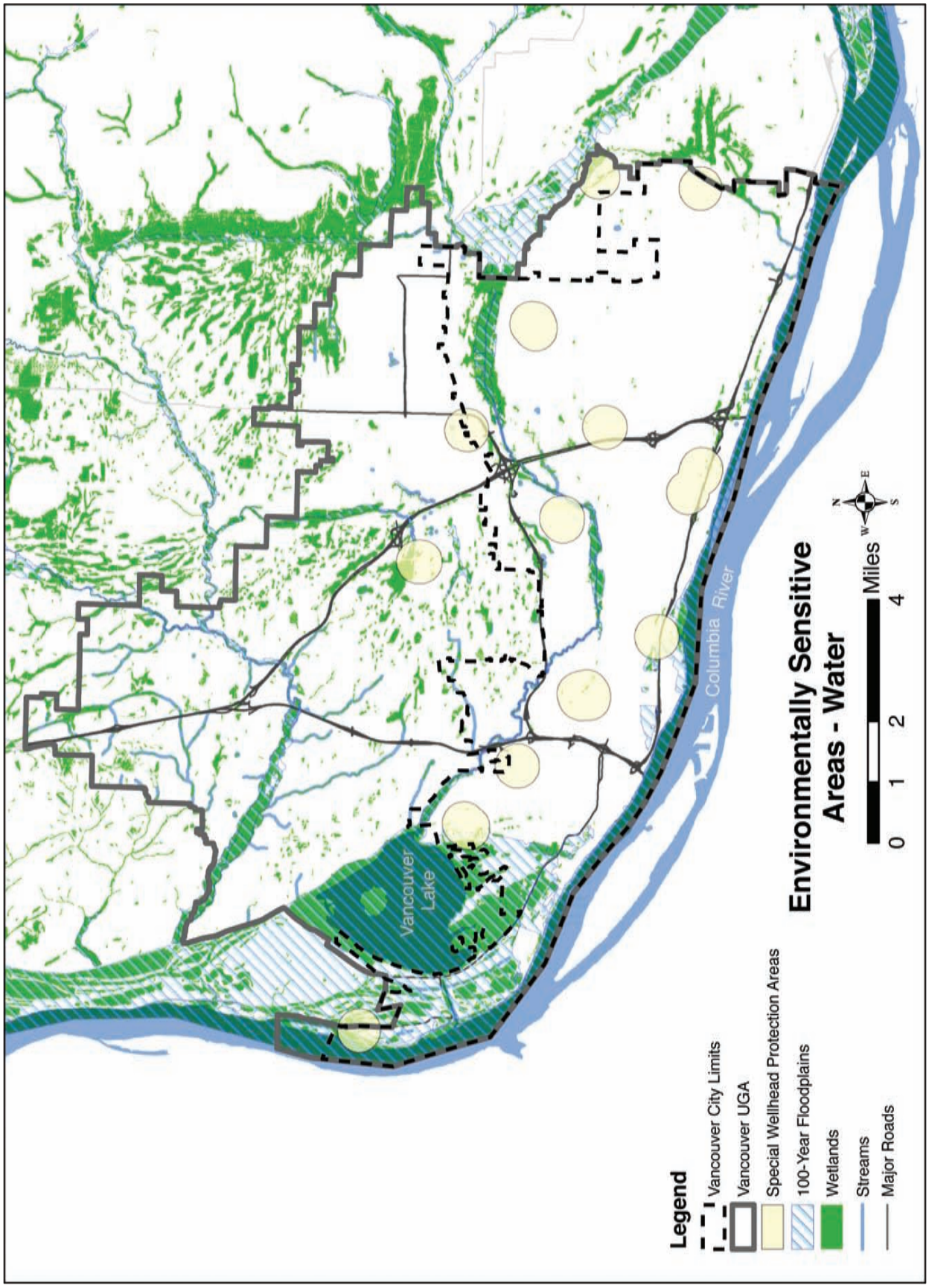


Figure 4-1. Vancouver's major water resources. Source: Clark County GIS.

Oak woodland areas are identified by the state as a priority habitat. Douglas fir forest, although not designated as priority habitat, also supports sensitive native species.

Topography and earth

The Columbia River and ancient glacial flooding have sculpted much of Vancouver's topography (landform) by depositing clay, silt, sand, and gravel onto its banks over tens of thousands of years. Most of Vancouver is generally flat or terraced, although areas of steep slopes exist along portions of the Columbia River, Burnt Bridge Creek, and Vancouver Lake. **Figure 4-2** shows potential geologic hazard areas in Vancouver. Landslide and erosion areas include steep slopes, defined as those greater than 25%.

Air and climate

Vancouver is located in a regional airshed bounded on the south by Eugene, Oregon, on the north by Chehalis, Washington, on the west by the Coast Range, and on the east by the Cascade Mountains. Regional air quality has improved over the past two decades, as new emissions controls have generally kept up with impacts of growth. However, ongoing scientific research highlighting risks from various materials has resulted in tightened standards. As of 2010, Clark County ranked in the top 2 percent of counties nationwide in overall air pollution exposure according to the Washington Department of Ecology. Diesel exhaust, primarily from trucks, buses and small engines has been identified by Ecology as the most harmful airborne source of pollution to human health. Car emissions are also a significant source. In terms of individual pollutants, fine particulate matter standards were exceeded for 6 days in 2007 and 2 in 2008. Vancouver has not exceeded standards for ozone or carbon monoxide on any days since 1999.

Vancouver has wet, mild winters and warm, dry summers. The US Environmental Protection Agency (EPA) projects that Washington temperatures could increase an average of 4-5 degrees over the next 100 years due to global climate change, along with a 10% increase in winter precipitation levels, and more frequent unusually hot summer days. Car and truck use is the primary local source of greenhouse gasses that contribute to global warming. A detailed inventory of local sources is available at http://www.cityofvancouver.us/upload/images/PublicWorks/CoV-CommunityInventory-6pager-010810-final.pdf.

Environmental management

Most of Vancouver's environmental decisions are influenced by state and federal regulations, including the Washington Growth Management Act (GMA), Shoreline Management Act, (SMA), Water Pollution Control Act (WPCA and State Environmental Policy Act; and the federal Clean Water Act (CWA) Endangered Species Act (ESA), and Clean Air Acts (CAA).

The GMA requires the City to designate and protect critical areas: wetlands, fish and wildlife habitat, aquifers (groundwater), geologically hazardous areas such as steep slopes, and areas that flood frequently. The GMA also requires the City to protect the functions of these areas that are beneficial to the environment and to public health and safety. The Shoreline Management Act (SMA) requires local governments to adopt and implement local Shoreline Management Programs to protect various shoreline functions. The Clean Water Act requires that pollution of lakes, streams and rivers be controlled so these bodies of water are safe for swimming and fishing. The Endangered Species Act (ESA) prohibits harm, including habitat degradation, to threatened and endangered species. The Clean Air Acts (CAA) regulate air quality at the regional level.

Vancouver's efforts to protect the environment include acquiring and restoring sensitive areas. Much of the area adjacent to Burnt Bridge Creek, in the Vancouver Lake Lowlands, and in the Water

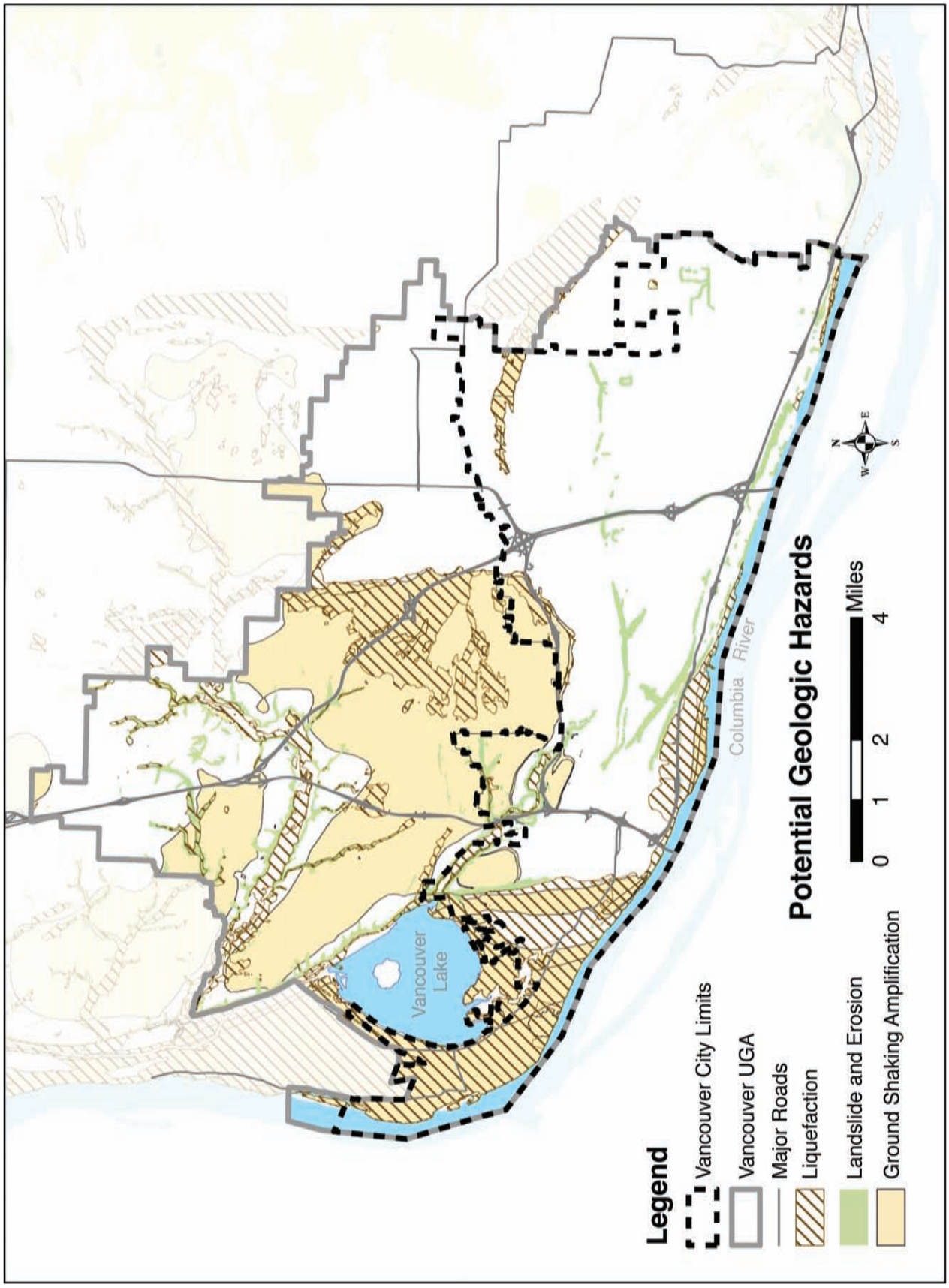


Figure 4-2. Vancouver's geologic hazard areas. Source: Clark County GIS.

Resource Education Center Wetlands is owned by the City. The City adopted the Lettuce Fields Subarea Plan to protect and restore about 250 acres of wetlands, improve stormwater management, and provide public access and environmental education. The plan has been implemented and the Burnt Bridge Creek Greenway is now a restored wetland area with public trails providing access to the open space. Vancouver has worked with WDFW, the Columbia Land Trust and property owners to obtain easements protecting the Wood's Landing area. Just upriver from the I-205 bridge, Wood's Landing is the largest Columbia River chum salmon spawning site between the river's mouth and Bonneville Dam.

Several City departments work together and with citizens and other agencies to provide innovative environmental education to the public. The Water Resources Education Center carries out many programs to increase people's knowledge about water. The Vancouver Urban Forestry Commission and the City implement the "Neighborwoods Program" to develop citizens' understanding of the value of trees in protecting air and water quality and neighborhood livability. The City of Vancouver partners with Clark County, Clark College, Clark Public Utilities, the Vancouver and Evergreen School Districts and the Washington Department of Fish and Wildlife to provide educational opportunities at the Columbia Springs campus and surrounding open area.

In addition to the protection provided by the State Environmental Policy Act (SEPA), the City has developed regulations to protect wetlands, streams, lakes, and shorelands, waterbodies, groundwater, surface water, fish and wildlife habitats, and trees and other vegetation (VMC Titles 20 and 14). The regulations include a requirement that floodplains and steep terrain be evaluated for potential hazards. Implementation of the regulations includes development review, inspection, enforcement and education.

Direction for the future

Environmental quality is an essential element of the city's livability. By integrating the natural and built environments, Vancouver will create a sustainable urban environment with clean air and water, habitat for fish and wildlife, and comfortable and secure places for people to live and work. Vancouver is committed to protecting and enhancing the environment as the City meets its other community, economic development, housing and infrastructure goals. In decisions and actions, Vancouver will seek to balance various goals, not just make tradeoffs, and identify ways to meet multiple objectives. The goals are to provide healthy ecological communities with a rich biodiversity and to protect public health and safety.

Implementation

Environmental protection and enhancement, based on the "Best Available Science" (as defined in the GMA), are important factors in Vancouver's land use planning, zoning and development regulations. Development that cannot reasonably avoid critical areas must minimize and mitigate potential impacts to prevent a net loss of environmental function. The GMA requires critical area regulations to be updated as necessary to maintain consistency with state law. In 2005 the City consolidated and streamlined its critical areas regulations in the Critical Areas Protection Ordinance which provides

a holistic approach to reviewing development impacts to critical area functions and streamlines the development review process. In 2007, the Critical Areas Protection Ordinance was incorporated into the Shoreline Management Program. The SMP is currently being updated for consistency with the Department of Ecology's 2003 guidelines, and the City's Critical Areas Protection Ordinance will continue to be incorporated into the SMP, maintaining consistency in critical areas protection throughout the City.

Incentives, education, acquisition, and restoration are important tools in achieving environmental quality. Vancouver will seek ways to provide incentives for protecting and enhancing the environment. Various City agencies including Parks, Public Works, Planning, and especially the Water Resources Education Center will continue to provide education on how to care for and make wise decisions about the City's environmental assets. The City will continue to protect and restore sensitive areas. The City's own operations will reflect environmental stewardship.

Air and water quality and vegetation

Protecting air and water quality and vegetation will help protect habitats for fish, wildlife, and people. Transportation choices will help protect air quality. Source control (keeping pollutants out of the environment) and water treatment (removing pollutants from the water) will protect ground- and surface water quality. Water conservation and innovative substitutions for impervious surfaces will protect the quantity of groundwater. Surface water management willhelp reduce the impacts of development on surface water quality and quantity. Preserving and planting native plants and removing invasive plant species will help protect and enhance vegetation.

Habitats and species

Vancouver will protect priority habitats, locally important habitats, and priority species. Vancouver will protect salmon and work with others in the region to develop and implement recovery plans for threatened salmon species.

Endangered Species Act

Vancouver will avoid harming ESA-listed species and their habitat. The City will work with others in the region to plan and implement actions in order for listed species to recover again.

Shoreline management

Vancouver will continue to implement its Shoreline Management Program (SMP) to protect shoreline resources, the environment, water-dependent and water-related economic development, and public access and recreation. The SMP is currently being updated for consistency with the Department of Ecology's 2003 Guidelines. The 2003 Guidelines require that the SMP together with a Restoration Plan and other local, state, and federal plans, programs, and regulations at least maintain existing ecosystem-wide processes and shoreline ecological functions and potentially increase them over time. This is known as the "no net loss" requirement. The City's Critical Areas Protection Ordinance will continue to be incorporated into the SMP, maintaining consistency in critical areas protection throughout the City and helping to achieve no net loss of shoreline ecological function.

Public health and safety

Vancouver will help protect public health and safety from flooding, landslides, and earthquakes. Maintaining clean groundwater and improving the quality of surface water will also protect public health and safety.

Coordination

Vancouver will coordinate environmental policies and programs among City departments, other agencies, the private sector, and citizens. The City will continue to take advantage of opportunities to consolidate and ensure consistency among environmental regulations. Vancouver will work with state and federal regulatory agencies to achieve compliance in a way that is resource-wise, both in terms of financial and environmental resources.

Sustainability

Vancouver will work to implement the the 2009 *Creating a more Sustainable Vancouver* Plan to provide for the needs of its residents without sacrificing the needs of future generations. The City will consider economics and the environment as it manages water, energy, land and natural resources. Vancouver will promote sustainable public and private development practices and patterns, building design, energy conservation, water-use reduction, and waste reduction. The City will incorporate green building (environmentally friendly) principles and practices into the design, construction, and operation of all City facilities, City-funded projects, and infrastructure to the fullest extent possible.

Environmental policies

The City of Vancouver adopts the following policies to protect and enhance the environment while meeting its other community, economic development, housing, and infrastructure goals. These policies are consistent with and implement Policy Section 11.0 of the Community Framework Plan, adopted by Clark County and local jurisdictions, and planning policy 36.70.A.020(10) of the Washington Growth Management Act (see Appendix A).

EN-1 Environmental protection
Protect, sustain, and provide for healthy and diverse ecosystems.

EN-2 Stewardship
Demonstrate and promote environmental stewardship and education.

EN-3 Energy Conservation
Promote and facilitate energy conservation and alternative energy sources and generation.

EN-4 Restoration and enhancement
Promote and facilitate ecosystem restoration and enhancement.

EN-5 Environmental coordination
Coordinate environmental policies and programs. Continue to consolidate environmental regulations.

EN-6 Habitat
Protect riparian areas, wetlands, and other fish and wildlife habitat. Link fish and wildlife habitat areas to form contiguous networks. Support sustainable fish and wildlife populations.

EN-7 Endangered species
Protect habitat for salmonids and other listed species and facilitate recovery. Encourage and support actions that protect other species from becoming listed.

EN-8 Water quality and quantity
Enhance and protect surface water, stormwater, and groundwater quality from septic discharge, impervious surface runoff, improper waste disposal, and other potential contaminant sources. Ensure safe and

adequate water supplies and promote wise use and conservation of water resources.

EN-9 Trees and other vegetation
Conserve and restore tree and plant cover, particularly native species, throughout Vancouver. Promote planting using native vegetation. Protect historic and other significant trees. Work towards the Vancouver Urban Forestry Program goal of covering 28% of Vancouver's surface area with tree canopy.

EN-10 Air quality
Protect and enhance air quality, in coordination with local and regional agencies and organizations.

EN-11 Hazard areas
Manage development in geologically hazardous areas and floodplains to protect public health and safety.

Tracking the Comprehensive Plan

- As of 2008, the following Vancouver water bodies not meeting Washington DOE standards for various parameters:

Table 4-1. Vancouver area waters not meeting state water quality standards

Water body	Washington DOE parameters listed
Burnt Bridge Creek	Fecal coliform, temperature exceedance, pH, dissolved oxygen
Vancouver Lake	Fecal coliform, total phosphorus (water); PCB, Toxaphene, TCDD, Dieldrin (fish tissue)
Columbia River (WRIA 27/28)	Fecal coliform, temperature, dissolved oxygen, dieldrin (fish tissue and water), PCB (fish tissue and sediment), dioxin (fish tissue and water)
Salmon Creek	Fecal coliform, temperature, dissolved oxygen, pH (water)
Peterson Ditch	Temperature, fecal coliform
Kleinline Pond	Invasive Exotic Species (water)

Source: Washington DOE Section 303d list (2008)

- **As of 2010, tree canopy covered 19% of Vancouver's citywide surface area**
- **Vancouver exceeded National Ambient Air Quality Standards (NAAQS) for fine particulate matter on 2 days in 2008 and 6 days in 2007. Vancouver has not exceeded standards for ozone or carbon monoxide on any days since 1999.**

For further information:

- *Vancouver's Critical Areas Ordinance regulations that identify and protect wetlands, habitat, floodplains, and geologically hazardous areas are contained in Vancouver Municipal Code (VMC), Title 20.740 http://www.cityofvancouver.us/MunicipalCode.asp?menuid=10462&submenuID=10478&title=title_20&chapter=740&VMC=index.html Development regulations protecting groundwater are contained in VMC Title 14. Standards for implementing the State Environmental Policy Act standards are contained in VMC Title 21.*
- *Vancouver's Shoreline Management Program is available online at http://www.cityofvancouver.us/upload/images/Planning/CAO/Vancouver_WA_SMP_Effective_April_9_2007%20.pdf*
- *Information about water quality standards can be obtained from the Washington State Department of Ecology's Water Quality Program (http://www.ecy.wa.gov/programs/wq/wqhome.html).*
- *Information about air quality standards can be obtained from the Southwest Clean Air Agency http://www.swcleanair.org/*
- *The 2009 Creating a Sustainable Vancouver Plan is available at http://www.cityofvancouver.us/upload/images/PublicWorks/VancouverSustainabilityPlanFINALWeb_090109.pdf*

CHAPTER 5

Public Facilities and Services

Urban communities must be supported by a range of public facilities and services, including transportation, water, sanitary sewer, stormwater, parks, fire, police, solid waste, schools, and libraries. This chapter summarizes Vancouver's infrastructure and capital facilities and how they will serve growth anticipated over the course of the Comprehensive Plan.

Specifics

- **Citywide capital facilities overview**
- **Transportation and transit**
- **Public sewer, water and stormwater services**
- **Police and fire**
- **Parks**
- **Schools**
- **Solid waste services**
- **Policies related to provision of services**

Introduction

The Growth Management Act (GMA) requires growth to occur first in developed areas already served by public services and utilities, and second in undeveloped areas needing new services. Public services must be provided in a timely and efficient manner to support planned growth and existing users. Extension of the services must be coordinated with adopted land use and growth plans, and capital facility investments should be targeted and cost-effective. The Vancouver Urban Growth Area (VUGA) includes the incorporated City of Vancouver and portions of unincorporated Clark County surrounding Vancouver shown in **Figure 1-6** (Chapter 1, Community Development). All of the VUGA must receive appropriate levels of urban service to support planned urban development during the planning period. This chapter focuses on infrastructure provision within city limits, and areas in the unincorporated VUGA served by City providers such as sewer, water, and fire services. Because of uncertainties over annexation, unincorporated Vancouver urban area capital facilities and services outside of City districts are addressed in the *Clark County Comprehensive Plan*.

For City service areas, this chapter describes public infrastructure and service needs, and projected improvements with their associated costs to adequately serve long-term growth at adopted service standards. As required by GMA, this chapter includes a policy requiring that land use plans be revisited if probable funding falls short of meeting those needs. The analyses in this chapter focus on the first six years of the planning period. Infrastructure and service needs for the 20-year planning period are more speculative, so the review is more generalized. The review is limited to capital facilities and major physical infrastructure related to growth, not all government services. The information in this chapter is drawn from specific service area plans, such as the *Vancouver Transportation System Plan* (2004), *Vancouver Transportation Improvement Program* (2011-16), *Vancouver-Clark Comprehensive Parks, Recreation, and Open Space Plan* (2009), and other service provider capital plans and budgets. For more detail, please consult these plans.

Table 5-1 lists the providers of public services in the City of Vancouver and the VUGA. Services are provided by the City of Vancouver, Clark County, and private utilities or service districts. Some providers serve areas within the city limits, while others have larger, regional service areas. The City coordinates with providers and considers of how service area boundaries may change (for example, through annexation). The GMA identifies cities as generally the appropriate provider of urban governmental services.

Table 5-2 is a summary of projected public capital facilities needs and funding sources from 2011 to 2016. The projects that make up the summary are described in greater detail in the separately bound Vancouver Capital Facilities Project List. Local capital facilities projects are financed and constructed through a variety of local, state and in some cases federal sources, depending on the type of facility. Providing adequate services in the face of growth, increasing service demands, and static or decreasing funding sources is one of the central challenges facing Vancouver and other jurisdictions. Consis-

Photo by Ed Vidinghoff

Table 5-1. Vancouver's public facility and service providers.

Facility/service	Provider
Transportation	• City of Vancouver • Clark County (unincorporated urban area)* • Washington Department of Transportation (I-5, I-205, SR-14) • Port of Vancouver* • Burlington Northern Santa Fe Railroad*
Transit	• C-TRAN
Water	• City of Vancouver • Clark Public Utilities (unincorporated urban area)*
Sanitary sewer	• City of Vancouver (within city and eastern and northern unincorporated urban area) • Clark County (sewage treatment facilities in unincorporated urban area)* • Clark Regional Wastewater District (western unincorporated urban area)*
Stormwater	• City of Vancouver • Clark County
Parks	• Vancouver-Clark Parks and Recreation Department
Fire protection	• City of Vancouver, including Fire District #5 (eastern unincorporated urban area) • Clark County Fire District #6 (western unincorporated urban area)*
Police protection	• City of Vancouver • Clark County Sheriff's Department (unincorporated urban area)*
Solid waste	• Waste Connections, Inc.(Waste and Recycling Collections through contract in Vancouver and through WUTC Franchise in VUGA) • Columbia Resource Company (Recycling Materials Processing, Transfer Station/ Transport/Landfill operations)
Public schools	• Vancouver, Evergreen and Camas School Districts (within city limits and portions of unincorporated urban area) • Battle Ground, Ridgefield and Hockinson School Districts (within portions of unincorporated urban area)*
Libraries	• Fort Vancouver Regional Library System*
General government	• City of Vancouver (Administrative Offices, Support Facilities) • Clark County (unincorporated urban area, urban correctional facilities, law enforcement and emergency response support services)*

*See the Capital Facilities Plan element of the Clark County Comprehensive Plan for more detailed information.

tent with the Growth Management Act, cost estimates in this document focus on new or expanded capital facilities, not maintenance costs, which are recognized as substantial expenses in providing governmental services to serve existing and future populations. During the 2011-30 planning period, maintenance costs for city public facilities represent a substantial need in order to ensure efficient operations of urban infrastructure systems.

Concurrency

The GMA requires that communities "ensure that facilities and services necessary to support development shall be adequate to serve the development at the time the development is available for occupancy and use without decreasing current service levels below locally established standards" (RCW 36.70A.020.12). This concept is identified as "concurrency" and requires local governments to adopt level-of-service (LOS) standards and to test individual land use proposals to ensure they will not exceed those standards. Proposed developments that would cause these standards to be exceeded cannot be approved unless necessary mitigation is provided. The Vancouver Comprehensive Plan requires concurrency for transportation, water and sewer services, and identifies these as "Tier I" public facilities and services. See individual service area analyses in this chapter for further information. Formal establishment of LOS standards is not required for Tier II capital facilities, including stormwater management, schools, parks, libraries, police, and fire facilities. As a result, individually proposed developments do not have to demonstrate

Table 5-2. Summary of planned six-year capital facilities costs 2011-2016.

Service	Major Capital Projects	Estimated Total	Funding Sources
Transportation	• 2012-16 Construction Projects $56,561,000 • 2011 Design Projects $9,367,000	**$65,928,000**	Impact fees, state and federal grants, City REET, state gas tax, developer contributions, public agency partnerships, street fund reserves, reserves for funded projects, General Fund
Transit*	• New High Capacity Transit • Replace/add buses, support facilities	**$161,490,000**	Grants, local revenue, voter approved funding measures
Water *	• Standby power facilities at water sources • Station 1 improvements	**$36,662,000**	System development charges, operating revenues, grants
Sanitary sewer*	• Sewer connection incentive program • Wastewater treatment facility maintenance and replacement • Development improvements (pump stations, force mains)	**$32,121,000**	System development charges, operating revenues, grants
Stormwater	• Regional facilities	**$5,645,000**	Stormwater Fund, Grants
Parks	• Urban Park Acquisitions ..... $5,713,284 • Urban Park Development ..... $1,405,000 • Urban Park Improvement and repair....$1,150,000	**$8,268,284**	REET, grants and donations, impact fees,
Fire & EMS* construction	• New fire stations land acquisition, design, ... $24,810,000 • Existing station seismic upgrade…..... $1,366,000 • New logistics warehouse land acquisition, design, construction $2,251,000	**$28,427,000**	Cash, new undetermined funding
Police	• New Firing Range…..…….....…$250,000	**$250,000**	Federal Grants
General government	• Central operations center ..... $12,000,000 • West Artillery Barracks……..... $2,500,000	**$14,500,000**	State grants, water ulitlty fund
Solid waste	• No Major capital facilities needed. Existing transfer and recycling facilities have sufficient capacity through 2030	**None**	User fees, grants
Schools*	• 6 new schools (3 elementary,1 middle, 2 high) including land acquisition • 2 remodeled/expanded elementary schools • Support Facilities	**$157,000,000**	Bonds, impact fees, state match
Libraries	• Headquarters building consolidation and remodel……..... $1,000,000 • Vancouver Mall library remodel or relocate ……..... $300,000	**$1,300,000**	FVRLD reserves for funded projects.
City of Vancouver Total		**$191,801,284**	
Non-municipal Agencies Total		**$319,790,000**	

* Includes project and costs outside Vancouver city limits
Data is summarized from individual facility and service summaries that follow. See *Clark County Capital Facilities Plan* for more detail on county and regional facility plans and costs.

that they would meet formal concurrency standards, although other City standards or state law do require varying levels of review to ensure services are provided.

Service standards

Service standards are quantifiable measures of the amount or quality of public facilities and services that are provided to a community. These measures help identify current and future capacities of capital facilities. They are also useful for identifying projected gaps or deficiencies and the improvements needed to serve new growth while maintaining adopted service levels. Service standards are

specified in the individual sections of this chapter, where applicable.

Transportation

This section summarizes the *Vancouver Transportation System Plan* (TSP), which is adopted by reference and supplemented with updated transportation analysis, proposed system improvements, plan references, and capital facility funding needs and estimates. Refer to the TSP for more information about Vancouver's existing transportation system and how it relates to regional systems, or the vision for the future of transportation within Vancouver reference. (http://www.cityofvancouver.us/upload/images/Transportation/TSP_2004.pdf)

The transportation system is the largest and most visible component of local government infrastructure. It is used daily to get people where they want to go, to bring goods to and from the community, and to connect people to the services they need. It defines the character of neighborhoods and communities, and affects local quality of life, economic efficiency and the City's long-term fiscal health. The transportation infrastructure is the City of Vancouver's single largest asset and its efficiency can affect the price of goods and services by increasing or decreasing the time it takes people and goods to get around.

Vancouver's transportation system has a variety of components, including river and rail freight (through the Port of Vancouver and on Burlington Northern Santa Fe trains), Pearson Field Airport, state highways (managed by Washington State Department of Transportation [WSDOT]), local streets, sidewalks, bicycle paths, and the C-TRAN public transit system. Components cross or overlap jurisdictional boundaries. For example, C-TRAN pays for and runs the buses in Vancouver but relies on Vancouver's roadway and signal systems to support these services. These components are illustrated here in **Figure 5-1**, the Metropolitan Transportation Plan for Clark County – Regional Transportation System map.

Regional coordination and consistency

Regional coordination and consistency are integral to Vancouver's transportation program. Regional partnerships are maintained with Clark County, the Southwest Washington Regional Transportation Council (RTC), C-TRAN (regional transit agency), WSDOT, the Port of Vancouver, and other cities in Clark County. Vancouver also works with the City of Portland, Metro (Portland's Regional Government), the Oregon Department of Transportation (ODOT) and the Port of Portland. RTC is the region's designated Metropolitan Planning Organization (MPO) and Regional Transportation Planning Organization (RTPO).

The RTC maintains and runs the travel demand forecast model for all jurisdictions in Clark County based on a common land use geographic information system and growth forecast developed in a cooperative planning process under the Growth Management Act and Clark County's Countywide Planning Policies. This ensures consistency in land use and transportation planning among neighboring jurisdictions. RTC certifies Vancouver's transportation element for consistency with the regional Metropolitan Transportation Plan (MTP) and with the plans of jurisdiction responsible for transportation planning within Clark County.

The comprehensive plan includes, and adopts herein by reference, for the purposes of regional consistency and coordination the Metropolitan Transportation Plan for Clark County (MTP), as amended. The MTP identifies the regional transportation system for arterials, highways, air and marine, and lists regionally coordinated transit levels of service for C-TRAN, as well as regionally adopted levels of service for all Highways of Statewide Significance (HSS system) and for Regional Highways of Statewide Significance (non-HSS). The MTP also identifies long-terms deficiencies to and planned improvements for the state highway system. The MTP also includes the regional strategy for jurisdictional

compliance with the Commute Trip Reduction Efficiency Act and related transportation demand management strategies. The MTP also identifies the regionally coordinated system for transportation system management / intelligent transportation system infrastructure and documents the Transportation System Management and Operations (TSMO) Plan.

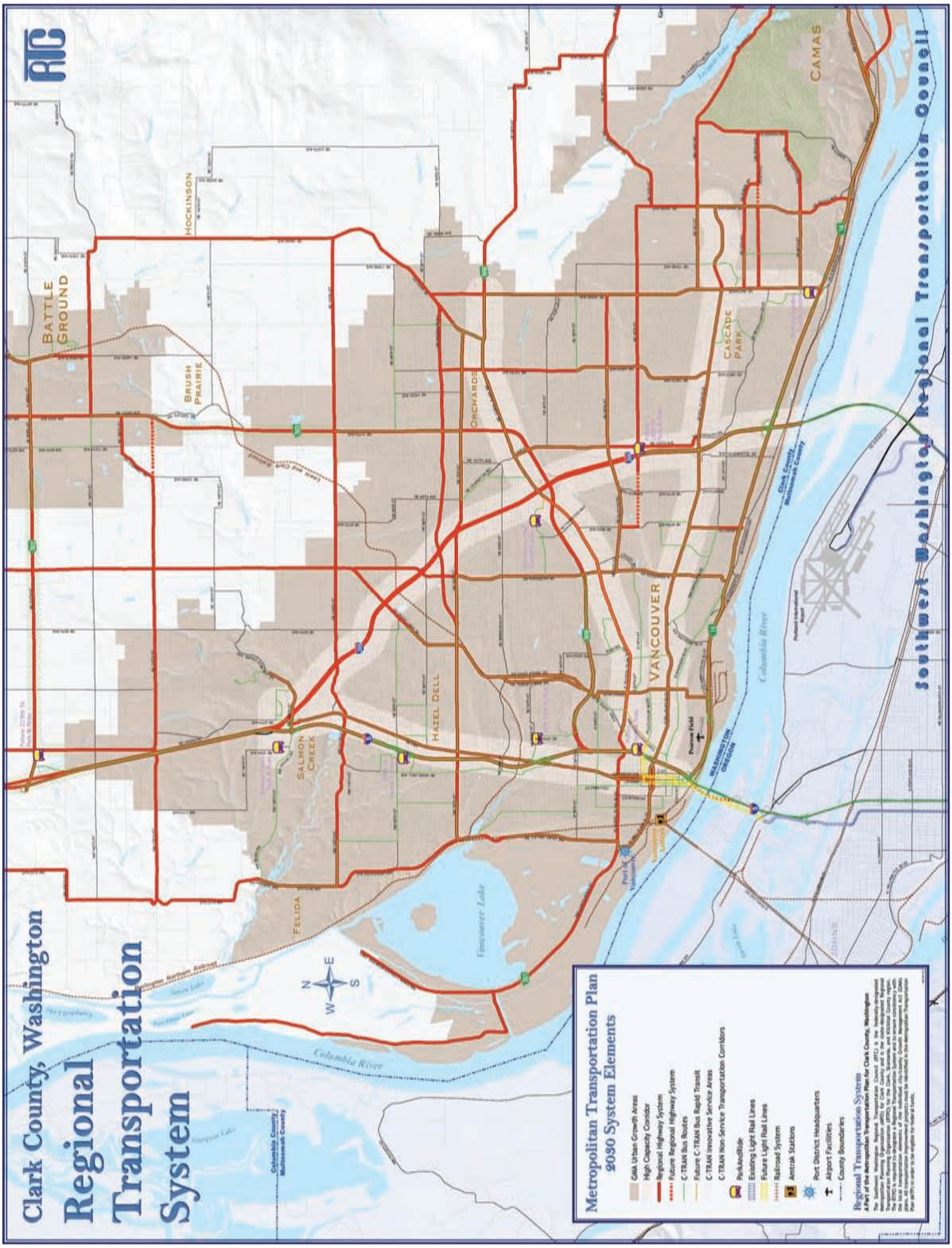


Figure 5-1. Metropolitan Transportation Plan for Clark County – Regional Transportation System

Vancouver's transportation system in 2011

The Vancouver Transportation Plan Vision establishes the framework for improving the city's transportation system and is supplemented by the updated *Transportation Analysis (2011) and regionally coordinated with the MTP and Clark County Transportation Resource Document (2002). The Transportation Analysis (2011)* and reference plans provide extensive information about the transportation system conditions, forecast travel demands and patterns, and corresponding transportation system improvement needs. The city's proposed transportation system improvement projects are summarized in the maps in this chapter. **Figure 5-2** shows the existing network of arterial streets as of 2011, and **Figure 5-3** shows proposed arterial improvements through 2030. **Figure 5-4** shows existing and proposed bicycle routes, and **Figure 5-5** shows existing and proposed pedestrian systems. Planning for the rail system, airports and water transportation through the Port is the responsibility of other agencies. Their connection to Vancouver's transportation system is described in the TSP and in the MTP and *Clark County Comprehensive Growth Management Plan (2007).*

In addition to Vancouver's transportation infrastructure, the Washington State Department of Transportation (WSDOT), CTRAN (Clark County's Public Transportation Benefit District), and the Port of Vancouver build and maintain transportation infrastructure in Vancouver. The Washington Transportation Plan 2007 – 2026 and the Washington State Highway System Plan 2007-2026 are adopted here by reference and includes an inventory air, rail, and ground transportation along with an assessment of existing and future needs. (See, http://www.wsdot.wa.gov/planning/wtp/ for more information). CTRAN's adopted Transit System Development Plan identifies existing and needed transit facilities in Clark County and is also adopted below by reference. (See, http://www.c-tran.com/assets/20_Year_Plan/C-TRAN_20_Year_Plan-Adopted_June_8__2010.pdf for a complete copy). Finally, the Port of Vancouver details its existing and future facilities on its website at http://www.portvanusa.com/sitemap. Each of the agencies mentioned above participate in the regional transportation planning process through the RTC, and the future facility development plans are included in the adopted MTP. Including all regional transportation facilities in the MTP ensures consistency of the plans of various jurisdictions because all facilities are included and analyzed in the future regional travel demand model.

Transportation Level of Service

For City arterial corridors that have not reached ultimate capacity, transportation level of service standards are set consistent with the Highway Capacity Manual 2000 for Urban Arterial Roadways. Additional considerations are also made for the multi-modal attributes and demand management strategies along each corridor. Urban street level of service standards are based on the average through-vehicle travel speed for an entire corridor or a corridor segment. Specific corridor standards are identified in **Table 5-3**.

Where a corridor has been constructed to ultimate capacity, where it is built to full urban standard with sidewalks, bike lanes, travel lanes appropriate to its designation, intersection capacity consistent with the roadway cross section and state of the art traffic control, The Vancouver City Council may designate that corridor has reached ultimate peak capacity. Once a corridor is designated as having been constructed to ultimate capacity, the focus of transportation development review turns to safety, access management and circulation, and transportation demand management.

Transportation Program need. The transportation improvements and program initiatives proposed in this section and in the TSP are based on the growth forecast in Chapter 1, Community Development and supported by the Transportation

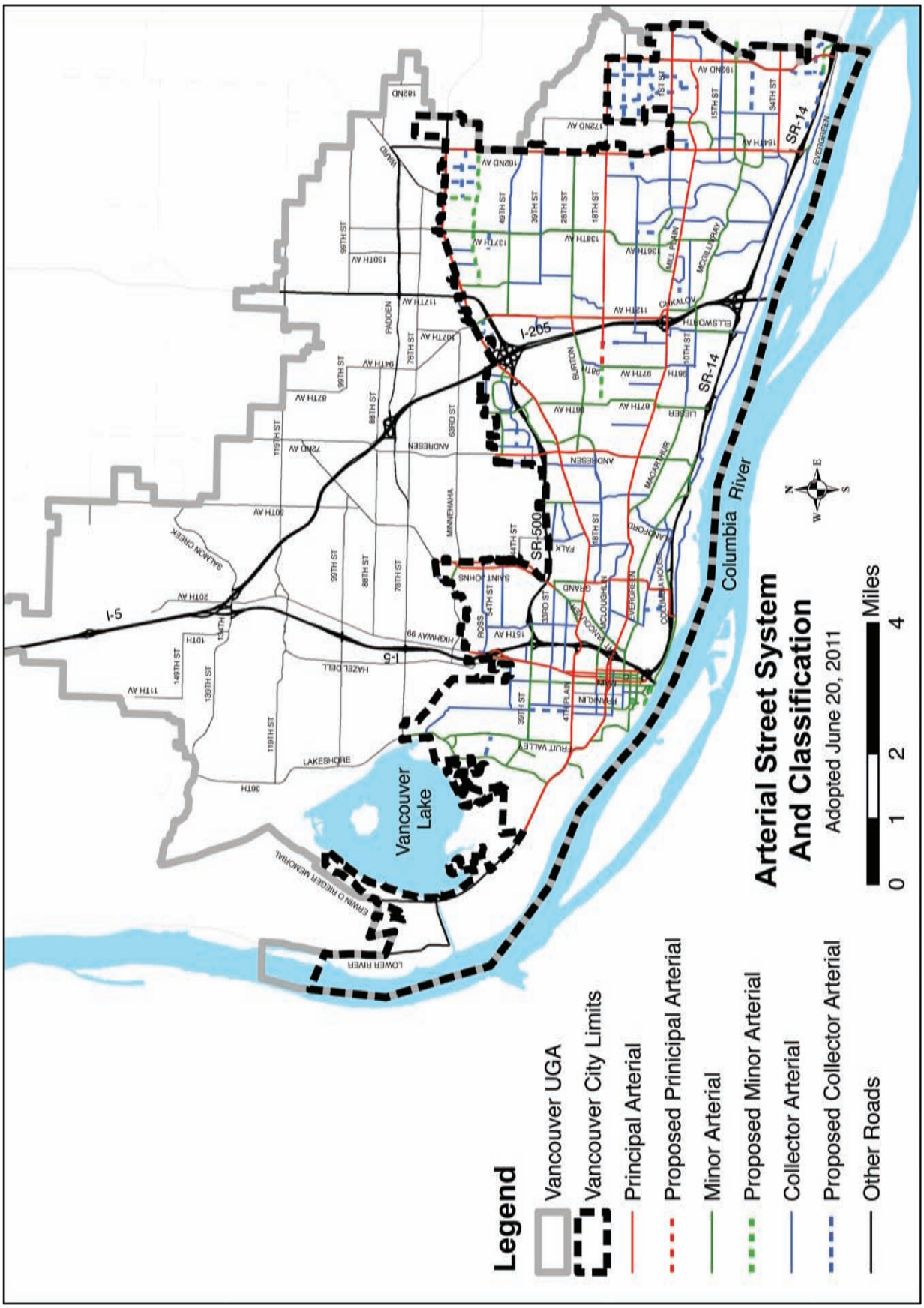


Figure 5-2. Existing Arterial Network

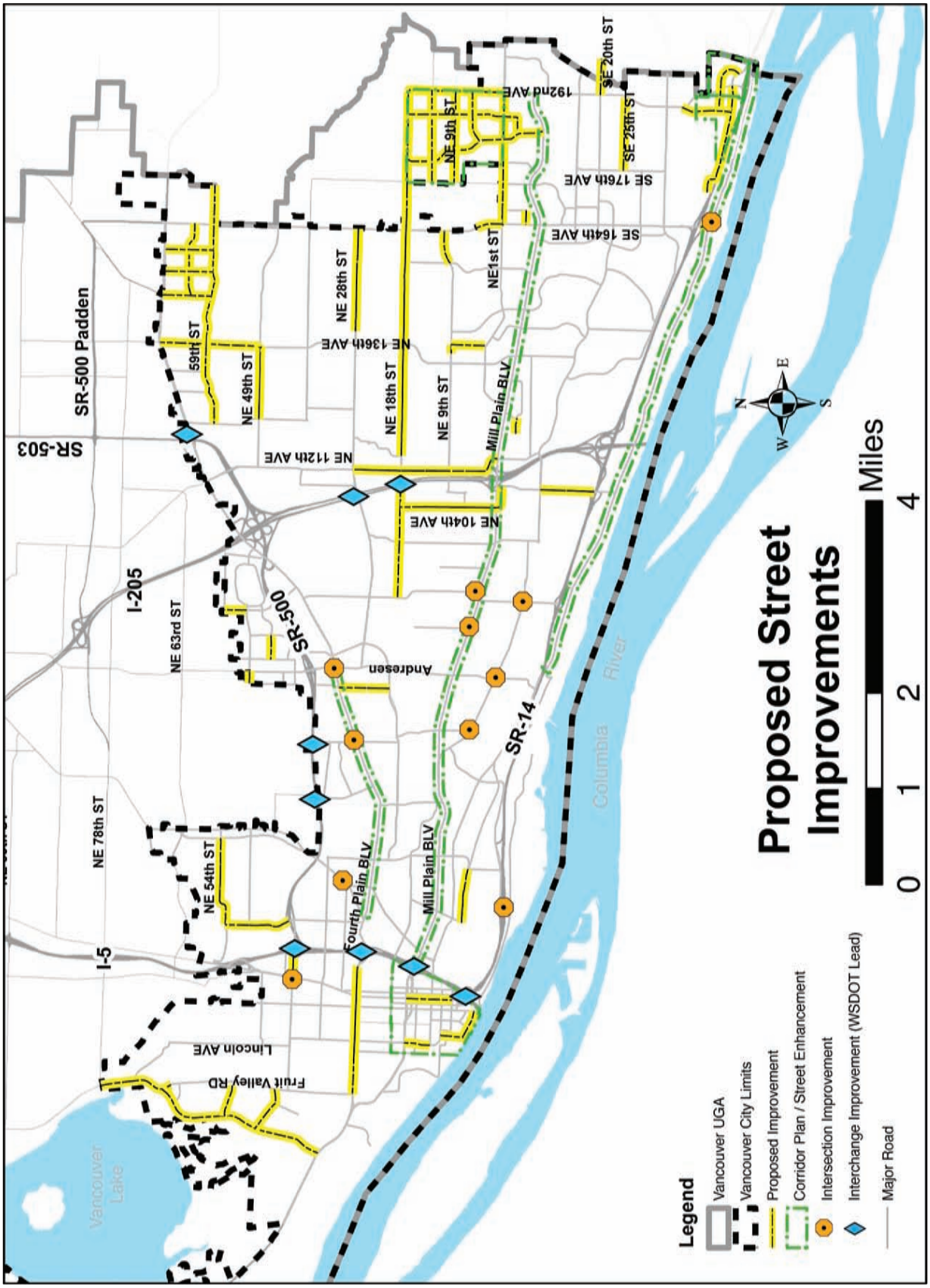


Figure 5-3. Proposed Arterial Improvements

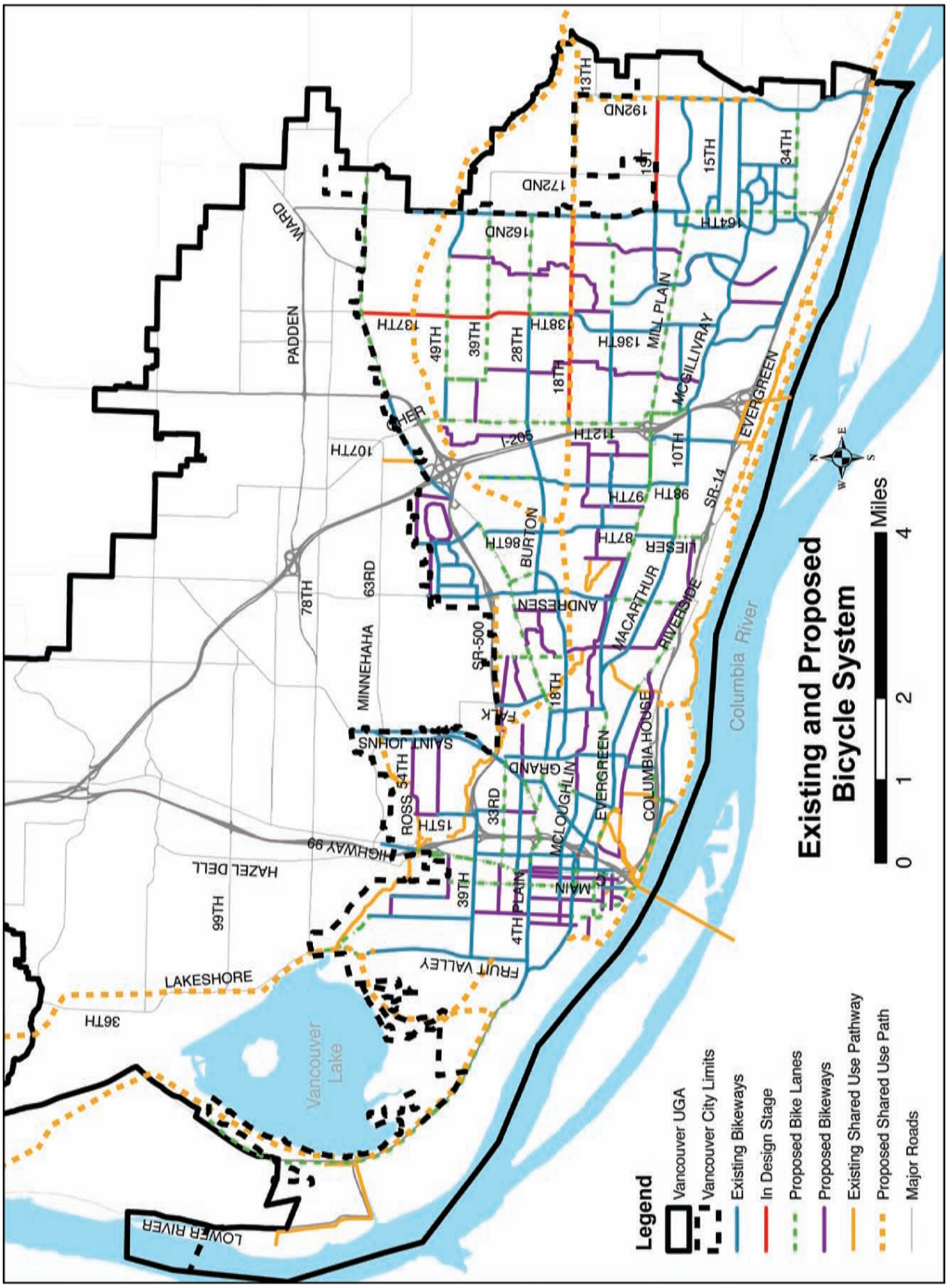


Figure 5-4. Existing and Proposed Bycicle System

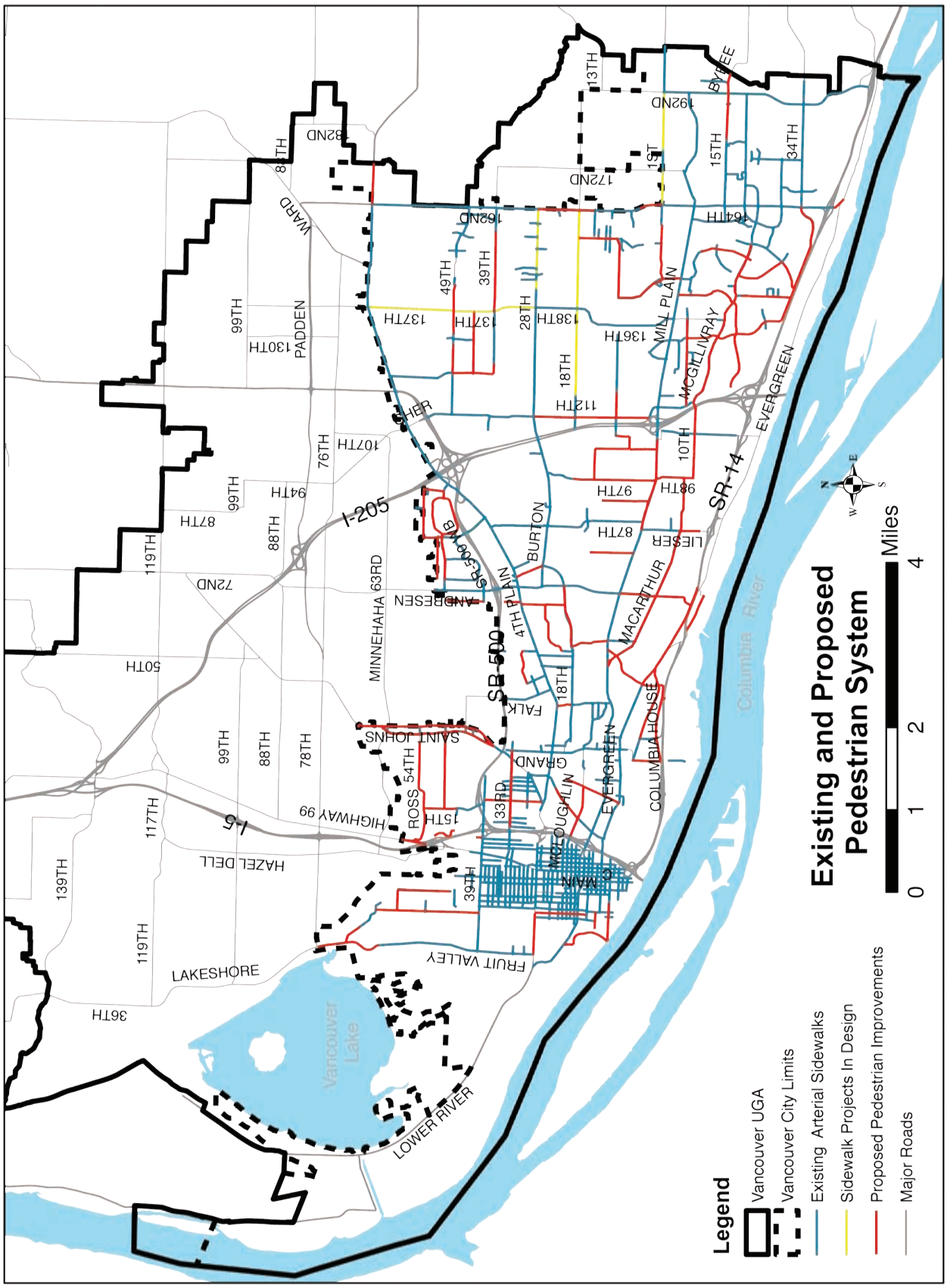


Figure 5-5. Existing and Proposed Pedestrian System

Table 5-3. City of Vancouver Arterial Standards.

Facility	Level of service (LOS) standard: Average peak hour travel speed (mph)
Andresen Road	
Mill Plain to SR-500	11
SR-500 to Padden Parkway	15
Burton Road	
Andresen Rd to 112th Ave	12
NE 28th St	
112th Ave to 138th Ave	10
138th Ave to 162nd Ave	12
Mill Plain Blvd	
Fourth Plain Blvd to I-5 *	10
I-5 to Andresen Rd	12
Andresen Rd to I-205	12
I-205 to 136th Ave	10
136th Ave to 164th Ave	10
164th Ave. to 192nd Ave.	10
164th Ave	
SE 1st St to SR-14	10
162nd Ave	
SE 1st St to Fourth Plain Blvd	10
192nd Ave	
SR 14 to NE 18th St	10
Fourth Plain Blvd	
Port of Vancouver to I-5	12
I-5 to Andresen	10
Andresen to 117th Ave (SR-503)	10
117th Ave (SR-503) to 162nd Ave	10
Ft Vancouver Way / St. Johns Blvd	
Fourth Plain Blvd to SR-500	12
St. Johns Blvd. / St. James Blvd	
SR-500 to NE 63rd Street	12
NE 18th St	
112th Ave to 138th Ave	12
138th Ave to 162nd Ave	12
NE 112th Ave	
Mill Plain Blvd. to 28th St	12
28th St to SR-500	12
NE 136th Ave	
Mill Plain Blvd To 28th St	12
28th St. to Fourth Plain Blvd	12
Other Principal and Minor Arterials	12

* This portion of Mill Plain Blvd. is also SR-501, a Highway of Statewide Significance with a regionally established LOS D.

Analysis. The improvements and programs outlined below will improve connectivity and access throughout the community, encourage alternative transportation choices, and support and encourage development as outlined in the Vancouver comprehensive plan. The planned improvements will increase access to goods and services throughout the community for drivers, pedestrians, bicyclists, and transit riders and will help to preserve the quality of life that makes Vancouver special.

Beyond the capital investments the City and region make in the transportation system, there are a variety of other programs and regulations that impact how the transportation and land use systems develop in Vancouver. The TSP includes a description of some of the most important ones—for example, the Neighborhood Traffic Management Program, the Transportation Demand Management Program, and the Vancouver Area Smart Trek program and Transportation System-Management and Operations plans which seek to upgrade the Intelligent Transportation Systems capabilities of the city. Vancouver is also planning to accommodate various types of electric vehicles by providing regulations for installing charging stations cooperating with Clark County on policies to accommodate Neighborhood Electric Vehicles (NEVs). These programs, along with development regulations and development review to ensure on- and off-site pedestrian, bicycle, and transit connectivity, each have a large impact on the character, convenience, safety and mobility of Vancouver neighborhoods.

Vancouver has an active Transportation Demand Management program, with several key components. In addition to managing the regional commute trip reduction program for state-designated CTR employers in Clark County, Vancouver runs a variety of local programs and promotions to encourage commute trip reduction for non-CTR employers (the state CTR law and program applies only to businesses with 100 or more employees). Vancouver has also adopted two Growth and

Transportation Efficiency Centers, one in the central business district and one in the east-side employment center at Columbia Tech Center. These programs include participation in regional efforts for trip reduction, such as car pool matching, bike-to-work, and CTR promotions with prizes for employees that use non-SOV modes to reach work.

Vancouver also participates in the regional Vancouver Area Smart Trek (VAST) program through the Regional Transportation Council. This effort has helped Vancouver install millions of dollars of upgrades to state of the art traffic systems management tools. For example, Vancouver, in cooperation with CTRAN is preparing to test a transit signal-priority system to increase transit efficiency and reliability. Vancouver has also recently participated in development of the Traffic System Operations and Management (TSMO) Plan update with the RTC. The TSMO plan identifies projects and strategies to improve system efficiency as growth continues and establishes the city's master plan for signal system fiber communications and related signal system upgrades. Increased operational efficiency of existing capital infrastructure is a key transportation growth management strategy for Vancouver.

Twenty-year transportation need.
Traffic projections derived from the population and employment growth forecasts clearly indicate that auto, truck, and transit trips will all increase significantly in Vancouver over the next 20 years. That means that traffic congestion will worsen.

Figure 5-2 shows the master plan of the arterial street system. The improvements recommended in the comprehensive plan should help alleviate the worst problems. The plan supports growth in Vancouver by building and managing a multi-modal system designed for urban traffic conditions. The City's transportation system is not currently, nor will it ever be, based solely on the automobile.

To accommodate growth expected over the 20-year planning period, many more improvements to the transportation system will be needed. Planned projects include major roadway projects, minor street projects, signal systems projects, pedestrian projects, bike projects, and trails. Partnerships will also be undertaken with the responsible agencies to provide system improvements that support and complement the area's transit services and highway systems.

Table 5-4 is a summary of the projects needed from 2011 to 2016 and more generally from 2017 to 2030. It is important to note that the 20-year projected needs include projects that will be imple-

mented in one to six years. **Figures 5-3, 5-4** and **5-5** depict arterial, bicycle and pedestrian systems that will be needed to support expected growth during the 20-year planning period. Building the full transportation system of the comprehensive plan will provide a diverse multi-modal system supportive of residents mobility needs and will not eliminate all traffic congestion.

The comprehensive plan supports the City of Vancouver's vision statement (see Preface) and presents a process for implementing workable transportation solutions to promote mobility and accessibility. The Vancouver transportation system needs analysis assumes that major improvements planned by the Washington Department of Transportation (WSDOT), Clark County and local cities will be made. However, these outside agency improvements are not included in Vancouver's capital cost and revenue estimates. State and regional plans contain specific information. WSDOT facilities in Vancouver include portions of I-5 and I-205, and State Routes 14, 500 and 503.

High-capacity transit. The planning process for high capacity transit in Vancouver is well underway and is described in detail in the adopted Metropolitan Transportation Plan in Chapter 5 (http://www.rtc.wa.gov/reports/mtp/Mtp2008ch5.pdf). In addition to the MTP, high capacity transit planning for Clark County has been completed in a special RTC high capacity transit study and in C-TRAN's twenty year transit development plan. (http://www.rtc.wa.gov/hct/ and http://www.c-tran.com/assets/20_Year_Plan/C-TRAN_20_Year_Plan-Adopted_June_8__2010.pdf).

In addition to planning efforts, two projects are in process. C-TRAN has initiated an Alternatives Analysis for high capacity transit on Fourth Plain Boulevard to evaluate implementation of a bus rapid transit system for operational enhancements. The Columbia River Crossing Project is planning for a new multi-modal river crossing on the I-5 corridor that will include connecting light rail into Oregon through a route in downtown Vancouver to Clark College. Improving transit service and street conditions along major transit corridors (HCT and Tier 2) will enhance the public transit system and increase the total suite of transportation services within the city. Major improvements such as the planned high capacity transit lines support the growth goals and mode share strategies of the Plan as well as growth center plans for the Vancouver City Center Vision and other identified centers.

Funding needed improvements. Funding for transportation improvements comes from a variety of sources. The federal government provides funds to states for construction of state highways and major facilities that support interstate commerce. The state in turn distributes the funding to local governments for specific improvements. The state itself funds improvements to state highways linking communities.

At the local level, the City has a road fund dedicated to maintaining and upgrading city streets. Funds currently dedicated to transportation capital upgrades include: state collected motor vehicle fuel tax, real estate excise transfer taxes, impact fees, which are supplemented by state and federal grants, developer contributions, and limited bonding. Pursuant to

Table 5-4. 20-year CFP project cost summary.

Years	Project	Cost	Funding
2011 to 2016	Construction Projects	$56,561,000	**$56,561,000**
	Design Projects	$9,367,000	**$9,367,000**
	Subtotal Years 1 to 6	**$65,928,000**	**$65,928,000**
2017 to 2030	Street and intersection projects	$337,046,000	**$337,046,000**
	Pedestrian projects	$19,979,000	**$19,979,000**
	Bicycle projects	$7,038,000	**$7,038,000**
	Subtotal Years 7 to 20	**$364,063,000**	**$364,063,000**
Total 20-year CFP		**$429,991,000**	**$429,991,000**

RCW 35.77.010, the City of Vancouver must adopt a six-year Transportation Improvement Program (TIP) each year. The TIP contains a coordinated transportation program and an explanation of how the money for transportation improvements will be spent. The TIP is based on the policy direction in the TSP. **Table 5-5** lists transportation funding sources and amounts for the 2011 to 2016 period, and more generally, for 2017 through 2030.

In addition to city investment, developers of land construct roads when they build new subdivisions and may contribute funds to construct improvements to surrounding roads to mitigate impacts of their development. Property developers also pay a traffic impact fee (TIF) based on the number of vehicle trips the development will add to the system. TIF funding must be used for the specific projects identified in the impact fee program, which are a subset of the City's transportation capital facilities plan. Typically, TIF funds are spent to improve designated arterial roadways that are included on the project list included in the City's Traffic Impact Fee Program Technical Document.

Transportation finance summary. The transportation capital project list is divided into two categories: (1) projects programmed and budgeted for design and/or construction, and (2) capital facilities plan projects that are needed to serve growth. Project cost by category are presented in **Table 5-4**.

Funding principles. Vancouver's transportation funding strategy is based on four principles: (1) existing revenues should be used before asking for more, (2) new revenues should be based on benefits to users, (3) there should be a time limit on the duration of authority for new revenue sources, and (4) new revenues should be a small fraction of the community's willingness to pay. The principles were used to identify the strategy for increases revenues within the 20-year period, as appropriate.

Funding plan. The funding plan addresses how the transportation capital facility plan will be implemented. The funding plan is divided into two initial phases. Phase I is a six-year plan and is scheduled for 2011-2016. Phase II covers 2017 to 2030. Phase II will be funded using the same baseline revenues but will require reauthorization and new funding. Requesting regular public reauthorization allows for periodic checks to ensure that the new money is being spent according to the plan.

The City can finance the transportation capital program by forming a transportation benefit district, selling bonds (voted or non-voted), by reinstating the business and occupation tax, by increasing traffic impact fees, by increasing the sales tax and business license fee surcharge, or by using any combination to address funding needs beyond Phase I. Additional information on transportation financing is available in Appendix D, Capital Facilities Funding Summary. Future transportation revenues are projected to match costs, but will require activation of additional authorized funding sources not currently in use. Policy CD-13 of this comprehensive plan (see page 1-15) commits the City to maintaining balance between land use and facilities planning. Should planned funding fall short of expectations, Vancouver will initiate a re-assessment of essential balance between adopted levels of service, planned growth, and the cost of the capital facilities plan. One strategy the City will likely employ is included in the transportation concurrency section above. The City's concurrency policy allows for designation of transportation corridors

Table 5-5. Estimated future transportation revenues.

Source	2011 to 2016	2017 to 2030
Total Impact Fees	$10,872,000	$10,827,000
State and federal grants	$21,743,000	$21,654,000
City REET – 1st $^1/_4$% – Pavement Management	$2, 514,000	$25,377,000
State gas tax	$18,766,000	$ 50,803,000
Developer contributions	$1,500,000	$4,500,000
Reserves for funded projects	$14,700,000	_
Bonds/Loans	$10,700,000	_
General Fund support	$9,361,000	$36,047,000
City REET — 2nd 1/4%	$600,000	$1,690,000
New Funding — TBD	$5,771,000	$319,664,000
Total	$96,527,000	$470,562,000

Note: revenue forecast includes street pavement preservation programs

that have reached "ultimate capacity." Once a corridor is built to ultimate capacity, the City's focus changes from providing additional peak-hour through put for additional vehicles to trip reduction.

Direction for the future

Promote accessibility, not just mobility. Accessibility ensures that all users of the transportation system have equal access to safe and quality facilities, regardless of transportation mode. Basic transportation access to obtain goods and services and engage in social activities is an essential need that must be met. Motorists, pedestrians, bicyclists and transit riders should all be able to use the transportation system in a safe, efficient, and uniform way. Transportation is a means to an end, seldom an end in itself. By focusing on accessibility rather than mobility, the critical issue becomes one of how people can accomplish daily activities more efficiently, rather than how they can get from point A to point B more rapidly. Furthermore, focusing on accessibility recognizes the relationship between land use and transportation systems.

Be efficient. Money for transportation improvements is scarce, even as demand for new and better facilities increases. Consequently, strategies that make do with less and maximize existing investments are a high priority. Improvements to the transportation system must address efficiency. Incremental improvements to existing infrastructure are often more efficient than large capital investments, and more efficiently use scarce resources. Improvements should also support all modes of travel.

Create livable streets. Most people who live in Vancouver view the community's streets as more than simply concrete and asphalt. Streets affect the way people live, work, and play. Streets should be viewed as part of a dynamic, integrated land use and transportation system. Street treatments (paving type, sidewalks, lighting, street trees, signs, and furniture such as benches and trash cans) should address the needs of regular users and the surrounding area.

Have good connections throughout. Connected, continuous street systems make activities of daily living easier to accomplish. Vancouver's early development was based on a grid street system. As development moved east, a grid based on major corridors was established, but many of the connections have not been completed. In many areas, connectivity for auto travel, pedestrians, and bicyclists is lacking. This means that even simple errands-like going to the store or visiting a friend-require significant travel.

Support all travel modes. Vancouver residents and businesses support and expect the development of a multi-modal system—one that provides a range of travel choices. This will require planning and providing facilities for automobile, bus transit, high-capacity transit, pedestrian, and bicycle travel.

Help build a truly walkable community. Nearly everyone walks and does so every day. Vancouver residents and businesses have indicated they equate a walkable community with a high quality of life. In addition, citizens have made it clear that Vancouver's streets need to be more accessible and safer for pedestrians. Especially important are downtown and neighborhood streets, minor neighborhood arterials, and routes along major bus lines.

Support transportation and land use improvements. A large majority of residents support mixed-use developments in at least some of Vancouver's centers and neighborhoods. Mixed-use areas are often favorite places with lots of activity easily accessible by different transportation modes. Streets with an attractive and interesting street atmosphere, where land uses and the transportation system are mutually supportive, create a vital and interesting focus for the community. In addition, by offering a mix of housing, employment and services near each other, the areas benefit the transportation system by reducing the total number of trips and trip length, and by keeping them off the major highway system.

Transit

Vancouver's public transit in 2011

C-TRAN has provided public transit service in Clark County since 1981. C-TRAN's mission is to provide safe, efficient, reliable mobility choices. Vancouver area services include 30 fixed bus routes, commuter vanpool, and ADA (Americans with Disability Act) paratransit. A detailed description of C-TRAN's services, facilities, and equipment is included in its 20-Year Transit Development Plan, entitled C-TRAN 2030, which is incorporated here by reference. (http://www.c-tran.com/20_Year_Plan_Update2.html). Locations for current fixed routes are available from C-TRAN at http://www.c-tran.com/system-map.html.

Existing major Vancouver area transit facilities shown in **Figure 5-6** of this chapter include three transit centers (Fisher's Landing, 99th Street at Stockford Village, and Vancouver Mall) and six park and ride lots (Andresen, BPA Ross Complex, Evergreen, Fisher's Landing, 99th Street at Stockford Village, and Salmon Creek). These park and ride lots provide a total of 2,170 parking spaces systemwide, primarily used by commuter express, carpool, and vanpool passengers. Most of these facilities include shelters and benches as well as bicycle racks or lockers. All fixed route buses are ADA accessible and have onboard bike racks. Transit centers at Fisher's Landing and 99th Street offer public restrooms. A total of about 260 shelters and benches are maintained throughout the fixed route system.

Direction for the future

Six-year plan: 2011-2016. C-TRAN fixed route, paratransit, and vanpool services totaled 369,800 operating hours in 2010, providing over 6.5 million passenger trips. C-TRAN has been affected by the economic downturn that continues in Clark County. Sales tax revenues, C-TRAN's local funding, are recovering, but still well below pre-recession levels.

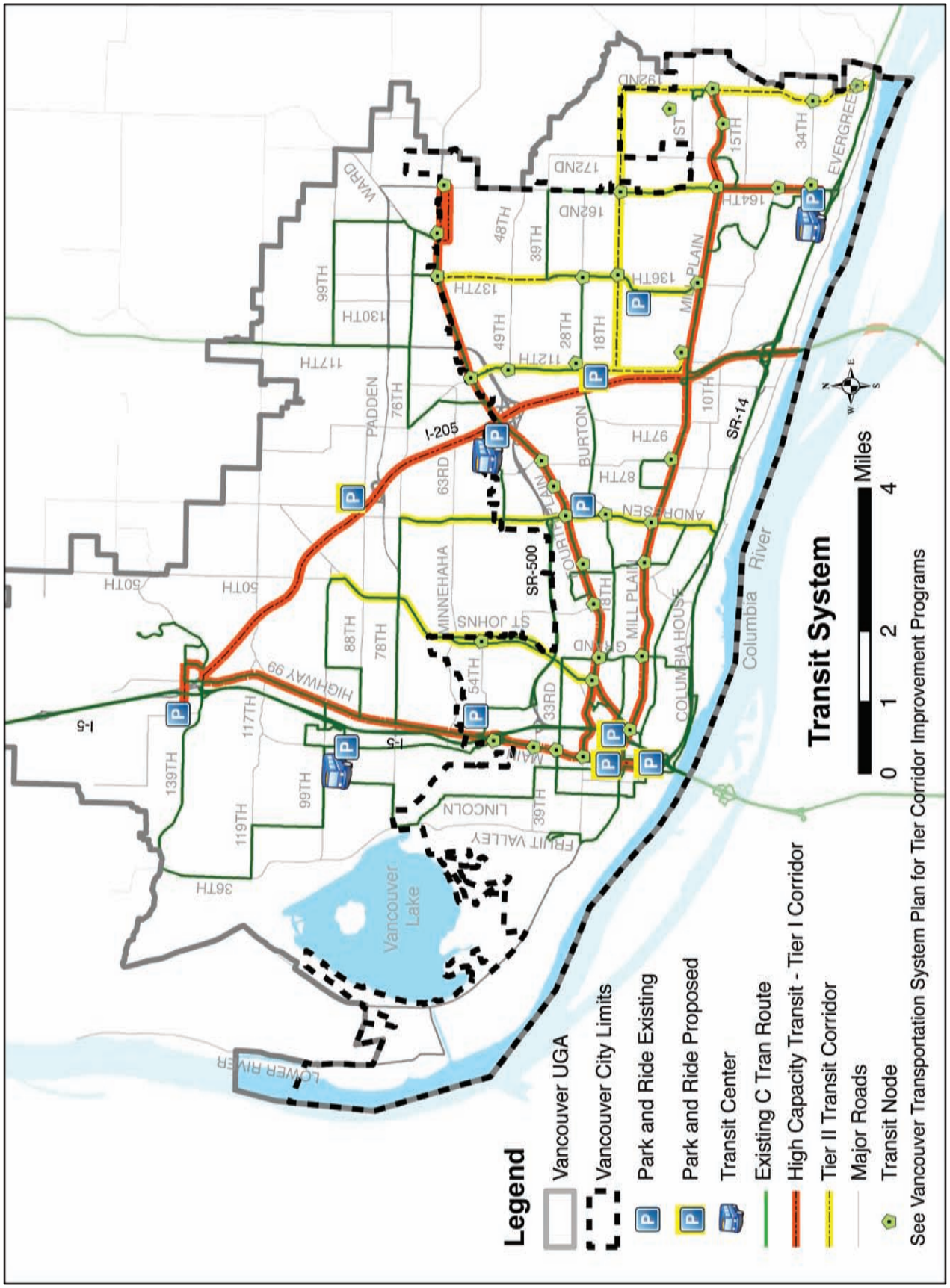


Figure 5-6. Transit System

Table 5-6. Operating Hours and Ridership, 2005-2010

	2005	2010	Increase	Change
Operating Hours	330,603	369,800	39,197	11.8%
Ridership	5,812,417	6,552,570	740,153	12.7%

C-TRAN has implemented a variety of strategies to maintain service levels. In 2011, C-TRAN expects to seek voter approval for additional sales tax funding that would be used to preserve and expand the transit system, implementing Phase I of the 20 year plan. Without additional funding, C-TRAN will need to reduce operating hours to match reduced income levels.

C-TRAN will continue its investments in technology to help improve safety and operating efficiency. Project priorities for 2011 include improvements to bus stops and amenities, opening a relocated park and ride, maintaining a state of good repair at transit facilities, providing accessible customer information, and expanding the vanpool program.

C-TRAN 2030

C-TRAN 2030 outlines a plan for growth and investment in the transit system over the next 20 years. Investments include two new bus routes in east Vancouver, increased frequency on local routes, two new park and ride facilities with increased commuter service, service to meet the growing paratransit demand, and C-TRAN's first bus rapid transit (BRT) route along the Fourth Plain corridor. The 20-year plan also supports the development and operation of light rail's extension into downtown Vancouver as included in the Columbia River Crossing project. Implementation of *C-TRAN 2030* is contingent on voter approval of additional funding for C-TRAN.

High Capacity Transit

C-TRAN 2030 includes the first project in the Clark County High Capacity Transit System, the Fourth Plain BRT. Expansion of the BRT system to other arterial corridors is beyond the scope of current transit plans, but consistent with C-TRAN's 50 year vision. Extension of light rail to Vancouver's central business district is in planning through the Columbia River Crossing project. Ensuring intermodal connections that facilitate travel for Clark County residents is a priority for C-TRAN throughout these projects. Vancouver's plan anticipates these improvements and depends upon transit investments and operations to support future mobility.

During 2011, C-TRAN is beginning the Alternative Analysis study of transit improvement alternatives in the Fourth Plain corridor, building on the previous HCT Study recommendation for a BRT project to meet the need for improved transit to serve growing ridership demand. C-TRAN and its partners including the City of Vancouver and RTC will engage the community in a process to explore alternative service proposals, leading to adoption of a locally preferred alternative in the summer of 2012. Once a locally preferred option is adopted, C-TRAN will seek funding for construction. At this time, construction is anticipated during 2013, with the BRT being completed and open in 2014.

Airport

The City of Vancouver operates Pearson Field, a general aviation airport as an enterprise fund, which requires the airport to be self-supporting. Pearson Field (International Designation "VUO") primarily serves general aviation aircraft that are comprised primarily of propeller driven aircraft with wingspans less than 49 feet and weighing less than 12,500 pounds. Pearson Field has a 3,275 foot long, 60 foot wide, hard surfaced runway and parallel taxiway system. The airport has an estimated 50,000 annual operations, 175 based aircraft, 12 reserved tie-downs and 10 transient tie-downs.

Pearson Field is a gateway to the Vancouver-Portland area for business, commerce and tourism due to its location with easy access to downtown Vancouver and Portland. Over 60% of the operations are commerce related, and the airport is a primary location for emergency operations, search and rescue and other public services. Pearson has a Fixed Base Operator (FBO) that provides a full range of aviation services including major aircraft and avionics repair and maintenance, flight training, aircraft sales and rentals, aviation fuel, and scenic flights.

Pearson Field is one of 138 public use airports in the state of Washington and is identified within the Washington State Aviation System Plan and the National Plan of Integrated Airport Systems as an important regional, state and national transportation facility. In addition to being the nation's oldest operating airport, the airport was named among the country's 100 most needed airports according to a list prepared by the National Air Transportation Association.

Under the Growth Management Act, Pearson Field Airport is an essential public facility, and must be protected from adjacent incompatible land uses and/or activities that could impede the safe operation of the airport. In 2001, an airport master plan was completed that included a capital improvement program (CIP) for a twenty-year planning period (2000-2020). A master plan update will be completed in 2012. In addition to the master plan update, the 2005 business plan is undergoing a strategic update with a completion date scheduled for late 2011.

The City of Vancouver owns 61.8 acres of the 134-acre airport site with the remaining 72.6 acres owned by the National Park Service. Pearson Field is the only airport in the nation that operates within the boundaries of a national historic reserve. Current and future operation and management of Pearson Field is defined through multiple agreements established between the City, National Park Service, National Historic Reserve Trust and Federal Aviation Administration.

Public water

The City of Vancouver Public Works Department provides potable water to the City of Vancouver and the eastern portion of the Vancouver Urban Growth Area (VUGA) north of the city limits A complete facility inventory, analysis of capacity and need, and capital facilities program is provided in the adopted 2007 *City of Vancouver Water System Comprehensive Plan*.

Clark Public Utilities (CPU) serves the western portion of the VUGA north of the city limits. Regional water policy is guided by the Clark County Coordinated Water System Plan (CWSP), and overseen by the Water Utility Coordinating Committee (WUCC), which is composed of managers and technical officials from local jurisdictions.

Vancouver's public water supply in 2005

Inventory. Figure 5-7 shows the Vancouver public water supply system. All water in the local system comes from groundwater sources. Water is stored in ten reservoirs or towers to maintain system pressure and provide for peak flow, fire flow, and standby flow. The total capacity of these reservoirs is 24 million gallons. Water quality is ensured by ongoing monitoring and treatment of groundwater prior to delivery to the distribution system.

Table 5-7 summarizes current production and future demand for the water system. The average daily system demand in 2005 was 26.2 million gallons (MGD), which is a daily water use of approximately 125 gallons per person based on an estimated service area population of 209,527.

Pipeline and system maintenance efforts along with conservation programs have resulted in an increase in the average daily demand (ADD) for water of only 5% despite an almost 43 percent increase in served population. Since most changes to reduce water loss have been completed, ADD is likely to resume increasing as the City population grows.

The City presently has 40 groundwater wells. Vancouver has a total annual water right for withdrawal of 15.8 billion gallons per year, or an annual daily average of 43.4 MGD. Maximum instantaneous withdrawal allowed is 108.07 MGD at 75,000 gallons per minute. Ideal design practice recommends that the source of supply be able to

Table 5-7. Water production and projected demand.

Category	1996* (actual)	2005 (actual)	2012 (projected)	2026 (projected)
Service area population (includes incorporated City and adjacent unincorporated areas)	146,184	209,527	228,779	272,664
Average Daily Demand (ADD) in millions of gallons per day (MGD)	24.9	26.2	35	45
ADD/person, in gallons	165	125	144*	150*
Peak day demand in MGD	50	52	66	82
Number of wells	36	40	40	TBD**
Reliable well capacity in MGD	53	89	89	TBD**
Storage capacity in MG	24.5	24	24	TBD**
Primary water rights, annual daily average in MG	43.41	43.41	43.41	TBD**
Primary water rights in billions of gallons per year	15.8	15.8	15.8	TBD**

*The increase in ADD is attributed to assumed increases in industrial and wholesale demand.
**To be determined

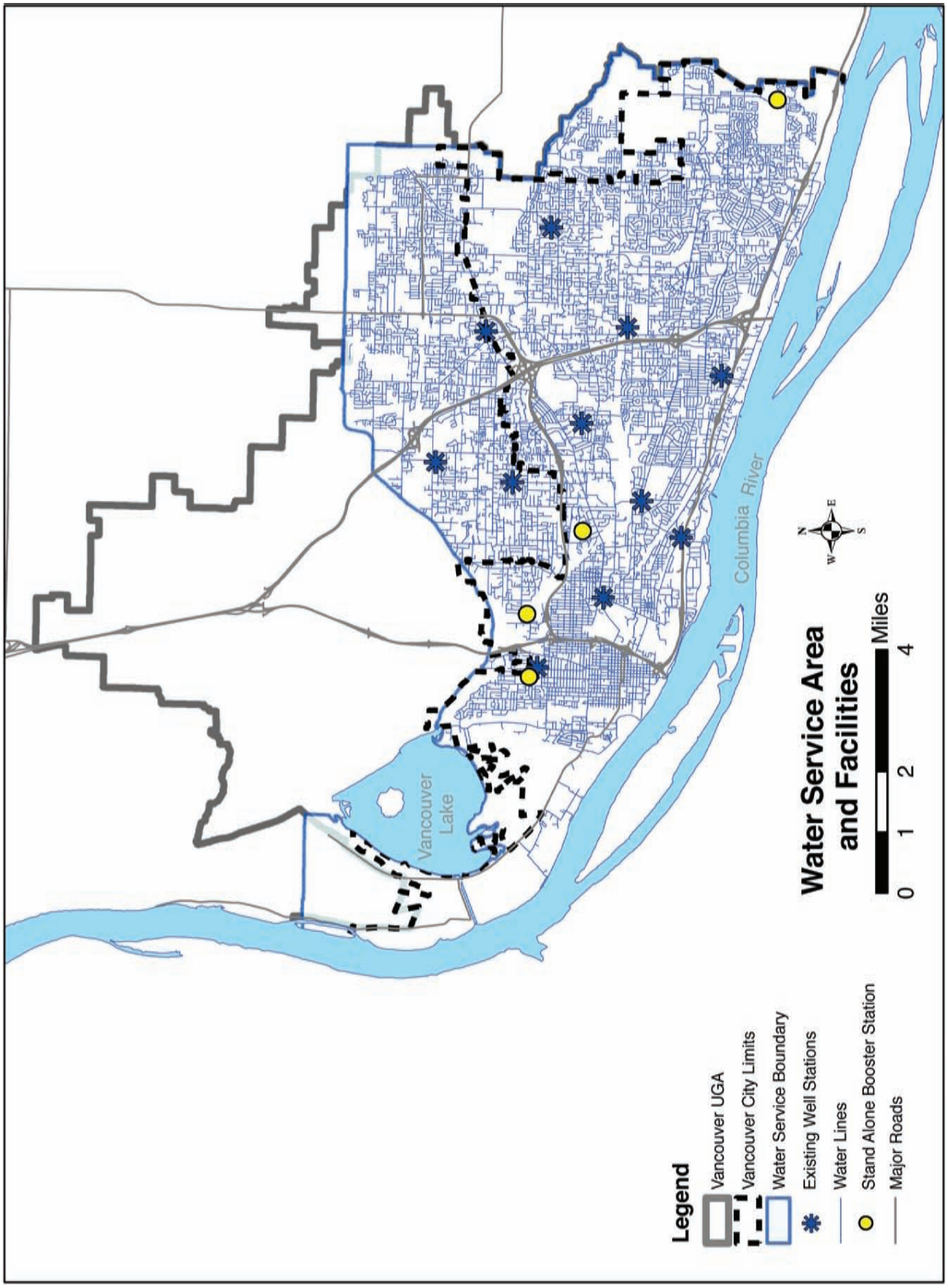


Figure 5-7. Existing Public Water Sysem

Photo by Pat Easley

serve the maximum day demand (MDD), allowing stored water to be used for the daily peaking requirements of the system. Currently, the total *peak* reliable well capacity is 89 MGD, but other limiting factors such as treatment restrict the total usable capacity to 80.6 MGD. The peak day system demand was 52 million gallons in 2005, or 248 gallons per person. It is estimated that the *average* daily demand will increase to 150 gallons per person by 2026 and that the peak day demand will increase to 300 gallons per person due to an increase in industrial and wholesale demand.

When operated continuously, existing water production facilities are sufficient to meet current and projected future (2026) demands.

Fire flows. A water system is required to have a supply, storage, and distribution system grid with sufficient capacity to provide firefighting needs while maintaining maximum daily demand flows to residential and commercial customers. Because fire fighting requires a large amount of water in a short time, fire flow requirements typically determine the minimum size of water lines needed to serve an area, as well as the amount of storage needed.

The City of Vancouver's water delivery system provides fire hydrants and water distribution mains in neighborhoods and business areas throughout the water service area. Development requires new water mains and hydrants to serve new buildings, per the latest adopted version of the International Fire Code and Vancouver Municipal Code.

Service standards. The Washington State Department of Health requires the water system to provide flows to satisfy peak hourly demands with pressures at no less than 30 psi (pounds per square inch) at all points in the distribution system (measured at any customer's water meter or at the property line if no meter exists), except for fire flow conditions. It is usually desirable to have pressures above 40 psi.

Direction for the future

Future demand. Although water production is sufficient, there is a geographical separation between the productive water sources in the southwest and the growing population and water demands in the northeast. Therefore, the City will continue to construct a backbone of transmission and booster pump improvements to move water from the southwest to northeast.

To improve system water supply reliability, particularly in the event of a power failure or other emergency operations, Vancouver plans to construct standby power facilities at multiple water sources. Specifically, the City created a Master Plan directed exclusively at its largest and most important source, Water Station No. 1. The plan identified desired improvements, including replacement wells, new standby power facilities, replacement of all storage at the site due to seismic concerns, consolidation and expansion of pumping systems, and creation of secure operator support facilities.

Vancouver is not in immediate need of new water rights, but will apply for additional rights in order to make adjustments between source locations, withdrawal rates, and to meet its projected long-term annual demands. The Salmon-Washougal and Lewis Watershed Management Plan was approved in 2006. The plan prefers that new water supplies

be withdrawn from the Columbia River, adjacent lowland reaches of tributaries subject to tidal effects, and/or associated groundwater, rather than from flow-limited reaches of streams that have sensitive aquatic habitat. These areas include water prolific areas such as the Vancouver Lake lowlands and the Steigerwald Wildlife Refuge. Future regional water supplies are likely in these areas to meet long term demands.

Additional improvements may include source improvements (new wells, pumps, or water treatment systems), improvements to existing booster stations, new or improved water storage facilities, and extension or upgrade of pipelines. A detailed description of current capital improvement projects is provided in the *Vancouver Water System Comprehensive Plan* (2007).

Six-year funding and projects. Table 5-8 provides information about costs of planned projects and funding over the next six years and longer to maintain or improve levels of service to Vancouver water customers.

Table 5-8. Water system capital projects and funding, ongoing and planned, 2011 to 2016.

Year	Total Costs	Available funds
2011 budgeted $9,172,907		
2012 budgeted $4,235,000		
2013 $5,350,000		
2014 $5,230,000		
2015 $5,850,000		
2016 $6,825,000		
Total 2011–2016	More than $36,662,907	More than $39,000,000

Sources: City of Vancouver Public Works

Analysis of revenue and expense indicates there are adequate operating reserves to fund ongoing facility replacement needs. System development charge revenues will be used to partially fund expansion projects. Biannual review of utility rates will provide appropriate management review to keep rates current and proportional to capital facility improvement and maintenance needs.

Sanitary sewer

Sanitary sewer systems consist of neighborhood sewer lines that take waste from pipes serving individual properties, trunk lines that collect waste from these lines within individual drainage basins, and interceptors that receive flow from several drainage basins and route it to treatment facilities. Pump stations and force mains augment the system. Sanitary sewer service is a Tier I concurrency service in the City of Vancouver. For more detail refer to the *City of Vancouver, Washington General Sewer Plan.*

Vancouver's sanitary sewer system in 2011

The City of Vancouver provides wastewater services within city limits and in a portion of the unincorporated urban areas north and east of the city limits, such as the east Minnehaha area and the Orchards and Sifton areas, as indicated in **Figure 5-8.** The Vancouver service area includes several major wastewater drainage basins. The Clark Regional Wastewater District serves the northwest portion of the unincorporated VUGA that straddles I-5. The City of Vancouver sewer system comprises more than 700 miles of pipe. The gravity mains range in size from 6 to 60 inches in diameter. Wastewater flow is treated at the Westside Water Reclamation Facility (WWRF) and the Marine Park Water Reclamation Facility (MPWRF). The WWRF also serves a City-owned industrial pretreatment lagoon. Sterilized ash from incineration of solids is trucked to a solid waste landfill in Boardman, Oregon.

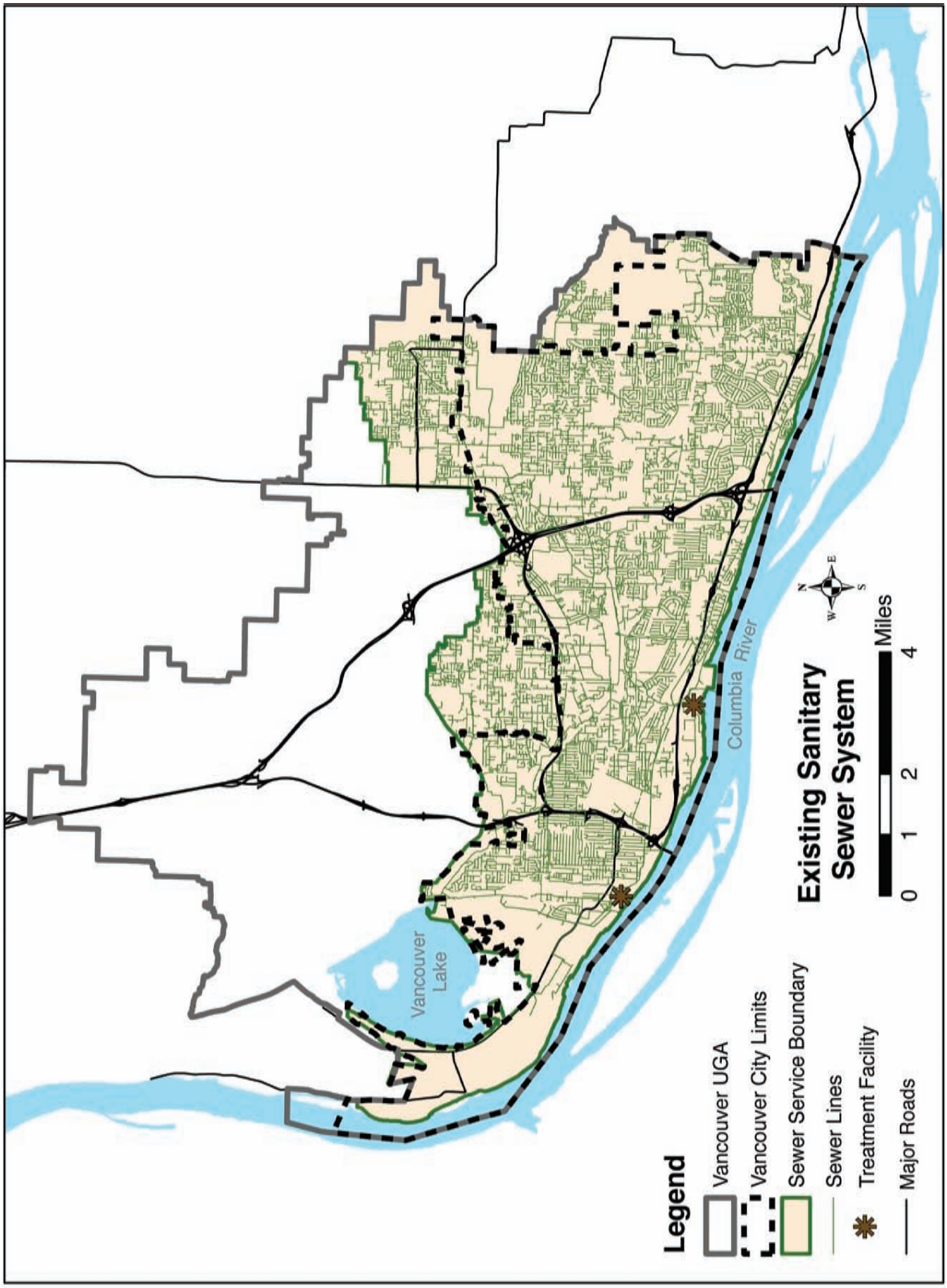


Figure 5.8 Existing Sanitary Sewer System. Source: Vancouver Public Works Department

Some of the residential and commercial wastewater flows can be shifted between WWRF and MPWRF, depending on available capacity. In addition to treating Vancouver wastewater WWRF treats wastewater from the southwest portion of the Clark Regional Wastewater District. Both treatment plants release treated water into the Columbia River. The WWRF also serves a City-owned industrial pretreatment lagoon handling food-processed wastewater. Ash from incineration of solids is trucked to a solid waste landfill in Boardman, Oregon.

Completion of the Sewer Connection Incentive Program (discussed below) will increase total system usage demand by approximately 1.2 MGD. Total projected buildout peak dry weather flow, including new flow from the septic elimination program, is 25.4 MGD, well below the current capacity of 44.3 MGD average daily flow capacity.

Table 5-9. City of Vancouver treatment facilities, capacity, and flows in 2010

Facility	Average daily flow capacity (in MGD)	Average daily flow (in MGD)	Maximum average daily (in MGD)
Westside Water Reclamation Facility (WWRF)*	28.3	10.4	14.5
Marine Park Water Reclamation Facility (MPWRF)	16.0	10.7	14.9
Industrial pretreatment	3.2	1.52	2.6

*Pretreatment flow is included in the flow data for the WWRF.
Source: Vancouver Public Works Department, 2011.

The hydraulic model for the major wastewater collection system was refined as part of the City of Vancouver, Washington General Sewer Plan to determine whether the network of pipes, manholes, pumps, and other physical facilities were adequate to convey estimated flows under storm conditions. The results indicate that the system is capable of conveying flows resulting from a nearly one-in-twenty-five-year recurrence interval storm under 2008 conditions without compromising wastewater treatment. However, to accommodate projected buildout flows under this storm the wastewater collection system will need minor upgrading.

Service standards. The existing sewer system meets all federal and state standards and has adequate capacity for existing and future demand. The sanitary sewer system is monitored by instrumentation, computer modeling, and tracking development trends so that sewer projects can be implemented before the mains reach capacity. Preventive maintenance keeps problem areas clean to minimize unexpected blockages.

On-site systems (septic tanks). At the end of 2010 there were approximately 6,000 onsite sewage treatment or septic systems in the Vancouver sewer service area, serving 16,200 people and discharging over 1.2 MGD of effluent into the ground for treatment. Because most of the systems are more than 30 years old and reaching the end of their expected life spans, failures are increasing. Septic system failures may go undetected, allowing contamination of nearby streams, lakes, or shallow drinking water wells. Septic systems can also cause an increase in nitrates in groundwater. The Sewer Connection Incentive Program (SCIP) has been developed to protect water resources from failing septic systems and to help homeowners eliminate unreliable septic systems. City ordinances and County Health Department rules prohibit new septic systems except for in extenuating circumstances. The program extends sanitary sewers into areas served by septic systems, and provides affordable financing to homeowners to allow them to connect to the system.

Direction for the future. Table 5-10 shows planned sewer system improvements through 2030, grouped into categories of basin improve-

ments, sewer connection incentive program, replacement/preservation, roadway coordination, development improvements, and wastewater treatment improvements. The treatment facility projects are all in the maintenance/replacement/preservation category as there is sufficient capacity for the expected growth. The City is currently servicing debt generated from past expansion of the two wastewater treatment facilities. As the City retires this existing debt there is sufficient funding from system development charges and rates to cover the costs of the all proposed projects. Rate increases will continue to be sought to cover escalating operating costs associated with inflation.

Basin Improvements. These are projects that are planned basin improvements or that relieve capacity concerns identified by the City's state of the art hydraulic sewer model.

Sewer Connection Incentive Program. Sewers are extended into existing neighborhoods currently served by septic systems to provide the homeowners sewer service, so it is available for homeowners to connect to when existing septic systems fail. (See City of Vancouver General Sewer Plan for more information on SCIP Program).

Replacement/Preservation. This program replaces substandard mains—typically these have been older mains that are nearing the end of their life cycle. Unless remedial action is taken they usually require extensive preventive maintenance. Remedial steps taken at appropriate times reduce maintenance demands and potential backups. Sometimes old mains are replaced when roads are improved to reduce cutting new pavement. The City is embarking on a comprehensive Asset Management Plan that will refine this program by performing coordinated condition assessments. This work will allow the City to better prioritize the replacement and preservation efforts.

Roadway Coordination. When the City, County, or State constructs a new roadway the plans will be reviewed and sewers may be installed or extended to provide service to adjacent parcels. Sewer replacements based upon age and/or maintenance history can be accomplished during roadway construction as well. Sewers are less expensive to install when an existing road is being reconstructed. Also, this coordination prevents cutting of the new pavement in the short-term for sewer installation later.

Development Improvements. Outside of the SCIP projects developers extend most of the sewers in the City's system. This includes needed pump stations and force mains. The City may grant System Development Charge credits for any pump stations or force mains that are considered system improvements.

Wastewater Treatment Improvements. As mentioned above these are projects to maintain, replace, or preserve the existing wastewater treatment facilities.

Table 5-10. Vancouver sanitary sewer capital programs and projects, 2011–2030.

Program/ Project	2011-2012	2013-2014	2015-2016	2017 to 2023	2024 to 2030	Total
Basin Improvements	$ 543,000	$ 70,000	$ 387,000	$ 6,320,000	$ 0	$ 7,320,000
Sewer Connection Incentive Program	$ 6,000,000	$ 6,000,000	$ 6,000,000	$ 21,000,000	$ 11,000,000	$ 50,000,000
Replacement / Preservation	$ 500,000	$ 500,000	$ 500,000	$ 4,000,000	$ 14,000,000	$ 19,500,000
Roadway Coordination	$ 0	$ 915,000	$ 600,000	$ 2,000,000	$ 0	$ 3,515,000
Development Improvements	$ 1,950,000 As needed	$ 1,950,000 As needed	$ 1,950,000 As needed	$ 6,825,000 As needed	$ 6,825,000 As needed	$ 19,500,000 As needed
Wastewater Treatment Improvements	$ 1,206,000	$ 972,000	$ 2,088,000	$ 40,900,000	$ 13,400,000	$ 58,566,000
Total	$ 10,199,000	$ 10,407,000	$ 11,525,000	$ 81,045,000	$ 45,255,000	$158,401,000

Costs are presented in December 2010 dollars
Source: Vancouver Public Works Department, 2011.

Stormwater

The City of Vancouver's overall goal is to promote stormwater drainage designs that help maintain or improve surface and groundwater quality. Increased urbanization can make this challenging, as increasing impervious surfaces (roadways, parking lots, driveways, and sidewalks) increases the amount of runoff from storms, thereby increasing the potential for stormwater to transport pollutants such as petroleum contaminants, eroded sediments, and chemicals. These pollutants can end up in surface waters or infiltrate and threaten groundwater resources.

Table 5-11. Storm drainage infrastructure in the City of Vancouver and the VUGA.

Open ditches	6 miles
Storm sewers	336 miles
Outfalls (estimate)	177
Catch basins (estimate)	12,893
Detention facilities*	29
Retention facilities*	None
Treatment facilities*	456
Regional facilities	6
Public infiltration facilities (infiltration basins or dry wells)	50 %

Connections to WSDOT facility: SR-500 at I-5, I-205 at Andresen Road, at Thurston, and SR-14 at I-205
*Estimated number operated by MS4

Vancouver's preferred approach to stormwater management is to require property owners to retain stormwater on site and treat it, usually by running it through vegetated areas where plants filter out and absorb pollutants, prior to its release into the ground or nearby surface water. This approach also reduces the risk of flooding along streams by regulating flow into the stream during storms. **Table 5-11** summarizes the existing stormwater management systems (both piped and natural) in Vancouver.

The City's surface water utility was created in the mid-1990s. Master planning efforts have resulted in several plans based on the drainage basins in Vancouver: the *Columbia Slope Plan* and the *Burnt Bridge Creek (BBC) Watershed Plan*. The *Columbia Slope Plan* was developed when the City's utility was established. The City's budget addresses many of the projects and property acquisitions for the surface water utility.

Managing stormwater on-site means much of the stormwater system is private, which makes measuring total system capacity difficult. What is known is that the geology for most of the City of Vancouver allows for stormwater to infiltrate on site, so new

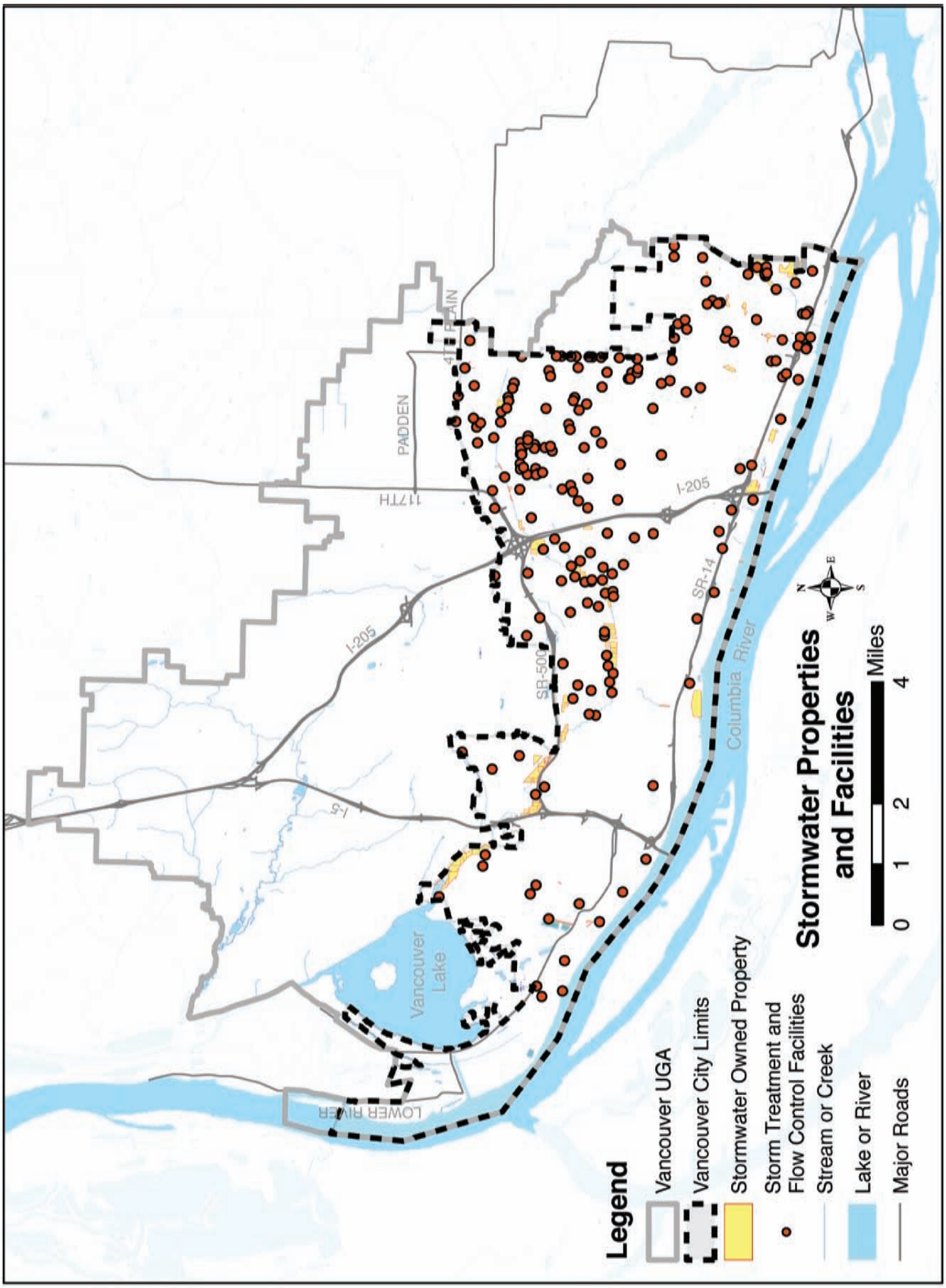


Figure 5-9. Vancouver's existing stormwater properties and facilities.

development typically is able to provide water quality treatment and to discharge to stand-alone infiltration systems. However, in the unincorporated Vancouver UGA the groundwater table is high and the hydric soils are saturated, which limits the ability of stormwater to infiltrate and constrains the capacity for on-site management.

The City has completed improvements to the BBC Greenway. The project enhanced fish and wildlife habitat, provided trails for recreational access, and improved stormwater treatment before draining to

the creek. The Surface Water Management division continues evaluating storm drainage rates and provides updated inventories and maps of stormwater pipes, drainage facilities and treatment.

National Pollutant Discharge Elimination System Phase II Stormwater Permit The Department of Ecology issued Vancouver its first Phase II NPDES Stormwater Permit in 2007. A new permit will replace it in 2012. Permit measures include the following main categories:

Public Education and Outreach – SWM provides educational programs and distributes informational materials to the community about the practices that lessen impacts.

Public Involvement and Participation – SWM provides programs to promote public participation in stormwater issues.

Illicit Discharge Detection and Elimination – A business and industry inspection program helps insure compliance with Water Protection regulations. Staff maintains an extensive and detailed database of local businesses and industries to facilitate the inspection process. Mapping of the City's storm system is another key component of illicit discharge detection and elimination.

Controlling Runoff from New Development, Redevelopment and Construction Sites – All construction projects that include ground disturbing activities must have an erosion control plan that is reviewed and approved by SWM staff. An erosion control specialist inspects project sites before and during construction to insure storm systems and water ways are protected from erosion. Following construction the City continues to inspect stormwater treatment and flow control facilities to verify maintenance standards are met.

Pollution Prevention and Operation and Maintenance for Municipal Operations – The City's O&M program establishes maintenance standards, initiates facility inspections, and incorporates staff training in practices that can help reduce pollutant runoff from municipal operations.

Other essential Surface Water Management services The following programs and services are not mandated by the NPDES permit but are considered essential:

Capital Planning/Projects – SWM staff works with consultants on larger capital projects by reviewing and guiding their efforts. Smaller project are planned and designed by staff.

Operations Support – SWM staff works with operations staff to plan and design solutions to drainage problems throughout the city.

Utility Billing – Stormwater fees are based on impervious surfaces on a parcel. Customers frequently inquire about their fees and staff researches and verify fees that are being charged.

Reviewing Transportation Projects – Transportation projects usually include stormwater collection systems. SWM engineering staff reviews these projects for compliance with city standards and to insure ease of maintenance for operations staff.

Public Response/Support – SWM staff answers calls from the public concerning drainage issues on both private and public property.

Endangered Species Act – SWM staff provides technical assistance to Community Development Services efforts to protect endangered species.

Recreational – SWM owns many large parcels of land that are adjacent to Burnt Bridge Creek. These open space parcels are used as native vegetation buffers for the creek. Where possible, the public has been allowed access to these natural areas with formal and informal trails. These areas have become open space assets to the public.

Future direction

Vancouver will continue to work with private property owners to enhance the functioning of floodplains and riparian areas throughout the City and in the extended stormwater service area. Increased plantings of native vegetation and removal of impervious surfaces will also enhance stormwater management.

Capital Project Needs

Capital facilities needed through 2016 are summarize in **Table 5-12**.

Table 5-12. Stormwater Capital Facilities 2011-2016

Project Category	Cost	Funding Sources
WDOT projects	$1,200,000	Surface Water Construction Fund
SCIP	$1,167,000	Surface Water Construction Fund
Stormwater Capacity	$508,000	State Grants
Other	$2,770,520	Surface Water Construction Fund
Total	$5,645,520	

Sources: City of Vancouver Public Works

Parks and Recreation

Parks, trails, greenways, and other park and recreation facilities in Vancouver and unincorporated Clark County are managed by the Vancouver-Clark Parks and Recreation Department (VCPRD), a joint agency encompassing the previously separate City and County parks departments. VCPRD owns and operates six different types of parks: neighborhood parks, community parks, regional parks, natural areas and open space, trails and greenways, and special use areas. VCPRD also owns and operates two community centers (Firstenburg and Marshall), a senior center (Luepke), and the Vancouver Tennis Center. The 13 member Vancouver-Clark Parks and Recreation Advisory Commission serves as an advisory body to the City of Vancouver and Clark County on planning, acquisition, development and operation of the parks system. Direction is also provided by the Vancouver-Clark Comprehensive Parks, Recreation & Open Space Plan adopted in 2007.

Urban Parks

Park Impact Fee Districts

Existing parks, trails, and open spaces are shown in **Figure 5-10**. For purposes of planning and funding parklands, the City of Vancouver and Vancouver Urban Growth Area are divided into ten park planning and impact fee districts (See **figure 5-11**). The program establishes level of service standards for urban parks, including neighborhood and com-

munity parks and urban open space, and assesses park impact fees on new residential development to offset the cost of providing these parks. The acquisition standard for the urban park system (neighborhood parks, community parks, and urban open space combined) is 6 acres per 1,000 people. For 2016, the estimated population for the City of Vancouver and its Urban Growth area is 339,955. The amount of urban parkland, including neighborhood parks, community parks and urban open space, needed to meet the adopted urban standard is 2040 acres. With the current inventory, this reflects a need of an additional 423.5 acres.

Neighborhood Parks

Neighborhood parks provide access to basic recreation opportunities for nearby residents, enhance neighborhood identity, and preserve neighborhood open space. These parks are generally two to five acres in size and primarily serve residents within a half-mile radius. Sites may vary in size depending upon unique site characteristics, opportunities and land availability. Elementary school sites have been included under the neighborhood parkland classification, since they often have neighborhood park elements and serve some of the neighborhood park needs. At the present time, the VCPRD provides neighborhood parks within the City of Vancouver and its Urban Growth Area (UGA). The acquisition standard is 2 acres/1,000 people with a total of 74.5 additional acres needed within the City and UGA.

Community Parks

Community parks provide a focal point and gathering place for broad groups of users. Usually 20 to 100 acres in size, community parks are used by all segments of the population and generally serve residents from a one-to three-mile service area. Community parks often include recreation facilities for organized activities, such as sports fields, skate parks, community gardens and play courts as well as programming such as the amphitheater at Esther Short Park. Community parks may also incorporate

passive recreation space and community facilities, such as community or senior centers. Because of their large service area, community parks require more support facilities, such as parking and restrooms. Some middle and high school sites are included in the community parkland inventory, since these facilities can serve some of the community park needs. The acquisition standard is 3 acres per 1,000 people, or a total of 278.5 additional acres needed.

In urban areas where an adequate or suitable community park site is no longer available, or where areas are poorly served by a community park, VCPRD considers the modification of neighborhood park standards to compensate for the lack of a community park. Specifically, consideration is given to increasing site size and type of development of neighborhood parks to allow for increased recreation opportunities. In addition, where dense existing neighborhoods may preclude the acquisition of typical acreage for neighborhood parks, VCPRD has acquired and developed small urban parks to address the need for public park spaces in compact urban environments.

Other Parks & Trails

Regional Parks

Regional parks are recreational areas that serve residents from throughout Clark County and beyond. Regional parks are usually larger than 50 acres in size and provide opportunities for diverse

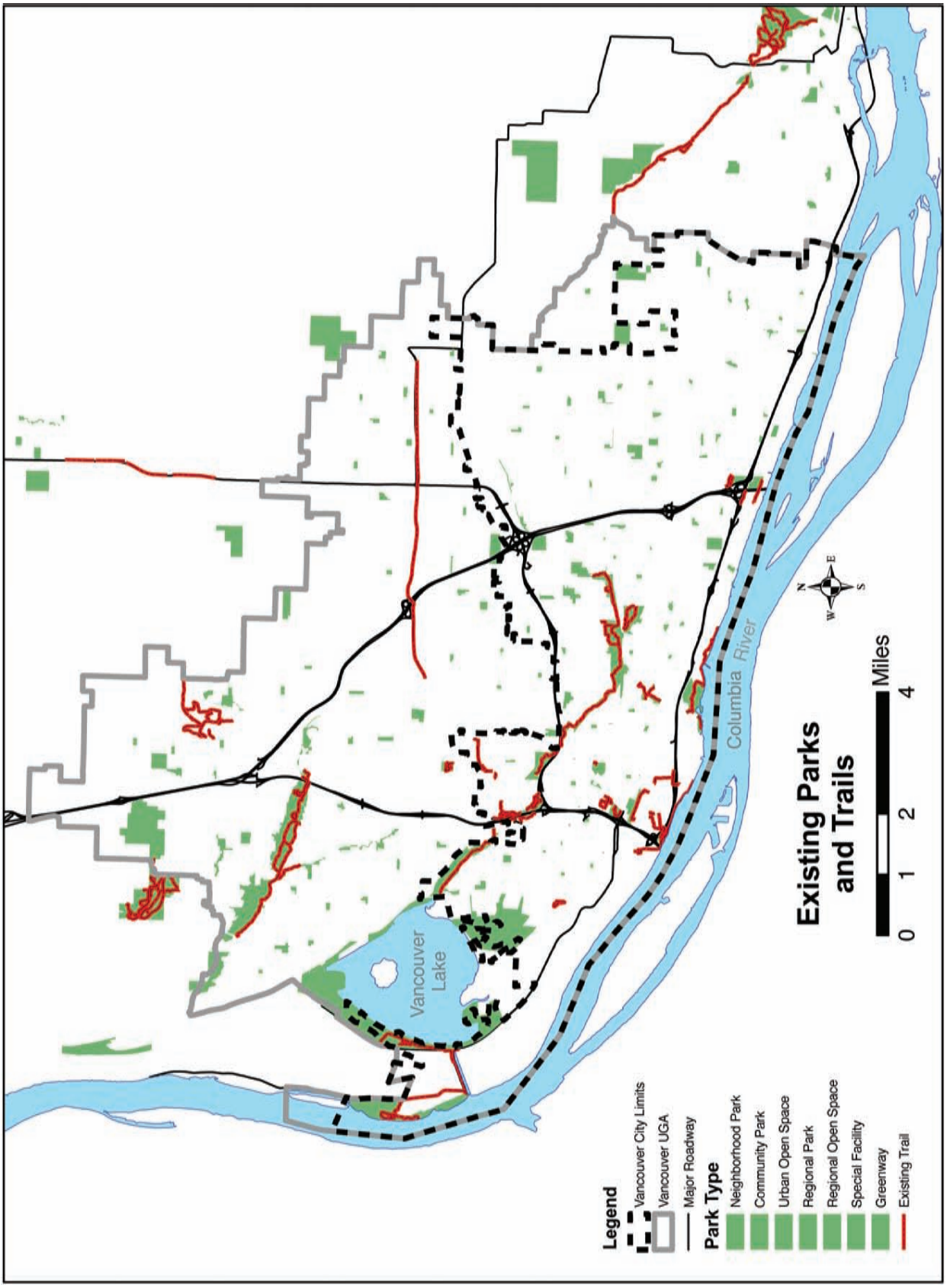


Figure 5-10 Existing parks and recreation facilities. Source: Vancouver Clark Parks and Recreation Department

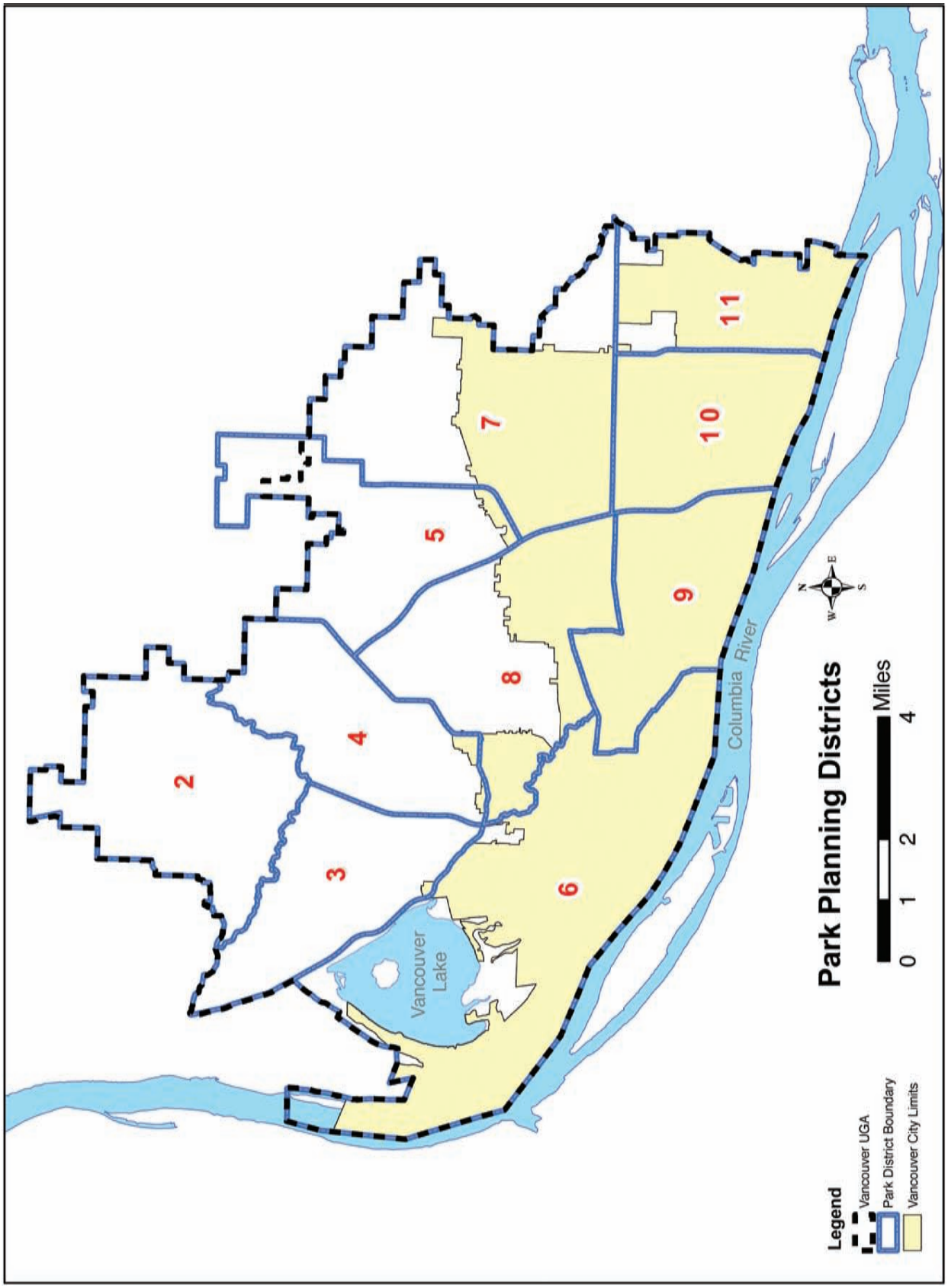


Figure 5-11. Park planning and impact fee districts. Source VCPRD

recreational activities. Facilities may include sports fields, extensive trail systems, or large picnic areas. In addition, regional parks often include significant natural areas or access to lakes or rivers. Because of their large size and broad service area, regional parks typically require more support facilities, such as parking and restrooms. These parks are usually designed to accommodate large numbers of people. The acquisition standard for regional parks is 10 acres/1,000 people, for a total of 2,605.1 additional acres needed county-wide.

Natural Areas and Open Space

Natural areas and open space are primarily undeveloped spaces, which are managed for both their natural, ecological value and for light-impact recreational use. These areas can range in size and may include wetlands, wildlife habitats, or stream corridors. Natural areas and open space provide opportunities for nature-based recreation, such as bird-watching and environmental education. Where appropriate, natural areas may allow for opportunities to walk, run, bike and hike. These spaces can provide relief from urban density and may also preserve or protect environmentally sensitive areas, such as endangered animal habitat and native plant communities.

Within the Vancouver Urban Growth Area (UGA), natural areas are typically referred to as urban open space. Within the VCPRD planning area but outside the UGA, these spaces are referred to as natural areas or conservation areas. Within the urban area, VCPRD has an adopted acquisition standard of one acre of open space /1,000 people, for a total of 70.5 additional acres needed.

Trails and Greenways

The City and County have completed a comprehensive *Regional Trails and Bikeways System Plan* which defines trails as any "path, route, way, right-of-way, or corridor posted, signed, or designated as open for non-motorized travel or passage by the general public." Five trail types are identified in the plan:

- Regional, multi-use trails, which provide the major access networks across the County;
- Local trails, which provide access from neighborhoods to regional multi-use trails;
- Rustic trails, which are smaller in scale than the local trails and are intended to provide access to natural features and loop trail opportunities;
- Semi-primitive trails, which are intended for rural or forest settings; and
- Bike lanes and pedestrian walkways, which are located on City, County, and State road right-of-ways.

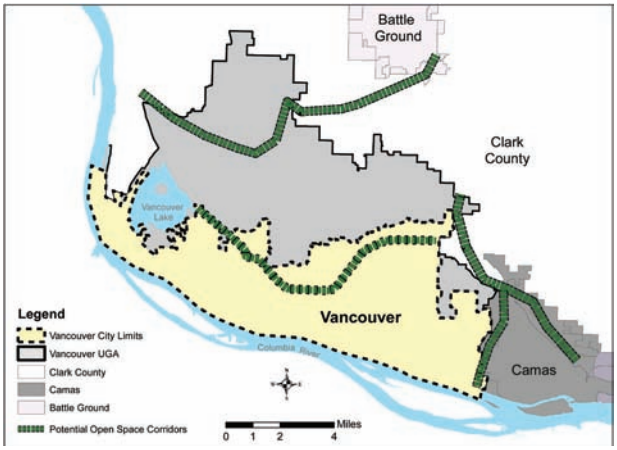
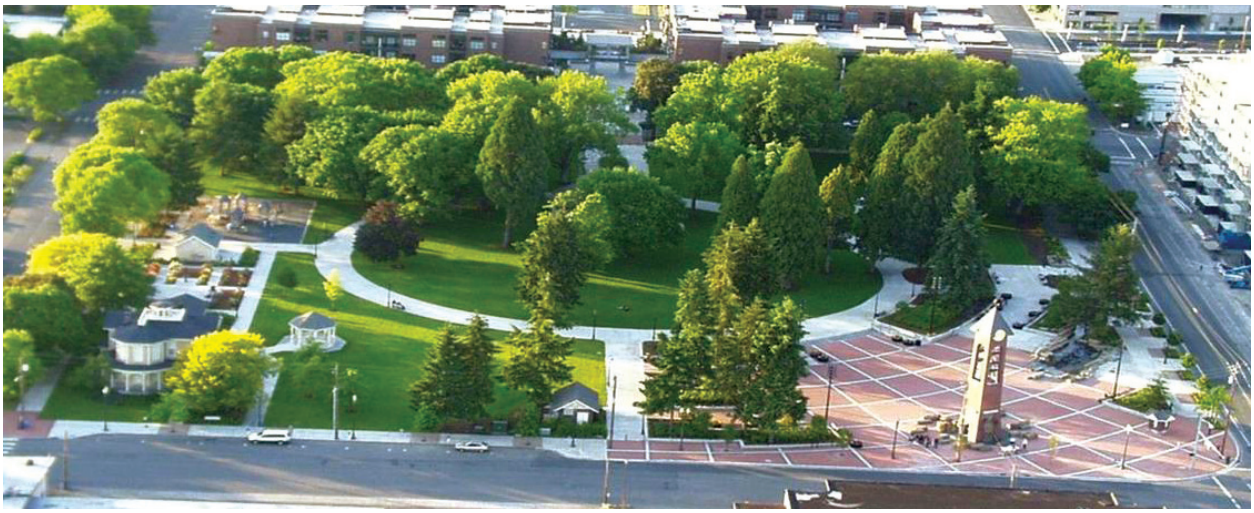


Figure 5-12. Existing and potential open space corridors in and around Vancouver UGA. Source: Vancouver GIS

The current trail inventory estimates 60 miles of trails within the County. VCPRD pursues an acquisition and development program consistent with the *Regional Trails and Bikeways System Plan*, in conjunction with transportation, public works, and other departments to promote an interconnected system of trails and greenways throughout the County.

Greenways are corridors that follow linear features such as streams, abandoned railroad rights-of-way, or power lines. Greenways often contain trails and may also include viewpoints, seating areas, and interpretive displays. Greenways provide public access to trail-oriented activities, including walking, biking, or running, and preserve open space.



Greenways along streams can also help protect water and habitat quality. Figure 5-12 conceptually identifies major open space corridors within and around the Vancouver UGA, consistent with GMA requirements of RCW 36.70A.160

Special Use Areas and Facilities

Special use areas are stand-alone facilities such as community centers, aquatic centers, sports complexes, or skate parks that provide space for a specialized activity. Since special use areas vary widely in function, there is no minimum size, but special use areas must be large enough to accommodate the intended use. Support facilities, such as parking and restrooms, are often included.

Development Standards

The application of the neighborhood and community park development standards differs across the incorporated and unincorporated areas. In the City of Vancouver, the standard is 4.25 acres/1,000 population of developed urban parkland. In the Urban Unincorporated Area, neighborhood and community parks are acquired and immediately developed to a Level 1 standard which secures the site in a safe but unimproved condition. Within the unincorporated area, priority is given to acquiring, reserving, and making available sites for future neighborhood and community park development.

Development at a Level 2 standard of urban parks which would include recreational amenities and basic landscaping occurs only after maintenance funds are secured. The Level 3 development standard for UGA urban parks is intended to provide a greater level of recreational amenities and natural area enhancement, and may be possible if additional capital and maintenance funds are available.

For Urban Open Space/Natural Areas, no development standard is applied as sites should remain mostly in a relatively natural condition. Currently, VCPRD has 619 acres of developed park land and 1520 acres of undeveloped land in the City of Vancouver Table 5-13 summarizes existing inventory of parks by type in the city.

Recreation Facilities

Existing facilities include the Firstenburg Center, Marshall Community Center, Luepke Senior Center, and Vancouver Tennis Center.

Table 5-13. Number of parks by type in Vancouver

Park Type	Developed	Undeveloped	Total
Neighborhood	52	15	67
Community	12	0	12
Urban Natural Area	0	18	18
Regional	2	0	2
Special Facility	3	1	4
Regional Natural Area	0	2	2
Trails & Greenways	3	0	3

Capital Facilities Plan

Table 5-14. VCPRD Capital Facilities Plan for Vancouver City and UGA, 2011-2016

City of Vancouver	2011	2012	2013	2014	2015	2016	Total
Urban Park Acquisitions	$1,780,000	$1,445,650	$453,142	$1,145,903	$135,061	$753,528	$5,713,284
Urban Park Development	$755,000	$650,000	$0	$0	$0	$0	$1,405,000
Urban Park Improvement & Repair	$550,000	$0	$150,000	$150,000	$150,000	$150,000	$1,1150,000
Trail Planning, Acquisition & Improvement	$0	$0	$0	$0	$0	$0	$0
Special Facilities Development & Improvement	$0	$0	$0	$0	$0	$0	$0
Planning	$0	$0	$0	$0	$0	$0	$0
City Total	$3,085,000	$2,095,650	$603,142	$755,000	$285,061	$903,528	**$8,268,284**
Vancouver UGA							
Urban Park Acquisitions	$4,453,633	$1,442,000	$4,147,839	$2,659,195	$0	$0	$12,702,667
Urban Park Development	$1,647,771	$558,624	$0	$0	$8,138,354	$4,687,519	$15,032,268
Trail Acquisition - GCPD	$0	$0	$0	$0	$0	$0	$0
Trail Planning, Acquisition & Improvement	$20,000	$40,000	$30,000	$30,000	$30,000	$20,000	$170,000
Urban Park Improvement & Repair	$0	$0	$0	$0	$0	$0	$0
Special Facilities Development & Improvement	$7,470,795	$750,000	$0	$0	$0	$289,819	$8,510,614
Planning	$0	$51,500	$0	$0	$0	$231,855	$283,355
VUGA TOTAL	$13,592,199	$2,842,124	$4,177,839	$2,689,195	$8,168,354	$5,229,193	**$36,698,904**

Sources: VCPRD

Fire and emergency services

Vancouver's fire and emergency services in 2010

The Vancouver Fire Department (VFD) provide fire protection and emergency services within the Vancouver city limits and the eastern two-thirds of the unincorporated VUGA. This unincorporated area is currently in Clark County Fire District #5, which contracts with VFD to provide fire and emergency services. The western remainder of the VUGA is served by Fire District #6, which is addressed in the *Clark County Capital Facilities Plan*.

Beginning in 1994, the VFD and Fire District #5 consolidated operations, with Vancouver contracted as lead agency for the provision of all fire fighting, fire prevention, emergency medical response, and other fire department services, throughout the 91-square-mile area of both districts. This consolidated fire department is the largest in the region and fourth largest in the state, serving over 249,000 people, mostly within the VUGA. In addition to traditional fire suppression services, the consolidated operation provides basic and advanced emergency life support medical services, code enforcement, hazardous materials and disaster response, plan review, and public education. District #5 also operates the regional fire training center.

The consolidated fire department currently has ten fire stations staffed by full-time personnel. Vehicular equipment includes trucks (with ladders and equipment), engines (pumps and hoses), and

Photo by Mick Foy

support vehicles such as command cars and water tanker trucks. During 2010, emergency medical calls accounted for approximately percent of the total emergency call responses in the VFD service area, up from percent from 2002 (**Table 5-15**). These services are supplied by fire fighters who are cross-trained as emergency medical technicians and paramedics as well. Non-emergency and critical care transport of the sick and injured is performed by private ambulance providers regulated by Clark County.

Service standards

Demand *The Vancouver Fire Department Comprehensive Plan* (1997) established that the average response time to an emergency call should be five minutes or less for at least 90 percent of Vancouver's population. The current service standard for fire protection and emergency medical services (EMS) is based on:

- response time and call volume
- number and location of fire stations

Table 5-15. Fire and EMS calls per station

Station	Sta 1*	Sta 2	Sta 3	Sta 4	Sta 5*	Sta 6	Sta 7	Sta 8	Sta 9	Sta 10	Other Juris	Total
Calls/Station 2002	2,738	2,036	2,890	1,539	3,181	1,424	339	2,051	1,953	_	593	18,744
Calls/Station 2010	2,644	2,474	3,521	1,842	3,339	2,133	854	2,598	1,946	1,350	412	23,113

*Stations 1 and 5 have two emergency response units each.
Sources: 2002 VFD/FMS Data, 2010 VFD/Firehouse Data

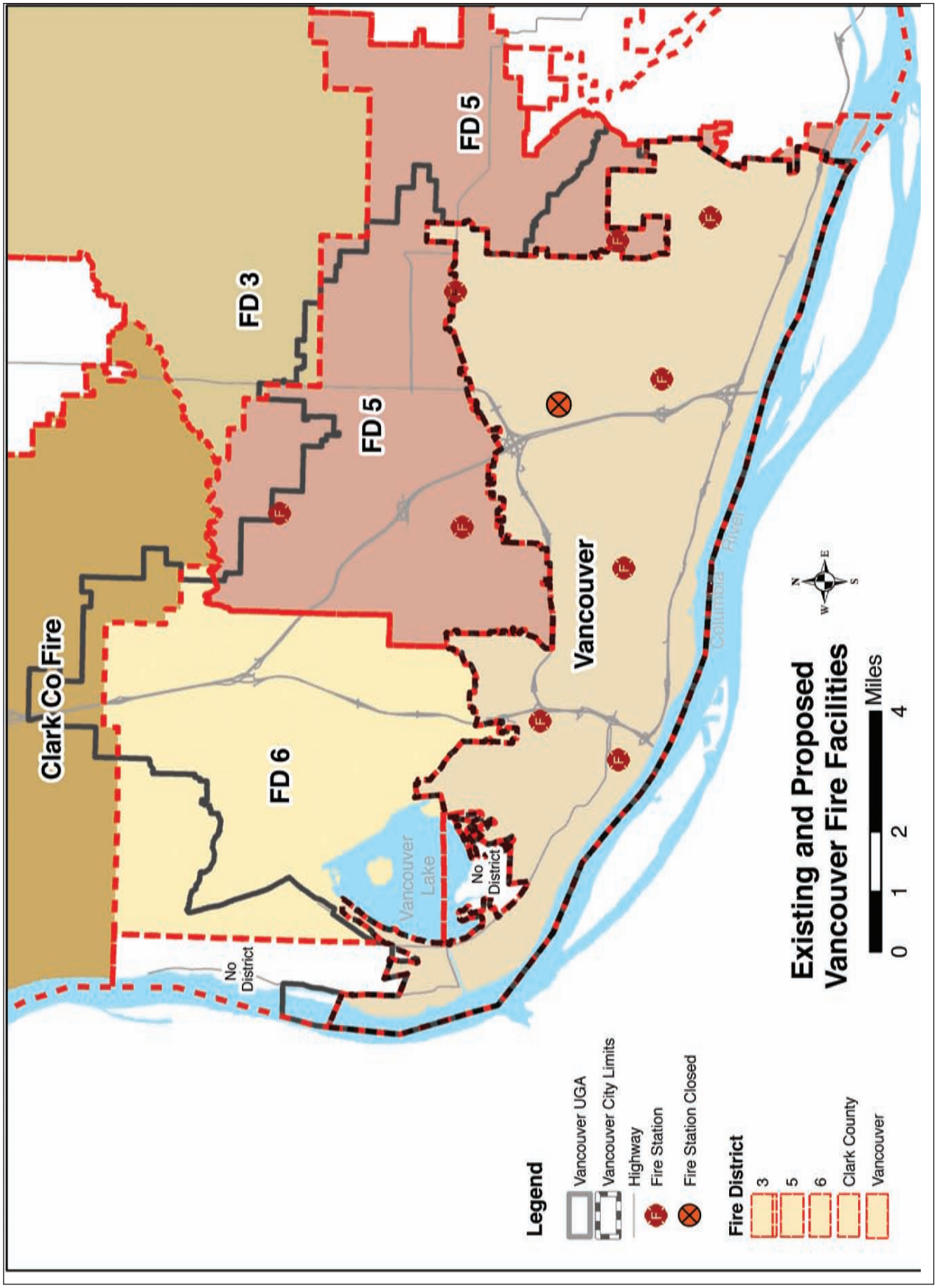


Figure 5-13. Location and service areas of fire districts and stations. Source: City of Vancouver GIS.

- number and location of emergency response vehicles
- number of trained personnel
- traffic patterns and vehicle or pedestrian congestion
- type of structure or emergency

In projecting future need, fire and EMS providers consider a variety of factors. In station areas currently served by career firefighters, 3,500 calls per engine company annually is the standard by which the need for additional engine companies within existing station areas is measured. **Table 5-17** lists minimum staffing requirements. The Washington Survey and Rating Bureau rates fire protection services using a variety of criteria including staffing levels, equipment, training, and response times. The insurance industry uses the rating to determine premiums. On a scale of 1 to 10, with 1 being the best, Vancouver currently has a Class 4 rating.

Response Times

A high number of emergency calls was the most significant cause of response delays during 2010, with traffic congestion and traffic calming devices also contributing to delays. In addition, the level of equipment and staffing was reduced with the loss of two quick response EMS units although 2010 also saw the opening of the 10th fire station staffed with an Engine. Coordinated EMS standards adopted by both the City (VMC 5.84) and the County (CCC 5.48A), and implemented through interlocal agreements, established response time goals for emergency medical responses in urban, suburban, and rural areas. Additional vehicle, facility and staffing enhancements, as identified in the *VFD Business Plan* (2008), coupled with planned improvements to the transportation system, are focused on achieving the 90 percent standard in the future. **Table 5-17** lists fire and EMS response time standards.

Direction for the future

The VFD estimates a 3.5 percent increase per year in fire calls and a 6 percent increase per year in emergency calls between 2010 and 2030 in its service area, including Fire District #5. The number and type of calls received from a specific area is influenced by several factors:

- increases in population and density
- number of aging structures that have not had ongoing maintenance

Table 5-16. Minimum staffing requirements for fire emergency response vehicles.

Engine (pumper)	1 company officer and 2 firefighters, one of whom is also a paramedic
Truck (ladder)	1 company officer and 3 firefighters, one of whom is also a paramedic
All company officers and firefighters are certified to at least the EMT level; many are certified as paramedics. 2010	

Table 5-17. Fire and EMS response time standards.

			Percentage meeting response time goal			
Service	**Geographic Area**	**Response time goal**	**2002**	**2010**	**2016 (projected)**	**2030 (projected)**
Fire	Urban	Within 5 minutes	54%	27%	90%	90%
	Suburban	Within 6 minutes	43%	27%	90%	90%
	Rural	Within 8 minutes	63%	63%	90%	90%
EMS	Urban	Within 5 minutes	51%	52%	90%	90%
	Suburban	Within 6 minutes	38%	52%	90%	90%
	Rural	Within 8 minutes	60%	75%	90%	90%

Source: Vancouver Fire Department/CRESA System Dispatch Times, 2010

- lower income levels that restrict the ability of residents and owners to maintain and repair their homes and businesses, resulting in greater fire risk
- number of senior, nursing and skilled care facilities
- increasing age of the baby boomer generation

Table 5-18. VFD service statistics and projections including District #5.

	2002	2010	2016 est.	2030 est.
Total calls (fire and medical)	18,744	23,113	27902	37225
EMS calls	14,839	18,793	22,880	31,269
EMS percentage of all calls	82%	81%	82%	84%
Total calls per 1,000 people	86	89	106*	122*
Total calls per square mile	203	255	308	411
Average response time in minutes	4:57	5:37	Under 5:00	Under 5:00
Professional fire personnel	159	165	190	250
Calls/professional staff	118	140	145	172
Volunteer firefighters	10	16	0	0
ISO Fire Insurance Rating (1 is best)	4	4	Goal = 2	Goal = 2

Sources: 2002 VFD/FMS Data, 2010 VFD/Firehouse Data
* Preliminary estimate until 2010 US Census is released in late 2011.

Population density, number of emergency calls per station area, response times, and national standards developed by the Insurance Services Offices, Inc. (ISO) and the US Fire Administration are used to decide when to staff fire stations with career personnel, and when and where to build new fire stations. The need for additional response units (engines, trucks, etc.) is based on the same factors and on the number of emergency calls per response unit. **Table 5-18** displays both historical and projected activity, based on growth estimates within existing service areas, and assumptions about population aging, increased urban densities, and future annexations to the City of Vancouver of areas outside of District #5, which would expand the combined service area. A 4.5 percent total growth rate was assumed to account for growth from both population and annexation.

Emergency response vehicles.

Vehicles are replaced between 5 and 20 years based on information regarding age, condition, and mileage. The fire department sets aside money each year for the eventual replacement of each vehicle.

Table 5-19. Projected Capital Facilities Needs.

Projects 2011-16	Costs	Funding Sources
• Fire Station 1 land acquisition, design, construction	• $5,280,000	cash, undetermined new funding
• Fire Station 2 land acquisition, design, construction	• $2,956,000	
• Fire Station 3 design, construction	• $3,536,000	
• Fire Station 8 seismic upgrade	• $1,366,000	
• Fire Station 6 land acquisition, design, construction	• $2,976,000	
• Fire District 5 design, construction	• $10,062,000	
• Logistics warehouse, land acquisition design construction	• $2,251,000	
Total	$28,427,000	

Source: Vancouver Fire Department

Police

Vancouver's police services in 2010

The Vancouver Police Department (VPD) provides police protection and other law enforcement services within Vancouver's city limits. In 2010 the police department consisted of 192 sworn officers and 22 non-sworn support staff. The department is divided into two precincts, four districts and 16 patrol beats.

Vancouver Police provides a range of services:

- 911 emergency response and law enforcement
- major criminal investigations
- traffic enforcement and serious collision investigations
- computer forensic examinations and digital evidence processing
- canine officers
- collateral duty assignments for special response needs include SWAT, hostage negotiators, tactical emergency medical services, explosive device investigation and disposal, crisis intervention response, public information, and more
- internal support services include training, evidence, case management, finance, volunteer coordination, hiring and background investigations, professional standards, homeland security planning, crime analysis, and precinct support

VPD participates in regional multi-disciplinary problem-solving teams to address child abuse, domestic violence, career criminals, gang crime, and drug enforcement and investigation.

Interlocal agreements for mutual aid allow all public safety agencies in Clark County to provide backup for other jurisdictions in emergencies. Washington State Patrol has police jurisdiction on state routes throughout Clark County and its cities, and takes the lead on traffic enforcement and collision investigations on state highways. Clark County Sheriff's Office deputies patrol the unincorporated areas outside city limits, with the exception of Vancouver Lake Lowlands areas indicated in Figure 5-14, which by agreemment are served by Vancouver. Vancouver contracts with Clark County Sheriff for service on to rivers, lakes and waterways inside the City of Vancouver. Clark County also provides police records under contract for Vancouver that includes a computerized police reporting system and information technology support, records storage and processing, and 24x7 records staffing for criminal records checks, warrants, court orders, and other support.

Clark County maintains Courthouse and Jail facilities and services. Offices for multiagency taskforces are leased as needed, and include the Clark-Skamania Drug Task Force, the Clark County Arthur D. Curtis Children's Justice Center, and the Domestic Violence Prosecution Center. Clark Regional Emergency Services Agency (CRESA) is a regional public safety communications center established by interlocal agreements for Clark County and its cities to provide 911 calltaking and public safety dispatch services. CRESA also coordinates disaster preparedness, emergency management and homeland security planning; emergency medical service over-

sight; and operation and maintenance of regional radio services, telephone systems, and computer networks to support public safety agency response. The Vancouver Police Department currently has East and West Precinct buildings, a headquarters building, and a secure evidence processing and storage facility. Locations throughout the City are set up with phone and computer access so officers can meet with citizens or write reports while staying in their patrol districts.

As land is annexed into the City, the responsibility for law enforcement in the formerly unincorporated areas will transfer from the Clark County Sheriff's Office to the Vancouver Police Department. Much of this land has already been developed into residential, retail, or mixed use commercial centers. Law enforcement staffing projections take into account population growth and density, demographic characteristics and call volume and crime rates, emergency response capability, vacant buildable land by zoning type, and traffic impacts. Vancouver's population has more than doubled since 1996, from 67,450 to approximately 162,300 in 2011.

Table 5-20. VPD staffing, 911 response and crime rates for 1996 and 2010.

Category	1996	2010	Change
Population served	67,450	165,800	146%
Commissioned Staffing – includes Chief of Police, Commanders, Detectives, Patrol Officers, etc. (Budgeted total FTEs, not actual filled positions)	115	193	+68%
Officers per 1,000 citizens	1.70	1.16	-32%
Officer responses	59,986	103,077	+72%
VPD response time to top Priority 1-2 calls in min:sec (from 911 call to police arrival)	6:36 (13% of calls)	7:44 (6% of calls)	-18%
VPD response time to Priority 3-5 calls in minutes:seconds (from 911 call to police arrival)	22:57 (87% of calls)	14:42 (94% of calls)	-36%
FBI – Index Crimes Reported	5,015	7,263	+45%

*Priority 1-2 = Imminent threat to life
**The FBI collects data on certain types of crimes each year: Homicide, rape, robbery, assault; burglary, larceny, motor vehicle theft, arson. This is only an index and does not include most crimes that are reported every day.

Table 5-20 summarizes statistics regarding Vancouver's police department staffing, crime rates, and response times for 1996 and 2010.

Service standards Although police staffing increases are often driven by population growth, community residents and business owners generally prefer areas with comparatively low crime crates. Crime rates are closely related to population density, age and gender distribution, neighborhood characteristics and economic conditions. In 1996, there were 1.7 officers per 1,000 citizens, but in 2010 this dropped to 1.16 as the economy worsened. The current FBI standard is 1.6 for urban areas and cities of Vancouver's size. The City's current goal is to maintain a staffing ratio of 1.2 officers per 1,000 citizens.

Direction for the future

Vancouver Police works with Finance and City leaders to plan for the future public safety needs of our community. The most recent VPD Business Plan was posted in 2010 to outline the additional staffing, equipment, and facilities that are needed to serve Vancouver as the population and service areas continue to grow. The process includes community growth, call volume, crime trends, service changes, community needs, neighborhood issues, demographic data, school districts, economic factors, and long range community planning data. The Business Plan has been integrated into the City's Strategic Plan, Biennial Budget, and other community planning processes.

Table 5-21 shows estimated capital facilities needs, based on projected staffing and program needs identified by Police and City Leaders. General fund dollars are generated from property taxes and sales taxes for capital and operating budgets. The

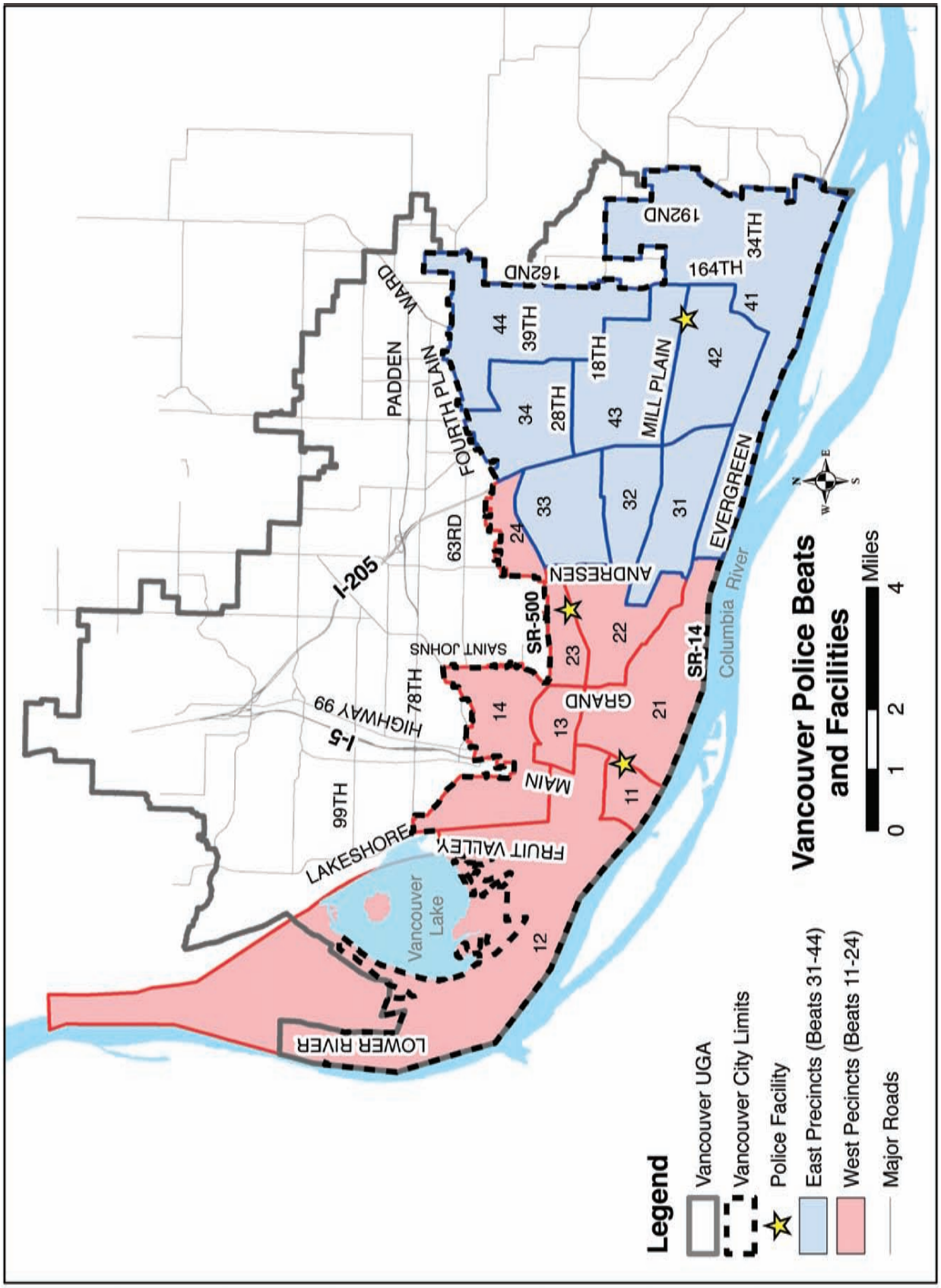


Figure 5-14 Vancouver Police Facilities and Beats

Table 5-21. Vancouver Police Department Capital Facilities Plan.

Year	Description	Amount	Funding source
2011-16	New firing range	$250,000	Federal Grants
2017-30	New headquarters building land and construction	$5,000,000	Cash, undeter mined new funding

Source: Vancouver Police Department

primary cost in providing police services is personnel. The Vancouver Police Department relies increasingly on state and federal grants for start-up programs, officer staffing and unfunded equipment needs, but to date new grant funding sources have not been identified for capital facilities.

Schools

Education in Vancouver is provided by public and private schools. The Vancouver, Evergreen and Camas Schools Districts provide K-12 education in the city limits, while the Battle Ground, Ridgefield and Vancouver School Districts serve the northern unincorporated Vancouver UGA. Clark College and Washington State University at Vancouver (WSU-V) provide higher education. Vancouver is also home to the Washington School for the Deaf and Washington School for the Blind. All are affected by City population growth and land use decisions.

Vancouver's schools in 2011

Figure 5-15 shows the public school districts and public school facilities (including colleges and universities) serving the VUGA. **Table 5-22** compares enrollment and number of schools in 2011 and 2017 (projected).

The GMA includes schools in the public facilities and services category. School districts have adopted capital facilities plans to satisfy the requirements of GMA and to identify additional school facilities necessary to meet the needs of anticipated growth in student populations planned for their districts. School districts plan on a six year cycle and update their six-year facility plans on a one or two year cycle, addressing change in enrollment, facility needs or educational programming. State funding for school construction, when provided, is calculated by state law for each district. State funding does not cover the full cost of new or remodeled schools. Eligibility for state funding for new schools is dependent on increased enrollment and unhoused students.

To determine the capacity of school facilities and need for expansion, each district sets planning standards that reflect both local goals and state mandates. School facility and student capacity needs are dictated by the types and amounts of space required to accommodate each district's educational program. The components that affect space needs include grade configuration (K-5 vs. K-6, for example), optimum facility size for different types of schools, class size (which can be affected by union contracts), types of educational programs (some require special facilities), and needs of the population (e.g., handicapped, non-English-speaking). Some factors are beyond the control or influence of the district.

Table 5-23 shows the classroom size planning standards used by the three school districts in their six-year capital facilities plan to accommodate projected enrollment growth during this period. Classroom size could change in the future, however, based on the factors discussed above.

Colleges and universities

Clark College is a community college providing two-year transfer degree studies, technical training and basic skills classes for as many as 16,000 full-time and part-time students each quarter. As

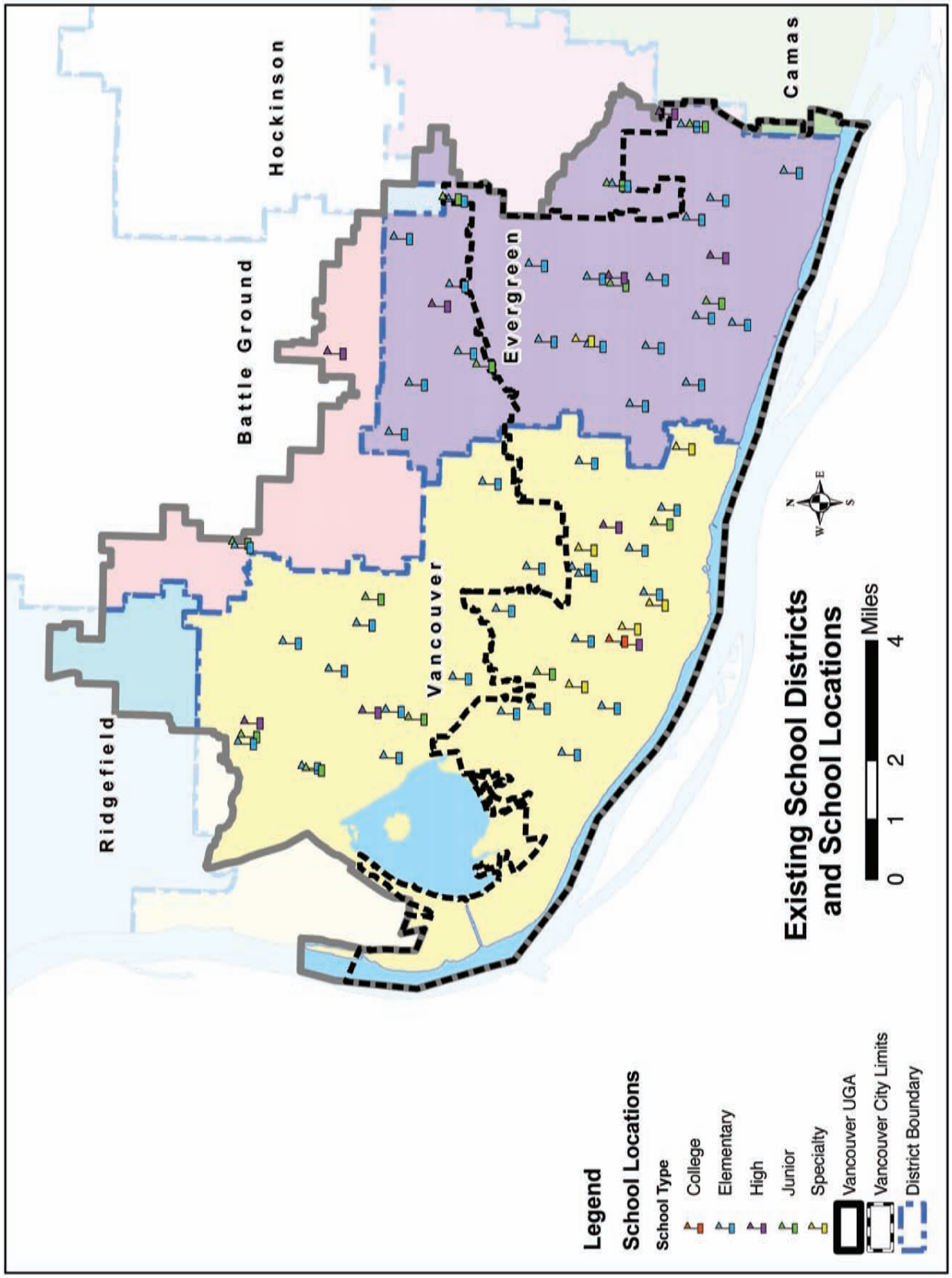


Figure 5-15 Existing School Districts and School Locations

Table 5-22. School enrollment and facilities

Project Enrollment	Vancouver	Evergreen	Camas
2011	22,011 students, 36 schools	26,871 students, 35 schools	5,883 students, 9 schools
2017	22,007	28,500*	NA
2030	23,774	NA	NA

Sources: 2011 data provided by each school district.
Other: Special education, advanced learning, resource rooms, learning support centers, and music, art, and dance programs. All schools have computer training.

Table 5-23. Targeted classroom size, 2011 to 2017.

	Vancouver	Evergreen	Camas
Kindergarten to 5th grade	23	23	24
6th to 8th grade	28	25	30
9th to 12th grade	30	25	30

Sources: 2011 data provided by each school district.

of 2011 it is the second largest college in the Washington state system of 34 technical and community colleges. A majority of the Washington students attending Clark reside in the college's service district which includes Clark, Skamania, and west Klickitat counties. Clark's main campus is located on 101 acres in Vancouver's Central Park area east of the I-5 freeway and north of the Fort Vancouver National Historic Site. Classes are also offered at Clark College at Columbia Tech Center in eastern Vancouver; Clark College at Town Plaza, located two miles east of the main campus, and Clark College at Washington State University Vancouver in Salmon Creek.

Washington State University at Vancouver. WSUV offers upper-level (junior and senior) course towards baccalaureate and graduate degrees in several fields on a 350-acre campus in the Salmon Creek area of the unincorporated Vancouver Urban Growth Area. Approximately 3,000 students were enrolled in 2011. many students transfer from Clark College to complete their college education.

Other institutions

Washington School for the Deaf. WSD provides educational services to Washington students ages 3 to 21 who are deaf or hard-of-hearing. WSD operates from a 17-acre site with an adjacent 11-acre playing field. Enrollment at WSD fluctuates annually between 100 and 200. In 2001-2002, the enrollment was 113. WSD provides both residential and day programs for deaf and hard-of-hearing students from around the state. WSD is in the process of redesigning its aging facilities to meet current needs. New residential cottages were completed in 1999 and the renovation of Clarke Hall (an older dormitory) was completed in 2002. In 2009, Kastel Hall opened.

Washington State School for the Blind. WSSB is a fully accredited residential K-12 school for blind and partially sighted students from all over Washington. This state-supported institution is located on East 13th Street near Clark College and the Southwest Washington Medical Center. WSSB provides assistance, advice and best practices for educators in other school districts with blind or partially sighted students as well as providing education to the over 1,400 students enrolled at the Vancouver campus.

Direction for the future

K-12 public education. All three districts expect to continue to grow and will therefore need to add new facilities. To facilitate the provision of schools that are necessary to serve forecast growth, each district has asked the cities they serve and Clark

County to impose school impact fees, as allowed under the GMA and local implementing ordinances. The maximum allowable impact fee is calculated according to an adopted formula. All three districts request impact fees in amounts reflected in their adopted six-year capital facilities plans.

As more development takes place in the VUGA, large parcels of land available for schools will become increasingly scarce. School districts try to purchase land in advance, based on growth trends, but this is sometimes difficult to do with limited funding. As a result, districts renovate and make more efficient use of existing facilities when possible.

Vancouver School District. In 1988, the Vancouver School District embarked on a long-range planning process for capital improvement projects. The improvements were grouped into three phases. Phase I (1990 bond issue of $45 million), Phase II (1994 bond issue of $135 million) and Phase III (2001 bond issue of $87.7 million) improvements associated with the long-range plan have been completed. The district anticipates continued growth and needs to construct additional elementary school capacity to serve the forecast growth. Funding in the form of bonds and state matching funds has not been secured yet. As funds are secured the district will also look at making upgrades and improvements at other schools. Forecast growth at the middle and high school for the next six years will be served in existing school facilities. The district estimates the cost for the new elementary school and needed facility ugrades is $26.6 million.

Evergreen School District. Evergreen School District completed construction of new schools that were funded with a $167 million dollar bond that was approved in 2002. The district is continuing to grow and needs to build additional schools to serve forecast growth. In the next year the district will construct a 500 student Bio and Health Science Academy that will increase high school capacity. The district also needs to build at least one additional 600 student elementary school and one additional 800 student middle school. Funds for the elementary and middle school have not been secured yet. The forecast cost for the school facilities that are needed over the next six years is $87.8 million.

Camas School District. The Camas School District is finishing construction of school facilities that were funded with a $113 million bond in 2007. The district constructed two replacement elementary schools and the Hayes Freedom Alternative High School. The district is continuing to grow and is in the process of adding capacity at Camas High School and Fox Elementary School. The district also will be constructing a new elementary school (beginning construction in the summer of 2011) will make improvements at other school facilities. The estimated cost to complete facilities funded by the 2007 bond is $42.5 million.

Colleges and universities

Clark College. In anticipated of continued growth in its service area, Clark College adopted a 2007 master plan for facility development, which generally envisions the need to add the equivalent

Table 5-24. School District Capital Facilities Needs, 2011 to 2017.

	Vancouver School District	Evergreen School District	Camas School District
Facilities	New or expanded elementary school and site,	New elementary school, new middle school, new magnet high school, additional portables	1 new elementary school, 1 expanded elementary school, 1 expanded high school, expanded support facilities
Cost	$26.7 million	$87.8 million	$42.5 million
Funding Sources	Future bonds, state match, impact fees	Bonds, state match, impact fees	Bonds, state match, impact fees

Sources: 2011 data provided by each school district.

of 1.7 new 70,000 sq. ft. buildings by 2020 just to maintain current service levels, in addition to planned improvements such as development of the 7-acre triangle property at the intersection of Fourth Plain Blvd and Fort Vancouver way. See http://www.clark.edu/about_clark/master_plan/documents/f_master_plan.pdf for further information.

Washington State University at Vancouver. WSUV completed a master plan in 2007 to guide growth and development of the campus in the Salmon Creek area of the VUGA, northeast of the I-5/I-205 interchange. The plan envisions a 2023 campus buildout to 1,200,000 gross square feet of development to serve an enrollment of 14,000 FTE. See http://admin.vancouver.wsu.edu/capital-planning-and-development for further information.

Other institutions.
Enrollment at both the Washington School for the Deaf and the Washington State School for the Blind is expected to remain at about current levels for the next six years.

Library Services

Vancouver's library services are provided by the Fort Vancouver Regional Library District (FVRLD), which serves all of Clark County (except Camas), plus Skamania and Klickitat Counties and the City of Woodland and Yale Precinct in Cowlitz County. With 13 libraries, three bookmobiles, a Vancouver headquarters building, Internet access and electronic services, FVRLD provides library services and community and cultural events for a population of about 455,000 in its 4,200 square mile multi-county service area. In 2006, Vancouver voters passed a $43,000,000 bond measure to fund three library projects within the City of Vancouver: a new Vancouver Community Library, a new Cascade Park Community Library, and technology enhancements in the Vancouver Mall Community Library. The project was supplemented by a $5 million anonymous donation. The new Cascade Park library opened adjacent to Firstenburg Community Center in December 2009. At 24,175 square feet, it is about ten times larger than its 2,495 square foot predecessor. The new Vancouver Community Library, which opens in July 2011, is an 83,000 square foot library replacing the 36,000 square feet of library space in its previous location at Mill Plain Boulevard and Fort Vancouver Way. Vancouver Mall Community Library is in its third Mall location since opening in 1983. The lease on this 7,200 square foot space expires in January 2012. Enhancements called for in the bond measure will be delayed until the future of the Mall Library is determined. The fourth library in the Vancouver area is the Three Creeks Community Library. It is located outside Vancouver City Limits, but within the VUGA. This 13,000 square foot library opened in 2002 in the Fred Meyer complex on Tenney Road.

Service Standards

A general standard for public library space is 0.5 square feet per capita. Prior to opening the new Cascade Park library, FVRLD had 45,710 square feet of library space within the city limits and 58,710 in the VUGA. The new Cascade Park and Vancouver libraries boost the total to 114,390 square feet of library space within the city and 127,390 within the VUGA. Based on a city population estimate of 162,300 and a VUGA population of 292,800, space per capita has increased to 0.7 square feet within the city and 0.4 within the VUGA.

Future Direction

The FVRLD Board of Trustees approved a Long Range Facility Plan in April 2010. This plan recognizes the significant strides made in Vancouver with the passage of the bond measure in 2006. The FVRLD is now much better equipped to meet the library needs of Vancouver residents due to the new facilities. As a result, facility needs in other parts of the district will be given a higher priority for the foreseeable future. While the future of the Mall library is unknown at this time, it is the intent of the FVRLD to maintain a library in the vicinity of Westfield Vancouver Shopping Center.

According to the Facilities Plan, priorities for the next 10 years include consolidation and remodel of the headquarters building (located in the old Vancouver Community Library), a larger library in the vicinity of Ridgefield junction (approximately 15,000 square feet), another in the Orchards area (approximately 15,000 square feet and likely within the VUGA), and replacement of the old and undersized Woodland Community Library (approximately 7,000-10,000 square feet). While cost estimates and funding plans have not been developed for these facilities, they will very likely require a combination of local funding, FVRLD funding and possibly voter-approved funds.

In addition, the Facilities Plan calls for exploration of Focused Service Outlets. These are smaller units of service ranging from book vending machines to storefront locations. The purpose is to bring library service closer to smaller population centers that are not in close proximity to an existing larger library.

Solid waste facilities and services

Cities and counties in the State of Washington are required by RCW 70.95 to have coordinated comprehensive solid waste management plans, to determine the type and source of solid waste streams, to establish strategies for the handling and disposal of solid waste, and to identify waste reduction and separation programs.

By interlocal agreement, Vancouver and other local cities delegate responsibility for solid waste transfer and disposal planning to Clark County through 2016. The adopted Clark County Comprehensive Solid Waste Management Plan (CSWMP) of 2008 is updated regularly and reviewed by the County Solid Waste Advisory Commission. The City of Vancouver is responsible for managing collection services within its boundaries.

Clark County and the City of Vancouver entered into a 20-year contract with Columbia Resource Company (CRC) in 1992 to recycle solid-waste materials collected and delivered to transfer and recycling stations, with the remaining non-recycled wastes transported for final disposal to CRC's Finley Buttes Landfill 180 miles upriver in Morrow County, Oregon. The Contract was updated in 2006 and provides opportunity for specified facility upgrades and extensions through 2026.

The two existing in-county transfer and recycling stations that are primarily utilized for managing Vancouver wastes (Central Transfer and Recycling Station and West Vancouver Materials Recovery Center) are designed to handle a maximum of 676,000 tons of solid waste per year. Waste delivered to these facilities is compacted into inter-modal containers and transported upriver by private barge, then trucked to the landfill. A third transfer station in Washougal was opened in 2009, increasing systemwide capacity by approximately 50,000 tons per year. Waste delivered to this station is trucked to the Wasco County Landfill in Oregon.

In 2005, approximately 311,000 tons of waste were handled through the Central Transfer (60%) and West Vancouver (40%) facilities. A portion of this material was supplied from collection routes which Waste Connections operates in the Portland Metro region. Since 2005 and 2006, the tons of inbound

waste received at the transfer stations have decreased by nearly 20% due largely to the economic downturn. Original design capacities for the two transfer stations indicated they could handle up to 438,000 tons per year of solid waste.

Vancouver's solid waste collection in 2009

Local garbage pickup service in Vancouver is provided by a private company, Waste Connections under a long-term contract with the City. This exclusive contract covers commercial and industrial waste collection services as well as residential garbage and recycling collection services. Every-other-week curbside recycling is provided on the same day that garbage is picked up for residences. Curbside yard debris collection is available every other week as an optional service for residents.

The County's recycling rate in 2009 was estimated to be 46 percent — from a total of 526,000 tons of solid waste, 242,000 tons were recycled. This figure does not include diversion of wood waste, used motor oil, tires, aggregate, and so on, which are not included under Environmental Protection Agency (EPA) methodology. Total county diversion rate for 2009 is estimated to be 55.9 percent.

In a regional environmental protection effort, the County and cities accept up to 25 gallons of household hazardous wastes (solvents, paints, pesticides, herbicides, fertilizer, batteries and other chemicals) free of charge on two designated days each week at both the Central Transfer and the West Van Centers, and on limited days each month at the Washougal Transfer Station.

Service standards

In 2009, daily waste generation per person in Clark County was 6.66 pounds, approximately 45% of which was landfilled, 45% recycled, 10% recovered. Though the county's population has steadily been increasing, over the last five years, due to the economic dowturn the latest pounds per capita waste generation rates are at 2003 levels.

Ongoing efforts to educate the public about reducing waste may help minimize the rate of waste generation, but nationally, until the recent recession, the per capita rate was steadily increasing. Current per capita waste generation nationally is about 1 ton per person per year (including residential, commercial, and industrial disposed and recycled waste), but appears to be about 20-40% higher in the Clark County region. It is difficult to determine Clark County's overall waste generation rate because of the proximity to the Portland metro area and its disposal facilities and recycling plants, some of which are operated by the same firms that serve the County.

If County facilities reach capacity, the County may have the option to limit some metro waste that is being delivered to the County's transfer stations.

Direction for the future

Together, the Central Transfer and West Vancouver transfer and recycling facilities have sufficient capacity to handle the volume of waste projected to be generated within Clark County over the next 20 years. In fact, either facility is designed to handle the entire projected year 2011 flow of municipal solid waste produced in Clark County in the event an emergency such as a flood shuts down one facility. In 2010 a countywide contingency plan was developed to address potential future disruptions, and it proved effective in utilizing alternative sites when Columbia River locks were out of service in 2011. However, in the interest of the long-term health of the system, the City will continue to develop waste reduction measures and encourage additional recycling.

General government

The main general government facilities providing local public services in Vancouver in 2011 in are the new Vancouver City Hall in downtown and the central Operations Center. Vancouver City Hall is located adjacent to Esther Short Park, and serves as the City's main administrative and public hearing facility. The building was remodeled in 2011 and is sized to accommodate future growth, allowing for a centralized consolidation of several local government activities previously housed in separate buildings. The Operations Center at 4711 Fourth Plain Blvd houses vehicles, equipment and staff involved in the maintenance of City transportation, water, sewer, and stormwater infrastructure.

Most other Vancouver capital facilities are primarily associated with specific public services or agencies, and are addressed elsewhere in this chapter or in related plans. The Vancouver-Clark Parks Department owns and operates the Firstenburg Community Center, Luepke Senior Center, Marshall Center, and the Vancouver Tennis Center. The Vancouver Public Works Department owns the Marine Park Engineering and Water Resource Education Center facilities.

Clark County owns and operates the Clark County Public Services Building in downtown Vancouver, as well as operations centers at 4700 NE 78th Street. These provide administrative and operations support for public services primarily to the unincorporated Vancouver UGA and elsewhere in Clark County.

Figure 5-16 shows locations of major existing general government facilities in Vancouver that provide local services. The City of Vancouver also owns and manages Pearson Airport and nearby historic properties, as well as various parking lots and structures primarily in the downtown area. The City of Vancouver General Service Department maintains complete listings of city-owned properties.

Table 5-25 lists the major capital needs for additional general government facilities to serve growth during the Comprehensive Plan period.

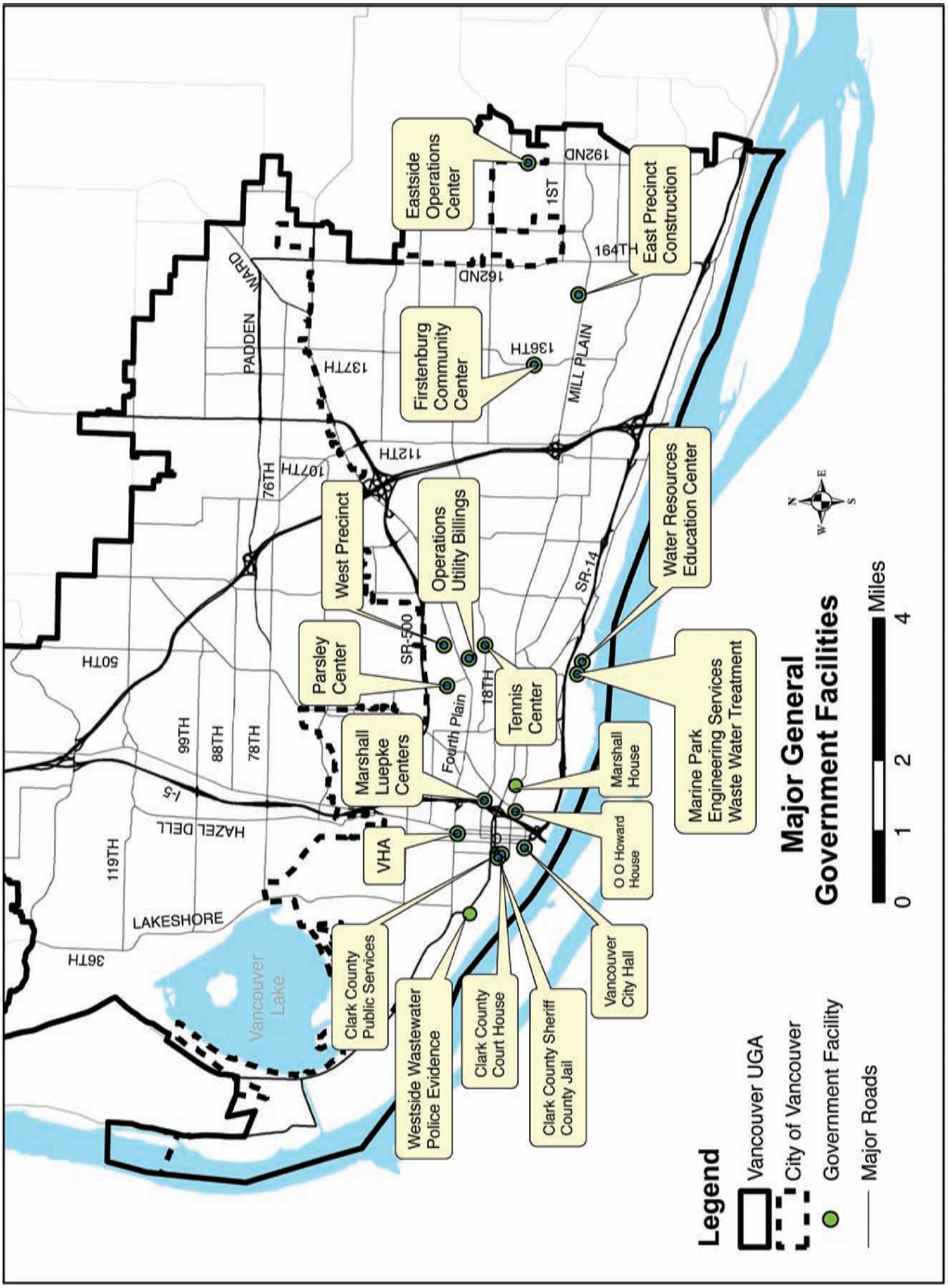


Figure 5-16 Major General Government Facilities

Table 5-25. General Government Capital Facilities Needs

Facility	Cost	General Timeline	General Funding Sources
West Artillery Barracks	$2.5 million	By 2016	State Grants
Central Operations Center	$12 million	By 2016	Water Utility Fund
East Side Operations Center	$35 million	By 2030	Water Utility Fund

Public facility and service policies

The City of Vancouver adopts the following policies to efficiently and cost effectively provide adequate transportation, sewer, water, and other capital facilities and public services for existing and new development. These policies are consistent with and implement policy sections 6.0, 7.0, and 8.0 of the Community Framework Plan, adopted by Clark County and local jurisdictions, and planning policies 36.70.A.020(3), (9), and (12) of the Washington Growth Management Act (see Appendix A).

PFS-1 Service availability
Consider water, sewer, police, transportation, fire, schools, storm water management, and parks as necessary facilities and services. Ensure that facilities are sufficient to support planned development.

PFS-2 Service standards
Establish service standards or planning assumptions for estimating needed public facilities, based on service capabilities, local land use designations and nationally recognized standards. Use LOS standards to encourage growth in designated centers and corridors.

PFS-3 Impact fees
Establish and maintain policies and regulations, including traffic, park and school impact fees, to ensure that new development pay for a proportionate share. Impact fees should be reduced or eliminated for low-income housing developments.

PFS-4 Transportation system
Develop and maintain an interconnected and overlapping transportation system grid of pedestrian walkways, bicycle facilities, roadways for automobiles and freight, transit and high-capacity transit service. Include support programs such as traffic operations, transportation demand management, neighborhood traffic management, and the regional trails program. Work towards completing and sustaining individual components and programs to ensure success of the entire system.

PFS-5 System balance
Allocate resources to balance transportation choices. Promote development of a broader range of transportation options including pedestrian, bike, and transit systems, rather than focusing all resources on satisfying peak commuting demand with roadway capacity alone.

PFS-6 Transportation safety
Ensure high safety standards for motorists, pedestrians, and bicyclists through the

development and capital improvement processes. Allocate city capital resources to high risk and collision locations for motorists, bicyclists, and pedestrians.

PFS-7 Transportation finance
Develop recurring and dedicated funding for a complete transportation program, including system operation and maintenance. Leverage local funding with innovative and aggressive finance strategies including partnerships, grant development, efficient debt, and fee-based funding resources.

PFS-8 Transportation circulation and system connectivity
Develop a transportation grid that provides good connections to surrounding land uses and activity centers and allows for multiple circulation routes to/from each location. Close gaps and complete system connections through the development and capital improvement processes.

PFS-9 Land use and transportation integration
Develop and implement innovative transportation investment, design, and program incentives to achieve the urban environment envisioned in the Comprehensive Plan.

PFS-10 Livable streets
Design streets and sidewalks and manage vehicular traffic to encourage livability, interaction, and sense of neighborhood or district ownership in linkage with adjacent land uses.

Encourage multi-modal travel, and provide accessible, human scale opportunities for transferring between travel modes.

PFS-11 Transportation accessibility
Build an accessible transportation system focused on inter-model connectivity and removal of barriers to personal physical mobility.

PFS-12 Transportation system efficiency
Invest in and improve efficiency of the transportation system with multi-modal design, advanced traffic management and operations technologies, demand management strate gies and high-frequency transit service.

PFS-13 Neighborhood traffic
Protect and enhance neighborhoods with an active program that focuses on safety, safe routes to school, traffic calming, education, and enforcement.

PFS-14 Transportation regional and metropolitan coordination
Coordinate Vancouver's transportation plans, policies, and programs with those of other jurisdictions serving the greater Metropolitan area to ensure a seamless transportation system. Focus particularly on cooperation with the Southwest Washington Regional Transportation Council, Washington State Department of Transportation, Clark County and C-TRAN.

PFS-15 Transit service
Maintain transit service at no less than 2003 levels.

PFS-16 Economic development
In order to support the continued economic vitality of Vancouver, major transportation system investments should facilitate freight mobility, job creation, regional competitive position, and revenue growth.

PFS-17 Vehicle miles traveled
Use transportation and land use measures to maintain or reduce single occupant motor vehicle miles traveled per capita to increase system efficiency and lower overall environ mental impacts.

PFS-18 Street design
Design city streets to achieve safety and accessibility for all modes. Arterial streets shall provide facilities for automobile, bike, pedestrian and transit mobility, and shall include landscaping and adequate lighting.

PFS-19 Parking standards
Adopt coordinated parking standards which maintain neighborhood integrity, promote the use of a multi-modal transportation system

and efficient utilization of limited land, and encourage desired economic development and growth throughout the entire urban area.

PFS-20 Airports
Discourage incompatible uses from locating adjacent to general aviation airports.

PFS-21 Wastewater reclamation
Eliminate health hazards from domestic and industrial wastewater and return clean water to the environment.

PFS-22 Sewer service
Provide sewers and sewer service to every Vancouver home, business, and industry at an affordable and equitable cost. Discourage development and use of on-site sewage treatment systems. Encourage existing development using septic systems to connect to public sewer as soon as available. Ensure that the infrastructure to support sewer service is in place prior to or at the time of development.

PFS-23 Water service
Provide safe, clean, quality drinking water to every Vancouver home, business, and industry. Discourage development and use of private drinking water wells. Provide water pressures and volumes necessary to support fire suppression hydrants and sprinkler systems. Ensure that the infrastructure to support water service is in place prior to or at the time of development.

PFS-24 Sewer and water service extension:
Public sewer and water service should not be extended outside the Vancouver urban growth area except to

(a) Remedy a threat to public health or safety, or to water resources;

(b) Provide service to public facilities within the urban reserve district if they are required to be served; or

(c) Support the type and density of development envisioned in that location in a jurisdiction's comprehensive plan

Water service extensions should may be extended if they are consistent with the Clark County Coordinated Water System Plan and do not increase density beyond the adopted Comprehensive Plan. The existence or extension of sewer or water service should not be used to justify changes to the comprehensive plan.

PFS-25 Stormwater management
Manage storm water to safely pass floodwaters, maintain and improve water quality of receiving streams, lakes, and wetlands, protect and enhance fish and wildlife habitat, promote recreational opportunities, and enhance community aesthetics.

PFS-26 Solid waste
Implement the 2008 Clark County Comprehensive Solid Waste and Moderate Risk Waste Management Plan. Reduce the production of waste, recycle waste that is produced, and properly manage and dispose of waste that is not recycled. Provide education and outreach to businesses and the public on benefits and opportunities of waste reduction and recycling.

PFS-27 Essential public facilities
Coordinate with Clark County, the state and special districts to identify future needs for regional and statewide facilities, such as airports, state education facilities, state or regional transportation facilities, state and local correctional facilities, solid waste handling facilities, and regional parks. Essential public facilities may be located in all zones as a conditional or permitted use as per VMC 20.855. Facilities that generate substantial travel demand should be sited along or near major transportation and/ or public transit corridors.

PFS-28 Schools
Work with local school districts to facilitate an adequate supply of schools and associated facilities. Facilitate timely and efficient siting processes which allow for assessment and mitigation of impacts.

PFS-29 Higher education
Work with state institutions of higher education to ensure that City residents have access locally to the education needed to work for knowledge- and skill based industries.

PFS-30 Open spaces and parks
Provide and maintain parks, open spaces, and recreational services for all segments of the community consistent with adopted level-of-service standards. Facilities and services should support recreational activities, environmental or historical re source protection, and should preserve and enhance neighborhood identity and function.

PFS-31 Trails
Provide a system of trails linking public and private open spaces, parks, recreational uses and transportation facilities within and between jurisdictions. Encourage use of greenspaces and riparian corridors as pedestrian and nonauto-oriented linkages within the urban area, in balance with habitat protection.

PFS-32 Parks coordination
Plan for parks, trails, open spaces and recreational services in coordination with other local and regional public agencies and private entities. Facilitate provision of lands and/or impact fees for parks as part of the development review process.

PFS-33 Parks funding
Develop dedicated funding for a complete park system that includes acquisition, development, maintenance and operation of parks, trails, open space, and recreation programs to serve City residents.

PFS-34 Parks education
Provide public education on the uses and benefits of parks, open spaces, habitat protection, and recreational services.

Tracking the Comprehensive Plan

- As of 2011, 54% of the total length of Vancouver arterial roadways were rated good or better under the industry-wide Pavement Rating Index, which measures road pavement condition. (Vancouver Public Works)

- As of 2010, 56% of Vancouver citizens surveyed were satisfied or very satisfied with the condition of neighborhood streets, while 52% were satisfied or very satisfied with the condition of major streets. These are comparable with responses elsewhere in the northwest, which reported satisfaction with 55% for both neighborhood and major streets. (2010 Vancouver DirectionFinder Survey) (http://citynet/Finance/Documents/PerformanceAnalysis/Surveys/External%20Surveys/2010%20Vancouver%20Final%20Report_April%2020.pdf see document page 68)

- Vancouver residents averaged 21 vehicle miles traveled (VMT) per day driving in 2010, up slightly from the 2005 average of 20 miles per day. These are comparable with Washington residents statewide, who averaged 23 miles per day in 2007. (SW Regional Transportation Council and WDOT)

- During the typical weekday evening peak travel in 2007, drivers countywide cumulatively experienced 1035 hours of vehicle delay. (2007 Metropolitan Transportation Plan)

CHAPTER 6

Annexation

Annexation is the process by which cities add land to their boundaries to accommodate growth and provide municipal services. The Growth Management Act anticipates that designated urban growth areas will become part of cities over the 20-year planning period, and that cities are generally the appropriate provider of urban services. This chapter contains policies intended to facilitate an orderly and smooth transition of property currently in the Vancouver Urban Growth Area into the Vancouver city limits.

Specifics

- **State and local legal framework**
- **Annexation procedure**
- **Vancouver's annexation history**
- **Future direction and annexation policies**

Annexation in 2011

Annexation may occur through various means under state statute and local regulations. The State of Washington's Growth Management Act of 1990 (GMA) requires counties to establish 20-year Urban Growth Area (UGA) boundaries to accommodate for projected growth, and encourages cities to annex lands within the UGA and provide urban-level services to these areas. Lands outside the UGA cannot be annexed.

The *Community Framework Plan* (Appendix A) adopted by Clark County, Vancouver, and other local cities also encourages annexation of lands in the UGA. In 2007 Clark County and the City adopted an Interlocal Agreement and 20-year Annexation Blueprint guiding annexations in the Vancouver UGA. The *Community Framework Plan* establishes County support for such annexations as long as they are consistent with the annexation elements adopted by Vancouver in the *City of Vancouver 10-Year Annexation Blueprint* (*Blueprint*).

The *Blueprint* was adopted by the City of Vancouver in 1993 and updated in 1995, 1997 and 2007. It is intended to provide opportunities for the City, County and special service districts to assess potential impacts, including fiscal impacts. The *Blueprint* prioritizes areas in the UGA to be annexed, while defining conceptual timelines. Annexation of these areas can occur as set out in the *Blueprint*. Larger or smaller annexations can also be processed depending on the level of support available.

Annexations can be initiated by property owners or cities. When an annexation is initiated by a city, local support is required. This support is generally provided through an election or petitions. The election method requires approval of the majority of voters in the annexation area, or 60 percent if the proposal includes the assumption of indebtedness. The petition method requires petitions signed by landowners representing the majority of the market value acreage in the annexation territory. The double majority method requires petitions signed by landowners representing the majority of the acreage and also by the majority of registered voters in the area if there are any. Other methods for municipal annexation are available for specific circumstances but are rarely applicable.

Annexation has been an ongoing process in the the City of Vancouver, with over 160 annexation occuring since the City was incorporated in 1857, primarily through the petition method. The 1990s were a particularly active period, with the City annexing 29 square miles in the Vancouver Mall and Cascade Park areas. The 1997 Cascade Park annexation was the largest in state history, and added almost 60,000 persons to the City. As of 2011, Vancouver's city limits encompassed approximately 50 square miles, and the

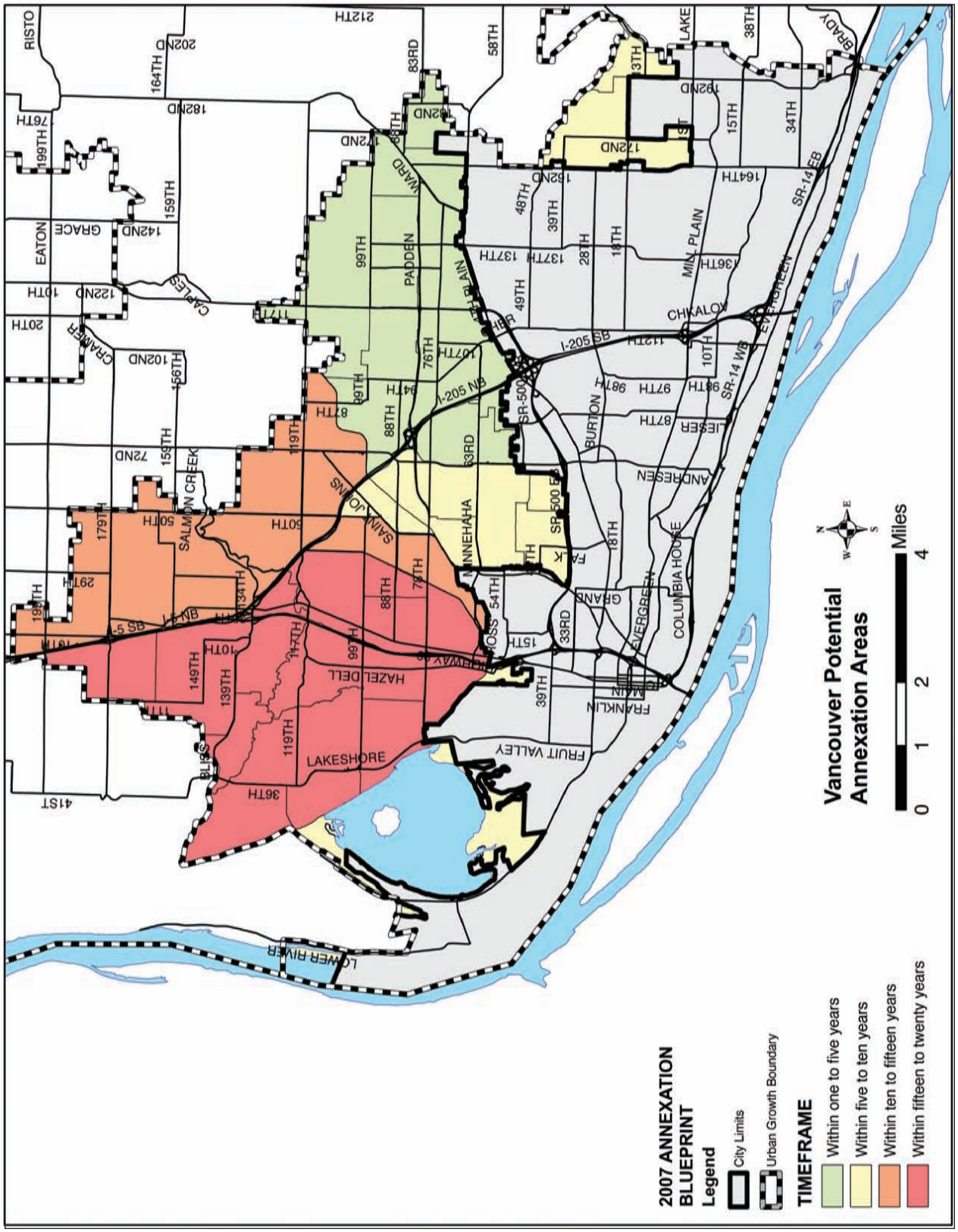


Figure 6-1. Potential annexation areas in unincorporated VUGA. Source: City of Vancouver GIS.

unincorporated Vancouver Urban Growth Area (VUGA) about 56 square miles. Most of the unincorporated VUGA is characterized by existing urban development, and provided with either City of Vancouver or non-municipal sewer and water services.

Direction for the future

Figure 6-1 shows the anticipated sequence and timelines for annexation of areas in the unincorporated VUGA to the City of Vancouver. The 2007 Interlocal Agreement and Annexation Blueprint documents provide further detail on potential annexation subareas, and strive to facilitate balanced annexations areas containing residential and non-residential lands. The City of Vancouver supports annexation to provide a full range of urban services and efficiencies to developing and developed urban areas. The Interlocal Agreement and Blueprint establish overall City and County support for annexation in the VUGA, and support for changes to state law to improve the annexation process. The City will also work closely with the Community and service providers to determine annexation issues that exist in specific areas, and to develop and implement annexation plans. Vancouver will require annexation or agreements to annex as a condition of extending municipal sewer and water services.

Annexation policies

The City of Vancouver adopts the following policies to ensure orderly urban transition and efficient delivery of urban services. These policies are consistent with and implement Policy Section 9.0 of the *Community Framework Plan*, adopted by Clark County and local jurisdictions, and planning policies 36.70.A.020(2), (11) and (12) of the Washington Growth Management Act (see Appendix A).

A-1 Coordination with Clark County
Work with Clark County to Implement the 2007 Interlocal Agreement and Annexation Blueprint, to facilitate future annexation of lands within the unincorporated VUGA, to facilitate infrastructure maintenance prior to annexation, and to advance Vancouver as a provider of urban services and Clark County as a provider of regional services.

A-2 Annexation before service extensions
To receive City-provided urban services, developing or developed unincorporated areas should annex or commit to annexation.

A-3 Annexation sequence
Unincorporated subareas should be annexed in the general sequence identified in the *City of Vancouver 20-Year Annexation Blueprint*.

A-4 Responsive annexation timelines
Annexation timelines should be responsive to the interests of citizens and Vancouver's ability to provide services, and consistent with the overall direction of the Annexation Blueprint.

A-5 Large annexations encouraged
Annexation of large areas should be encouraged, although individual property owners should not be prevented from pursuing annexation. Annexations should include both sides of streets and roads, including rights-of-way.

A-6 Service transition
Explore creative ways to facilitate the transition of government services, particularly public safety, transportation, parks, utilities, and land use review.

Tracking the Comprehensive Plan

The following areas have been annexed to the City of Vancouver since adoption of the 2007 Annexation Blueprint. These total 508 acres, approximately 5 % of the area anticipated by the Blueprint to be annexed in its first five years.

Annexation Title	Location and Size	Existing or Intended Use
Little (2009)	1 acre at St Johns Rd/49th St.	Commercial
Lake View B-Port (2009)	29 acres north of Lower River Rd.	Open space
Alcoa (2009)	148 acres south of Lower River Rd	Industrial
Columbia River (2010)	330 acres at 192nd Ave/SR-14	Mixed use north of 192nd; Residential and industrial south.

For more information:

- The *City of Vancouver-Clark County Vancouver Urban Area Annexation Blueprint 20-year Plan establishes* Vancouver annexation priorities and conceptual timelines.
- The *Community Framework Plan* (Appendix A) contains regional annexation policies in its Annexation and Incorporation Element.

CHAPTER 7

Implementation

The *Vancouver Comprehensive Plan 2011–2030* provides a vision for how Vancouver will grow and evolve over a 20-year period. It was produced with a wide range of community input. This chapter provides a roadmap for how the vision and policies of the comprehensive plan will be carried forward in City codes and standards, and through coordination with other agencies and groups.

Specifics

- **Implementation through City codes and standards**
- **Coordination of the unincorporated Vancouver UGA**
- **Provisions for updating the comprehensive plan**
- **Community outreach**
- **Implementation policies**

Implementing and updating

The direction of the *Vancouver Comprehensive Plan* is intended to be implemented in City standards and actions in several ways. The policies and map designations of the plan are to be implemented in greater detail by related City development standards, particularly the development code and zoning map in Chapter 20 of the Vancouver Municipal Code. Individual land use proposals, such as applications for housing subdivisions or commercial site plans, must then comply with the development standards. City service plans for transportation, parks, sewer, water and storm water must also be consistent with the direction of the comprehensive plan. The plan is also intended to inform City construction or other activities related to land use or the environment. Lastly, the policies of the comprehensive plan are used to evaluate site-specific requests to change map designations and related development proposals. The comprehensive plan is initially adopted to cover a 20-year period but is reviewed and updated

periodically during that timeframe. The City will monitor growth, development patterns and public programs and other indicators to determine how well plan goals and policies are being achieved, using the metrics identified in each chapter. The frequency of future comprehensive plan updates is governed by state law and City of Vancouver policy. **Table 7-1** outlines the requirements for reviewing and updating. More details are listed in the policies at the end of this chapter and in Section 20.285 of the Vancouver Municipal Code.

Table 7-1. Updating the comprehensive plan.

Type of change	Frequency	General Criteria for change
Zoning code or zoning map changes, not involving a comprehensive plan change	As needed	• Consistency with comprehensive plan policies • Consistency with standards of Vancouver Municipal Code
Comprehensive Plan private property map change applications	During City-initiated periodic review	• Consistency with comprehensive plan policies • Consistency with VMC 20.285
Other Comprehensive Plan changes, including adoption of service area capital facilities plans or other satellite documents incorporated into the Comprehensive Plan	Not more than once a year unless excepted by State law	• Consistency with comprehensive plan policies • Consistency with VMC 20.285
Periodic review and update of the overall comprehensive plan for GMA consistency	At least every eight years, or as otherwise specified by State law	• Consistency with GMA and Community Framework Plan • Consistency with comprehensive plan policy direction
Review and update of regional growth forecasts and UGA boundaries	At least every eight years, in coordination with Clark County	• Consistency with GMA and Community Framework Plan • Consistency with countywide growth forecasts • Consistency with comprehensive plan policy direction

Coordination with other governments, particularly Clark County, is a key part of implementing the Vancouver Comprehensive Plan. Clark County will manage the unincorporated VUGA until it is annexed by Vancouver. Residents and businesses in those areas may continue to use City roads and other City services, influencing Vancouver's economy and spending priorities. The Vancouver comprehensive plan establishes standards to ensure orderly urbanization, annexation, and delivery of urban services in the VUGA, in cooperation with Clark County. Coordination with other governments and service districts in the county and the metropolitan region will also be important in addressing regional transportation, public service, housing, economic and environmental concerns. In 2007 the City of Vancouver and Clark County adopted an Interlocal Agreement, which adopted the Vancouver Annexation Blueprint, and policies for coordination in the areas of annexation, development of common standards, and future Comprehensive Plan updates. Vancouver will strive to update and strengthen the Community Framework Plan (Appendix A) and other regional plans and agreements, and the relationships that support them.

The Vancouver Comprehensive Plan was developed with extensive help from community, and continued community involvement is perhaps the most important factor in a successful implementation of the plan. The City of Vancouver will continue to work with citizens, stakeholder groups, and other agencies as the comprehensive plan is implemented and updated in the future.

Implementation policies

The City of Vancouver adopts the following policies to guide Comprehensive Plan implementation over the next 20 years. These policies are consistent with and implement policies of the *Community Framework Plan*, adopted by Clark County and local jurisdictions, and planning policies under 36.70.A.020 of the Washington Growth Management Act (see Appendix A).

IM-1 Public participation
Provide for broad public participation in the development and implementation of the comprehensive plan, including sub-area plans for centers and corridors, and implementing development regulations and programs.

IM-2 Education
Increase awareness and understanding of the city's policies, land use planning, operations, historic and cultural resources, infrastructure, economic development, environmental resources, and parks and open spaces.

IM-3 Incentive measures
Use education and incentive measures in addition to regulatory approaches where appropriate to ensure achievement of plan goals.

IM-4 Internal policy consistency
Update development regulations as necessary to implement the policy direction of the comprehensive plan.

IM-5 Plan monitoring
Regularly review progress towards implementation of the Vancouver Comprehensive Plan goals and policies using the metrics identified in each chapter.

IM-6 Funding implications
Use comprehensive plan policy direction to influence city budget and funding decisions.

IM-7 Vancouver urban area coordination
Work with Clark County to achieve each of the following measures for the City of Vancouver and UGA:

(a) Increase consistency of City and County urban development standards, service provision standards, and permitting processes consistent with the 2007 Vancouver-Clark County Intergovernmental Agreement.

(b) Increase consistency of City and County legislative review processes, including use of joint or combined Planning Commission review when possible.

(c) Establish protocols for enhanced consultation between jurisdictions on development proposals, capital facility projects, and legislative changes that impact each other.

(d) Where appropriate, use Urban Holding zoning or other implementation strategies to adequately plan for newly added UGA areas, and defer urbanization until annexation can occur. Vancouver UGA areas developed prior to annexation should be urbanized in an orderly sequence, and developed at efficient long term urban densities.

IM-8 Future comprehensive plan updates
Periodically update the *Vancouver Comprehensive Plan* as follows:

(a) Annually, or otherwise as allowed by law, consider needed amendments to the Comprehensive Plan, including changes to documents adopted by reference.

(b) At least once every eight years or as otherwise specified by State law, comprehensively review and as necessary update plan policies and map designations citywide consistent with GMA requirements, and coordinate with Clark County for similar review in the existing unincorporated Vancouver UGA. Review private comprehensive plan plan map change applications during this periodic review.

(c) No more than once every eight years, work with Clark County to adopt new long-term growth forecasts and associated potential changes to the UGA boundary and comprehensive plans.

IM-9 Urban reserve areas
Work with Clark County County to designate and define lands outside the Vancouver UGA as Urban Reserves and Rural Reserves, so as to provide clarity as to which lands are likely to be brought into the Vancouver UGA in future Comprehensive Plan update, and which are likely to remain outside. Work with Clark County to ensure that lands immediately outside the Vancouver UGA that are appropriate for long-term future urbanization be maintained in large lot sizes and appropriate uses to ensure that the areas are able to develop efficiently and at urban densities and intensities when brought into the UGA.

IM-10 Future UGA expansions
Encourage urban-level development within the City of Vancouver by generally restricting VUGA expansions.

IM-11 Service coordination
Pursue interagency coordination in ways including but not limited to the following:

(a) Participate in cooperative interagency infrastructure planning processes at the regional, bi-state, and state levels.

(b) Support federal, state and local programs and policies that explore, maintain or expand the level of air, water, road, transit and rail transport service to and from the region.

(c) Encourage coordination and where feasible consolidation of service providers in order to minimize duplication, coordinate facility siting, and maximize economies of scale.

IM-12 Interjurisdictional coordination
Work with local jurisdictions and service providers to achieve the following:

(a) Establish clear regional policy expectations through the *Community Framework Plan*, and implement *Community Framework Plan* and *Countywide Planning Policies*.

(b) Facilitate development patterns focusing urban growth first in areas characterized by existing urban development and services, second in undeveloped or unserved areas.

(c) Achieve an equitable distribution of economic development and affordable housing among Clark County urban areas.

IM-13 Diversity
Consider demographic trends and impacts to all segments of the Vancouver Community for planning issues such as public outreach and communication, environmental justice, housing and economic policies.

For more information:

- The *Clark County Comprehensive Plan* contains policy guidance for the unincorporated VUGA. Contact Clark County Long Range Planning or visit the Clark County Web site http://www.clark.wa.gov/planning/comp_plan/index.html.
- The *Community Framework Plan* (Appendix A of this document) adopted by Clark County, Vancouver, and local cities contains policy guidance for regional growth issues.
- The Washington Growth Management Act (RCW 36.70A) establishes the legal framework for local comprehensive plans. Visit the state Web site http://www.commerce.wa.gov/DesktopModules/CTEDPublications/CTEDPublicationsView.aspx?tabID=0&ItemID=6413&MId=944&wversion=Staging

Appendixes

- **Appendix A** — **Community Framework Plan and Growth Managment Act Goals**
- **Appendix B** — **Vancouver Shoreline Management Master Program Goals**
- **Appendix C** — **Growth Capacity Assumptions**
- **Appendix D** — **Capital Facilities Funding Summary**
- **Appendix E** — **Other Plans and Documents Adopted by Reference**

APPENDIX A

COMMUNITY FRAMEWORK PLAN AND GROWTH MANAGEMENT ACT GOALS

Adopted by Clark County, City of Vancouver and other local cities in 1993 to provide regional guidance for local comprehensive planning. Updated in 2000 and 2001.

A. COMMUNITY FRAMEWORK PLAN

The Community Framework Plan encourages The Community Framework Plan encourages growth in centers, urban growth areas, and rural centers, with each center separate and distinct from the others. These centers of development are of different sizes; they may contain different combinations of housing, shopping, and employment areas. Each provides places to live and work. The centers are oriented and developed around neighborhoods to allow residents the ability to easily move through and to feel comfortable within areas that create a distinct sense of place and community. In order to achieve this, development in each of the urban areas would have a higher average density than currently exists, approximately 4, 6, or 8 units per net residential acre depending on the specific urban area. No more than 75 percent of the new housing stock would be of a single product type (i.e., single family detached, residential). This would not apply to the Yacolt urban growth area due to wastewater management issues.

Each urban growth area would have a mix of land uses with housing, businesses, and services appropriate to its character and location. For example, the Westfield Shoppingtown Vancouver area would continue to be a retail center, downtown Vancouver will continue to be a center of finance and government, Brush Prairie and Hockinson are to be rural centers with community commercial areas, and the Mount Vista area will be a center of medical research and education (with the Washington State University campus as the center). Residential development appropriate to the needs of the workers and residents in these areas would be encouraged nearby. A primary goal of the plan is to provide housing in close proximity to jobs resulting in shorter vehicle trips, and allows densities along public transit corridors that support high capacity transit, either bus or light rail.

Outside of urban areas, the land is predominantly rural with farms, forests, open space, and large lot residences. Shopping or businesses would be in rural centers. Urban levels of public services would generally not be provided in rural areas. Rural residents are provided levels of service appropriate to their areas. These areas are, by definition, more rural in nature and residents are more self-sufficient, often relying on private wells and septic systems. Most of northern Clark County would remain as it is today, in resource industries or rural use.

To implement the Community Framework Plan, the County, towns and cities would have to amend certain land use and development policies in their 20-year comprehensive plan process. The framework policies to guide future detailed policies are discussed in the next section.

B. POLICIES

In order to achieve the vision of Clark County, as a collection of distinct communities surrounded by open space, agriculture, and forest uses, Clark County and each of the cities will adopt certain types of policies. The general framework policies are outlined below by element of the Comprehensive Growth Management Plan (20-Year plan). The process-oriented county-wide planning policies which were adopted by the County in August 1992, and amended in 2000, are listed first (in italics), followed by the framework policies to guide implementation of the vision of Clark County's future preferred by many of its residents. The policies provide a framework within which the County can bridge the gap between the general land use concepts presented in the Community Framework Plan and the detailed (parcel level) Comprehensive Growth Management Plan (20-Year) required by the State Growth Management Act. Supplemental to the Community Framework Plan, the County and each jurisdiction, can develop more specific policies for their required 20-year time frame, in order to ensure that the resulting plans will work to achieve the overall vision of the future for Clark County.

1.0 LAND USE

The Land Use Element for 20-Year comprehensive plans determine the general distribution and location and extent of the uses of land, where appropriate, for agriculture, timber production, housing, commerce, industry, recreation, open spaces, public utilities, public facilities, and other uses. The Land Use Element includes population densities, building intensities, and estimates of future population growth. The land use element is to provide for protection of groundwater resources, and where applicable, address drainage, flooding, and run-off problems and provide for coordinated solutions.

The following policies are to coordinate the efforts of the County and cities in designating land uses, densities, and intensities to achieve the pattern described above in their respective Comprehensive Growth Management Plans (20-Year).

1.1 Countywide Planning Policies

a. The County, municipalities and special districts will work together to establish urban growth areas within which urban growth shall be encouraged and outside of which growth may occur only if it is not urban in nature. Each municipality within the County shall be included within an urban growth area. An urban growth area may include territory located outside of a city if such territory is characterized by

urban growth or is adjacent to areas characterized by urban growth.

b. Urban growth areas shall include areas and densities sufficient to permit the urban growth that is projected to occur in the County for the succeeding 20-year period.

c. Urban growth shall be located primarily in areas already characterized by urban growth that have existing public facility and service capacities to adequately serve such development, and second in areas already characterized by urban growth that will be served by a combination of both existing public facilities and services that are provided by either public or private sources. Urban governmental services shall be provided in urban areas. These services may also be provided in rural areas, but only at levels appropriate to serve rural development.

Urban governmental services include those services historically and typically delivered by cities, and include storm and sanitary sewer systems, domestic water systems, street cleaning services, fire and police protection, public transit services, and other public utilities not normally associated with non-urban areas.

d. An urban growth area may include more than a single city.

e. Urban growth is defined as growth that makes intensive use of land for the location of buildings, structures, and impermeable surfaces to such a degree as to be incompatible with the primary use of such land for the production of food, other agricultural products, fiber, or the extraction of mineral resources.

f. The County and cities shall review, at least every five (5) years their designated urban growth area or areas in compliance with RCW 36.70A.215. The purpose of the review and evaluation program shall be to determine whether Clark County and its cities are achieving urban densities within the Urban Growth Areas. This shall be accomplished by comparing the growth and development assumptions, targets and objectives contained in these policies (and in County and City comprehensive plans) with actual growth and development that has occurred.

1) Each municipality within Clark County shall provide to the County information on land developed or permitted for building and development, and a parcel specific buildable lands inventory to conduct a residential/commercial/industrial land capacity analysis for Urban Growth Areas in Clark County. The County and municipalities shall follow the guidelines specific in the Plan Monitoring Procedures Report for the collection, monitoring, and analysis of development activity and potential residential/employment capacity.

2) Clark County, in cooperation with the municipalities, shall prepare a Buildable Lands Report every five years, with the first report completed by September 2002. The report will detail growth, development, capacity, needs, and consistency between comprehensive plan goals and actual densities for Clark County and the municipalities within it.

3) The County and municipalities shall use the results of the Buildable Lands Capacity Report to determine the most appropriate means to address inconsistencies between land capacity and needs. In addressing the consistencies, the County and municipalities shall identify reasonable measures, other than adjusting urban growth areas, that will be taken to comply with the requirements of RCW 36.70A.215.

g. Population projections used for designating urban growth areas will be based upon information provided by the Office of Financial Management and appropriate bi-state/regional sources.

h. Interagency Cooperation

The County and each municipality will work together to:

1) establish Partnership Planning Subcommittees to develop an ongoing coordination program within the urban growth area;

2) provide opportunities for each jurisdiction to participate, review and comment on the proposed plans and implementing regulations of the other;

3) coordinate activities as they relate to the urban growth area;

4) coordinate activities with all special districts;

5) seek opportunities for joint efforts, or the combining of operations, to achieve greater efficiency and effectiveness in service provision; and,

6) conduct joint hearings within the urban growth areas to consider adoption of Comprehensive Plans in the Partnership Planning Process.

a. Coordination of land use planning and development

1) The County and each municipality shall cooperatively prepare land use and transportation plans and consistent development guidelines for the urban area.

2) Comprehensive Plans must be coordinated. The comprehensive plan of each county or city

shall be coordinated with, and consistent with, the comprehensive plans adopted by other counties or cities with which the County or city has, in part, common borders or related regional issues (ESHB 2929; Section 10). The city and the County shall play partnership roles in the production of plans which provide the opportunity for public and mutual participation, review and comment.

3) Urban development shall be limited to areas designated by the urban growth boundary.

1.2 Framework Plan Policies

1.2.0 Establish a hierarchy of activity centers, including both urban and rural centers.

Hierarchy of Centers:

All planning should be in the form of complete and integrated communities containing housing, shops, work places, schools, parks, and civic facilities essential to the daily life of the residents. Community size should be designed so that housing, jobs, daily needs and other activities are within easy walking distance of each other.

a. **URBAN GROWTH AREAS** have a full range of urban levels of services and can be divided into three main categories:

Vancouver Urban Growth Area Major Centers are now or will be activity centers with a full range of residential, commercial, and industrial uses, high-capacity transit corridors, schools, major cultural and public facilities. Major urban areas centers, have or will have, urban densities of development of at least 8 units per net residential acre as an overall average. Areas along high capacity transit corridors and priority public transit corridors may have higher than average densities, and other areas would have lower densities (e.g. established neighborhoods and neighborhoods on the fringes of the urban area). Regional institutions and services (government, museums, etc.) should be located in the urban core.

Urban Growth Areas of Battle Ground, Camas, Ridgefield and Washougal Small Towns and Community Centers have a full range of residential, commercial, and industrial uses, schools, neighborhood, community, and regional parks, and are within walking distance to HCT corridors or public transit. These areas will have employment opportunities and lower densities than major urban area centers, averaging at least 6 units per net residential acre. Higher densities occur along transit corridors and in the community center, with lower densities in established neighborhoods and on the outskirts of the community. These Urban Growth Areas, small towns and community centers should have a center focus that combines commercial, civic, cultural and recreational uses.

La Center Urban Growth Area will be a Neighborhood Centers are located in predominantly residential areas with at least 4 housing units per net residential acre with pedestrian-oriented commercial uses, schools and small parks. A mix of residential uses and densities are or will be permitted. Neighborhoods are to have a focus around parks, schools, or common areas.

b. Outside of urban growth and urban reserve areas, **RURAL ACTIVITY CENTERS** provide public facilities (e.g., fire stations, post offices, schools) and commercial facilities to support rural lifestyles. Rural centers have residential densities consistent with the surrounding rural minimum lot sizes and do not have a full range of urban levels of service.

Urban Areas

1.3.0 Establish consistent regional criteria to de termine the size of urban growth areas for the 20-year comprehensive plans that:

- utilize natural features (such as drainages, steep slopes, riparian corridors, wetland areas, etc.);
- conserve designated agriculture, forest or mineral resource lands;
- ensure an adequate supply of buildable land;
- have the anticipated financial capability to provide infrastructure/services needed for the 20-year growth management population projections; and,
- balance industrial, commercial, and residential lands.

1.3.1 Establish consistent regional criteria for urban growth area boundaries for the 20-year comprehensive plans that consider the following:

- geographic, topographic and man-made features;
- public facility and service availability, limits and extensions;
- jurisdictional and special district boundaries; and,

- location of designated natural resource lands and critical areas.

Urban Reserves

1.3.2 Establish criteria for new fully contained communities to ensure that the appropriate public facility and services are available. Large scale residential only developments are not considered as fully contained communities.

1.4.0 The County and jurisdictions within the County are to define urban reserve areas (land reserved for future development after 20 years), where appropriate, to allow an orderly conversion of land adjacent to designated urban growth areas to urban densities, as demonstrated by the need to expand the developable land supply or by regional industrial or public facility needs.

1.4.1 The County, cities and towns are to work cooperatively, to develop policies governing transition of urban reserve areas between the urban growth area set by the 20-Year Comprehensive Growth Management Plans and the urban areas conceptualized by the longer-term Community Framework Plan. Such policies are to:

- encourage urban growth in cities and towns first, then in their urban growth areas, and finally in the urban reserve area;
- ensure that any development permitted is consistent with the level of urbanization of the adjacent areas;
- identify major capital facilities and utilities, provide locational and timing criteria for development of these facilities and utilities;
- include a mechanism to ensure that major capital facilities and utilities are constructed when needed; and
- establish criteria for determining the need and procedures for amending the urban growth area boundary.

1.4.2 Develop criteria for uses within urban reserve areas to allow a reasonable use without preempting future urban growth area designations.

Techniques that enable the urban reserve to be maintained include but are not limited to:

- transfer development rights;
- conservation easements;
- tax assessments;
- pre-planning of lots and the clustering of units; and
- other innovative techniques.

2.0 HOUSING

The Housing Element is to recognize the vitality and character of established residential neighborhoods and identify sufficient land for housing to accommodate a range of housing types and prices. The goal is to make adequate provision for existing and projected housing needs of all economic segments of the community. These policies are intended to coordinate the housing policies of Clark County and its jurisdictions to ensure that all existing and future residents are housed in safe and sanitary housing appropriate to their needs and within their means.

2.1 County-wide Planning Policies

a. The County and each municipality shall prepare an inventory and analysis of existing and projected housing.

b. The Comprehensive Plan of the County and each municipality shall identify sufficient land for housing, including, but not limited to, government-assisted housing, housing for low-income families, manufactured housing, multifamily housing, and group homes and foster care facilities. All jurisdictions will cooperate to plan for a “fair share” of the region’s affordable housing needs and housing for special needs population.

c. Link economic development and housing strategies to achieve parity between job development and housing affordability.

d. Link transportation and housing strategies to assure reasonable access to multi-model transportation systems and to encourage housing opportunities in locations that will support the development of public transportation.

e. Link housing strategies with the locations of work sites and jobs.

f. Link housing strategies with the availability of public facilities and public services.

g. Encourage infill housing within cities and towns and urban growth areas.

h. Encourage flexible and cost efficient land

use regulations that allow for the creation of alternative housing types which will meet the needs of an economically diverse population.

2.2 Framework Plan Policies

2.2.0 Communities, urban and rural, should contain a diversity of housing types to enable citizens from a wide range of economic levels and age groups to live within its boundaries and to ensure an adequate supply of affordable and attainable housing. Housing options available in the County include single family neighborhoods and mixed-use neighborhoods (e.g., housing above commercial storefronts, traditional grid single family neighborhoods, townhouses, multi-family developments, accessory units, boarding homes, cooperative housing, and congregate housing).

2.2.1 Establish density targets with jurisdictions in the County for different types of communities, consistent with the definitions of Urban and Rural Centers.

2.2.2 Provide housing opportunities close to places of employment.

2.2.3 Establish maximum as well as minimum lot sizes in urban areas.

2.2.4 All cities, towns and the County share the responsibility for achieving a rational and equitable distribution of affordable housing.

2.2.5 Coordinate with C-TRAN to identify and adopt appropriate densities for priority transit corridors. Ensure that the development standards for these areas are transit and pedestrian friendly. Transportation and housing strategies are to be coordinated to assure reasonable access to a variety of transportation systems and to encourage housing opportunities in locations that support development of cost effective and convenient public transportation for all segments of the population.

2.2.6 Encourage infill development that enhances the existing community character and provide a mix of uses in all urban and rural centers. All cities and towns are to encourage infill housing as the first priority for meeting the housing needs of the community.

2.2.7 Encourage creative approaches to housing de sign to:

- accommodate higher densities attractively;
- increase housing affordability;
- ensure that infill development fits with the character of the existing neighborhood; and
- develop demonstration projects to assist the private sector to achieve infill goals.

2.2.8 Housing strategies are to be coordinated with availability of public facilities and services, including human services.

2.2.9 All cities, towns and the County are to provide for a variety of housing types and designs to meet the needs of people with special needs (for example those with physical, emotional, or mental disabilities), recognizing that not all housing will become accessible to special needs populations.

2.2.10 Establish a mechanism for identifying and mitigating adverse impacts on housing production and housing cost which result from adoption of new development regulations or fees.

2.2.11 Encourage and permit development of intergenerational housing, assisted living options, and accessory units in order to allow people with special needs and senior citizens to live independently as possible and to reduce the need for (and cost of) social services.

2.2.12 All cities, towns and the County are to provide increased flexibility in the use of new and existing housing development to increase the potential for re-use, preservation of existing affordable housing, shared living quarters, use of accessory structures as housing, etc.

2.2.13 Housing strategies are to be coordinated with the financial community and are to be consistent with public and private financing mechanisms.

3.0 RESOURCE LANDS

These policies are to ensure the conservation of agricultural, forest, and mineral resource lands, and protect these lands from interference by adjacent uses which affect the continued use, in the accustomed manner, of these lands for production of food, agricultural products, or timber, or the extraction of minerals.

3.1 County-Wide Planning Policies

a. The County and each municipality shall cooperate to ensure the preservation and protection of natural resources, critical

areas, open space, and recreational lands within and near the urban area through adequate and compatible policies and regulations.

3.2 Framework Plan Policies

3.2.0 The County and its jurisdictions as a minimum are to consider agricultural land based on Washington Administrative Code (WAC) 365-190-050.

3.2.1 The County and its jurisdictions as a minimum are to consider forest land based on WAC 365-190-060.

3.2.2 The County and its jurisdictions as a minimum are to consider mineral resource lands based on WAC 365-190-070.

3.2.3 Identify agricultural land on parcels currently used or designated for agricultural use and provide these parcels special protection.

3.2.4 Identify forest land on parcels currently used or designated for forest use and provide these parcels special protection.

3.2.5 Encourage the conservation of large parcels which have prime agricultural soils for agricultural use and provide these parcels special protection.

3.2.6 Establish standards for compatible land uses on land designated for agriculture, forest, and mineral resource uses.

3.2.7 Review cluster residential development on agriculture or forest land to ensure these developments continue to conserve agriculture or forest land.

3.2.8 Develop a range of programs (such as transfer or purchase of development rights, easements, preferential tax programs, etc.) to provide property owners incentives to maintain their land in natural resource uses.

3.2.9 Mineral, forestry, and agricultural operations are to implement best management practices to minimize impacts on adjacent property.

3.2.10 Establish buffers for natural resource lands (agriculture, forest, or mineral lands) and urban and rural uses to lessen potential impacts to adjacent property.

3.2.11 Establish right to farm or harvest ordinances to protect the continued operation of natural resource uses.

3.2.12 Public facility and/or utility availability are not to be used as justification to convert agriculture or forest land.

4.0 RURAL LANDS

The Rural Lands Element contains policies governing the use of lands which are not reserved for agriculture, forest, or mineral resources, nor are they designated for urban development. Land uses, densities, and intensities of rural development are to be compatible with both adjacent urban areas and designated natural resource lands.

4.1 County-wide Planning Policies

a. The County shall recognize existing development and provide lands which allow rural development in areas which are developed or committed to development of a rural character.

4.2 Framework Plan Policies

4.2.0 Rural areas should meet at least one of the following criteria:

- opportunities exist for small scale farming and forestry which do not qualify for resource land designation;
- the area serves as buffer between designated resource land or sensitive areas;
- environmental constraints make the area unsuitable for intensive development;
- the area cannot be served by a full range of urban levels of service; or,
- the area is characterized by outstanding scenic, historic or aesthetic values which can be protected by a rural designation.

4.2.1 Recreational uses in rural areas should preserve open space and be environmentally sensitive.

4.2.2 Commercial development of appropriate scale for rural areas is encouraged within rural centers.

4.2.3 Establish large lot minimums for residential development appropriate to maintain the character of the rural area.

4.2.4 Develop a program for the transfer or purchase of development rights (TDR) or similar programs to encourage implementation of these rural lands policies.

4.2.5 New master planned resorts are to meet the fol lowing criteria:

- provide self-contained sanitary sewer systems approved by the Southwest Washington Health District;
- be served by public water systems with urban levels of fireflow;
- preserve and enhance unique scenic or

cultural values;

- focus primarily on short-term visitor accom modations rather than for-sale vacation homes;
- provide a full range of recreational amenities;
- locate outside urban areas, but avoid adversely impacting designated resource lands;
- preserve and enhance sensitive lands (critical habitat, wetlands, critical areas, etc.);
- housing for employees only may be provided on or near the resort; and,
- comply with all applicable development standards for master planned resorts, including mitigation of on and off-site impacts on public services, utilities, and facilities.

4.2.6 Encourage the clustering of new development within a destination resort or a designated rural center (village or hamlet). All new development should be of a scale consistent with the existing rural character.

4.2.7 Revise existing development standards and housing programs to permit and encourage development of affordable housing for people who work in resource-based industries in rural centers.

5.0 TRANSPORTATION

The Transportation Element is to implement and be consistent with the land use element. The Community Framework Plan envisions a shift in emphasis of transportation systems from private vehicles to public transit (including high-capacity transit and light rail), and non-polluting alternatives such as walking and bicycling. The following policies are to coordinate the land use planning, transportation system design and funding to achieve this vision.

5.1 Countywide Planning Policies

a. Clark County, Metropolitan Planning Organization (MPO) and the Regional Transportation Planning Organization (RTPO), state, bi-state, municipalities, and C-Tran shall work together to establish a truly regional transportation system which:

1) reduces reliance on single occupancy vehicle transportation through development of a balanced transportation system which emphasizes transit, high capacity transit, bicycle and pedestrian improvements, and transportation demand management;

2) encourages energy efficiency;

3) recognizes financial constraints; and,

4) minimizes environmental impacts of the transportation systems development, operation and maintenance.

a. Regional and bi-state transportation facilities shall be planned for within the context of county-wide and bi-state air, land and water resources.

b. The State, MPO/RTPO, County, and the municipalities shall adequately assess the impacts of regional transportation facilities to maximize the benefits to the region and local communities.

c. The State, MPO/RTPO, County, and the municipalities shall strive, through transportation system management strategies, to optimize the use of and maintain existing roads to minimize the construction costs and impact associated with roadway facility expansion.

d. The County, local municipalities and MPO/RTPO shall, to the greatest extent possible, establish consistent roadway standards, level of service standards and methodologies, and functional classification schemes to ensure consistency throughout the region.

e. The County, local municipalities, C-Tran and MPO/RTPO shall work together with the business community to develop a transportation demand management strategy to meet the goals of state and federal legislation relating to transportation.

f. The State, MPO/RTPO, County, local municipalities and C-Tran shall work cooperatively to consider the development of transportation corridors for high capacity transit and adjacent land uses that support such facilities.

g. The State, County, MPO/RTPO and local municipalities shall work together to establish a regional transportation system which is planned, balanced and compatible with planned land use densities; these agencies and local municipalities will work together to ensure coordinated transportation and land use planning to achieve adequate mobility and movement of goods and people.

h. State or regional facilities that generate substantial travel demand should be sited along or near major transportation and/or public transit corridors.

5.2 Framework Plan Policies

5.2.0 The regional land use planning structure is to be integrated within a larger public transportation network (e.g., transit corridors, commercial nodes, etc.).

5.2.1 Encourage transportation systems that provide a variety of options (light rail, high-occupancy vehicles, buses, autos, bicycles or walking) within and between and rural centers.

5.2.2 Street, pedestrian paths, and bike paths are to be a part of a system of fully connected and scenic routes to all destinations. Establish design standards for development to promote these options, and work cooperatively with C-TRAN to ensure that programs for improvements in transit service and facilities as well as roadway and pedestrian facilities are coordinated with these standards.

5.2.3 To reduce vehicle trips, encourage mixed land use and locate as many other activities as possible to be located within easy walking and bicycling distances from public transit stops.

5.2.4 Encourage use of alternative types of transportation, particularly those that reduce mobile emissions (bicycle, walking, carpools, and public transit).

5.2.5 Establish residential, commercial and industrial development standards including road and parking standards, to support the use of alternative transportation modes.

5.2.6 Establish connections between Urban and Rural Centers through a variety of transportation options.

5.2.7 Establish regional level-of-service (LOS) standards for arterials and public transportation that ensure preservation of the region's (rural and urban) mobility while balancing the financial, social and environmental impacts.

5.2.8 Encourage a balanced transportation system and can be maintained at acceptable levels of service.

5.2.9 Establish major inter-modal transportation corridors that preserve mobility for interstate commerce and freight movement (Promote inter-modal connections to port, rail, truck, bus, and air transportation facilities. Preserve and improve linkages between the Port of Vancouver and other regional transportation systems).

5.2.10 Coordinate with C-TRAN, WSDOT, and SWRTC to allow park-and-ride facilities along regional transportation corridors.

5.2.11 Encourage the development of smaller, community scale park and ride facilities in rural centers as the gateways to public transportation in non-urban areas.

6.0 CAPITAL FACILITIES

The Capital Facilities Element will identify the need for capital facilities (such as libraries, schools, police facilities and jails, fire facilities, etc.) to accommodate expected growth and establish policies to ensure that these facilities are available when the development is occupied. The following policies are to coordinate the work of the cities and towns and special districts.

6.1 County-wide Planning Policies

a. The County, State, municipalities and special districts shall work together to develop realistic levels of service for urban governmental services.

b. Plans for providing public facilities and services shall be coordinated with plans for designation of urban growth areas, rural uses, and for the transition of undeveloped land to urban uses.

c. Public facilities and services shall be planned so that service provision maximizes efficiency and cost effectiveness and ensures concurrency.

d. The County, municipalities and special districts shall, to the greatest extent possible, agree upon present and future service provision within the urban area.

e. The County, municipalities and special districts shall agree on a full range of services to meet the needs of the urban area, including sewer, water, storm drainage, transportation, police, fire, parks, etc.

f. The County, its municipalities and special districts shall work together to ensure that the provision of public facilities and services are consistent and designed to implement adopted comprehensive plans.

g. Local jurisdictions shall establish a process to re-evaluate the land use element of their comprehensive plans upon its determination that the jurisdiction lacks the financing resources to provide necessary public facilities and services to implement their plan.

h. General and special purpose districts should

consider the establishment of impact fees as a method of financing public facilities required to support new development.

i. The County, its municipalities, and special districts will work together to develop financial tools and techniques that will enable them to secure funds to achieve concurrency.

j. The Comprehensive Plan of the County and each municipality shall include a process for identifying and siting essential public facilities such as airports, state education facilities and state or regional transportation facilities, state and local correctional facilities, solid waste handling facilities, and regional parks.

k. When siting state and regional public facilities, the County and each municipality shall consider land use compatibility, economic and environmental impacts and public need.

l. The County shall work with the State, each municipality and special districts to identify future needs of regional, and state wide public facilities. This will ensure county-wide consistency and avoid duplications or deficiencies in proposed facilities.

6.2 Framework Plan Policies

6.2.0 Major public and private expenditures on facilities and services (including libraries, schools, fire stations, police, parks, and recreation) are to be encouraged first in urban and rural centers.

6.2.1 Establish level of service standards for capital facilities in urban and rural areas.

6.2.2 Coordinate with service providers to identify the land and facility requirements of each and ensure that sufficient land is provided in urban and rural areas to accommodate these uses.

6.2.3 Establish standards for location of public facilities and services in urban growth areas, urban reserve areas, and rural areas.

7.0 UTILITIES

The Utilities Element is to provide for the extension of public utilities to new development in a timely manner, and to ensure that utility extensions are consistent with the land use plans of the County and cities and towns.

7.1 Countywide Planning Policies

a. The County, municipalities, special districts and Health District will work cooperatively to develop fair and consistent policies and incentives to: eliminate private water and sewer/septic systems in the urban areas; and to encourage connection to public water and sewer systems.

b. Within Urban Growth Areas, cities and towns should be the providers of urban services. Cities and towns should not extend utilities without annexation or commitments for annexation. Exceptions may be made in cases where human health is threatened. In areas where utilities presently extend beyond city or town limits, but are within Urban Growth Areas, the city or town and the County should jointly plan for the development, with the County adopting development regulations which are consistent with the city or town standards.

c. Plans for providing public utility services shall be coordinated with plans for designation of urban growth areas, rural uses, and for the transition of undeveloped land to urban uses.

d. Public utility services shall be planned so that service provision maximizes efficiency and cost effectiveness and ensures concurrency.

e. The County, municipalities and special districts shall, to the greatest extent possible, agree upon present and future service provision within the urban area.

7.2 Framework Plan Policies

7.2.0 Public sanitary sewer service will be permitted only within urban areas, except to serve areas where imminent health hazards exist.

7.2.1 Public sanitary sewer service should be extended throughout urban areas. It is recommended that cities and towns and other sanitary sewer service purveyors adopt policies that specify the circumstances under which residents located within urban growth areas but outside of incorporated areas would be required to connect to a sanitary sewer system once it becomes available.

7.2.2 Adequate public water service should be extended throughout urban areas. (An “adequate” public water system is one that meets Washington State requirements and provides minimum fire flow as required by the Fire Marshal. Various levels of public water service are considered adequate, depending upon the specific land uses and densities of development being served.)

7.2.3 When it is appropriate to provide public water service in rural areas, the level of service may be lower than that which is provided in urban areas. However, public water service in rural areas must meet the minimum requirements for an adequate public water system, given the specific land uses and densities being served (see 7.2.2).

7.2.4 Construction of new private wells in urban areas should be discouraged. New private wells will be considered only on an interim basis, until ad equate public water service becomes available to an area.

7.2.5 Construction of new subsurface sewage disposal systems within urban areas should be discouraged. It is recommended that cities and towns and the County adopt policies that specify the circumstances under which the construction of new subsurface sewage disposal systems would be permitted, if they are permitted under any circumstance within urban areas. If new subsurface disposal systems are permitted, it is suggested that these systems be considered only as an interim measure, until public sanitary sewer system becomes available.

7.2.6 Support the Southwest Washington Health District's efforts to establish a mandatory subsurface sewage disposal system inspection and maintenance program for pre-existing and new systems located in areas that need special protection from an environmental health perspective, as determined by the Health District.

7.2.7 Ensure compliance with Washington State requirements which call for a proposed development to provide proof that there exists a source of public or private domestic water which produces sufficient quantity and quality of water to meet minimum requirements before a development permit may be issued.

7.2.8 New wells may be constructed in rural areas, but only to serve developments on rural lots that are without practical access to existing public water systems. Existing public water purveyors should be given an opportunity to serve a new development. The first opportunity to serve a development should be given to the utility provider designated to serve the area in which the development is proposed. If the designated utility cannot serve the development, an adjacent utility should be given the opportunity to serve the development. If an existing utility cannot serve the development, construction of a new private or public well may be permitted. This procedure is set forth in the Clark County Coordinated Water System Plan Update, which was adopted by Clark County and the Washington State Department of Health in 1991.

7.2.9 The availability of public sanitary sewer and water services with capacities beyond those which are minimally required to meet the needs of an area will not presume or justify approval of a development that is inconsistent with the Community Framework Plan.

7.2.10 The Clark County Coordinated Water System Plan is designed to be responsive to the County's Comprehensive Plan and other local comprehensive plans, and land use regulations intended to implement the Comprehensive Plan. Public water system plans must be consistent with the Coordinated Water System Plan and the Comprehensive Plan, as provided under WAC 248-56.

8.0 PARKS, RECREATION AND OPEN SPACE

Although this element is not required by the Growth Management Act, Clark County and several cities and towns intend to include a Parks, Recreation, and Open Space Element in their plans because provision of these facilities is essential to the livability of the urban area. The policies listed below are to coordinate the planning for parks facilities, recreation programs, and open spaces to ensure that they are appropriately sited given expected growth patterns.

8.1 County-wide Planning Policies

a. The County and each municipality shall identify open space corridors, important isolated open space and recreational areas within and between urban growth areas, and should prepare a funding and acquisition program for this open space. Open space shall include lands useful for parks and recreation, fish and wildlife habitat, trails, public access to natural resource lands and water, and protection of critical areas.

8.2 Framework Plan Policies

8.2.0 Provide land for parks and open space in each urban growth area and rural centers consistent with adopted level-of-service standards. Wherever possible, the natural terrain, drainage, and vegetation of the community should be preserved with high quality examples contained within parks or greenbelts.

8.2.1 Use environmentally sensitive areas (critical areas) for open space and where possible use

these areas to establish a well defined edge separating urban areas from rural areas.

8.2.2 Regions should be bounded by and provide a continuous system of open space/wildlife corridors to be determined by natural conditions. Where appropriate connect open spaces to provide corridors, consistent with the Metropolitan Greenspaces Program.

8.2.3 Coordinate with jurisdictions to establish consistent definitions of park types and level of service standards for parks within urban areas.

8.2.4 Coordinate the planning and development of parks and recreation facilities with jurisdictions within the urban areas.

8.2.5 Establish a county-wide system of trails and bicycle paths both within and between jurisdictions for recreational and commuter trips. Coordinate this trail system with those of adjacent counties and Oregon jurisdictions.

9.0 ANNEXATION AND INCORPORATION

The intention of the Growth Management Act is that urban development occur within cities or areas that will eventually be cities -- either through annexation or incorporation. Currently in Clark County, large unincorporated areas are developed at urban densities. The transition of these areas to cities is a process that will require the cooperation of staff and elected officials from the County, cities and towns, and special districts. The following policies are to set the framework for discussion of the details which will be included in the 20-Year Growth Management Plans for these jurisdictions.

9.1 County-wide Planning Policies

a. Community Comprehensive Plans shall contain an annexation element. In collaboration with adjacent cities, towns, and Clark County, each city and town shall designate areas to be annexed. Each city and town shall adopt criteria for annexation and a plan for providing urban services and facilities within the annexation area. Policies for the transition of services shall be included in each annexation element. All cities and towns shall phase annexations to coincide with their ability to provide a full range of urban services to areas to be annexed.

b. No city or town may annex territory beyond its urban growth area.

c. Developing areas within urban growth and identified annexation areas should annex or commit to annex to adjacent cities in order to receive a full range of city-provided urban services. Unincorporated areas that are already urbanized are encouraged to annex to the appropriate city or town in order to receive urban services. Incorporation of new cities and towns is a legal option allowed for under Washington law. Incorporation may be appropriate if an adequate financial base is identified or annexation is impractical.

d. The County shall encourage and support annexations to cities and town within Urban Growth Areas if consistent with the policies contained within the annexation element.

e. No city or town located in a county in which Urban Growth Areas have been designated may annex territory beyond an urban growth area.

f. An inter-jurisdictional analysis and process which assesses the fiscal and other impacts related to annexation on the County, the city or town, and special purpose districts shall be developed consistent with the policies contained in the annexation.

10.0 ECONOMIC DEVELOPMENT

Although an Economic Development Element is not required in the Comprehensive Growth Management Plan, Clark County will include this element in order to ensure that there is a balance of economic and population growth in the County, and that the type of economic development which occurs contributes to maintaining and improving the overall quality of life in the County.

10.1 County-wide Planning Policies

a. The County and the municipalities will demonstrate their commitment to long-term economic growth by promoting a diverse economic base, providing oppor tunity for all citizens, including unem ployed and disadvantaged persons. Growth which helps to measurably raise the average annual wage rate of community citizens, and preserves the environmental quality and livability of our community, is viable growth and will improve the lifestyle of Clark County citizens.

b. The County and the municipalities will demonstrate their commitment to the retention of those enterprises which have

created the economic base of the County, and promote their continued growth in a predictable environment, which encourages investment and job growth.

c. The County and the municipalities will encourage long-term growth of businesses of all sizes, because all are important factors in overall job growth in the County and the municipalities.

d. The County and the municipalities will promote productivity and quality among its businesses to meet world and market standards for their products and services.

e. The County and the municipalities will encourage the improvement of the participation rate of residents in higher education, and the measurable performance of high school graduates compared with other counties in the state.

f. The County and the municipalities may give priority assistance to employers who will increase the standard of living in the community.

g. The County and the municipalities will plan for long-term economic growth which enhances the capacity of existing air shed for job-generating activities.

h. The County and the municipalities will provide for orderly long-term commercial and industrial growth and an adequate supply of land suitable for compatible commercial and industrial development.

i. The County and the municipalities will encourage the recruitment of new business employers to absorb the increasing labor force, and to supply long-term employment to a portion of the County's residents who are currently employed outside of the County.

j. The County and the municipalities will work together, to the greatest extent possible, to establish specific common benchmarks that will measure the community's overall economic viability. These benchmarks will be included in the County's Comprehensive Plan and are encouraged to be included in each jurisdictions comprehensive plan.

k. Encourage use of a multi-modal transportation system that facilitates the reduction of travel times and the need for additional road construction within the region.

10.2 FRAMEWORK PLAN POLICIES

10.2.0 Encourage a balance of job and housing opportunities in each urban center. Provide sufficient land for business as well as homes. Businesses within the community should provide a range of job types for the community's residents.

10.2.1 Encourage industrial uses in major urban centers, small towns and community centers.

10.2.2 Revise commercial and industrial development standards to allow for mixed use developments and ensure compatibility with nearby residential and public land uses.

10.2.3 Encourage businesses which pay a family wage to locate in Clark County.

10.2.4 Encourage appropriate commercial development in neighborhoods and rural centers that support the surrounding community.

10.2.5 Develop transit-friendly design standards for commercial and industrial areas. Encourage businesses to take responsibility for travel demand management for their employees.

10.2.6 Establish incentives for the long-term holding of prime industrial land. Encourage local jurisdictions to and special districts to hold prime industrial land for future development.

11.0 CRITICAL AREAS

All of the jurisdictions in Clark County have adopted interim measures to protect identified critical areas within their boundaries. These measures must be reviewed and, if necessary, revised to implement the Comprehensive Growth Management Plan. The following policies are to ensure a coordinated approach to preservation of identified sensitive lands. The goal is to preserve significant critical areas as a part of a system of such areas, not as isolated reserves, wherever possible.

11.1 County-wide Planning Policies

a. Urban growth areas shall be established consistent with the protection of the environment and the enhancement of the state's high quality of life, including air and water quality, and the availability of water. The establishment of urban growth areas shall also be done in a manner consistent with the preservation of land, sites and structures that have historical or archeo logical significance.

11.2 Framework Plan Policies

11.2.0 New developments are to protect and enhance sensitive areas and respect natural constraints.

11.2.1 Protect and improve the County's environmental quality while minimizing public and private costs.

11.2.2 In the long-term, all jurisdictions should work towards compatible classification systems for wetlands.

11.2.3 Vulnerable aquifer recharge areas are to be regulated to protect the quality and quantity of groundwater in the County.

11.2.4 Establish development standards for uses, other than natural resource uses, on sensitive lands (e.g., 100-year flood plains, unstable soils, high-value wetlands, etc.).

11.2.5 Wetlands and watersheds are to be managed to protect surface and groundwater quality.

11.2.6 The County and jurisdictions are to work cooperatively with the Washington State Department of Wildlife to develop programs and areas that promote the preservation of habitats.

12.0 COMMUNITY DESIGN

Implementation of the Community Framework Plan will require attention to the details of design if it is to succeed in encouraging a sense of community and getting people to use alternative means of transportation. The following policies are intended to focus the design policies of each jurisdiction on certain key issues which must be coordinated in order to be effective.

12.1 County-wide Planning Policies

a. The community design element shall help conserve resources and minimize waste.

b. The County's community design standards shall be appropriate to the region, exhibiting continuity of history and culture and compatibility with the climate, and encourage the development of local character and community identity.

12.2 Framework Plan Policies

12.2.0 Develop high quality design and site planning standards for publicly funded projects (e.g., civic buildings, parks, etc.).

12.2.1 Encourage the establishment of open space between or around urban centers. These areas could be public greenways, resource lands, wildlife habitats, etc.

12.2.2 Encourage urban and rural centers to provide an ample supply of specialized open space in the form of squares, greens, and parks whose frequent use is encouraged through placement and design.

12.2.3 Establish development standards to encour age mixed use developments in urban and rural centers, while providing buffering for each use from the adverse effects of the other.

12.2.4 Establish development standards for higher densities and intensities of development along priority and high capacity transit corridors that encourage pedestrian, bicycle, and public transit usage.

12.2.5 Encourage street, pedestrian path and bike path standards that contribute to a system of fully-connected and interesting routes to all destinations. Their design should encourage pedestrian and bicycle use and be defined by buildings, trees and lighting, and discouraging high speed traffic.

12.2.6 Establish standards that use materials and methods of construction specific to the region, exhibiting continuity of history and culture and compatibility with the climate, to encourage the development of local character and community identity.

13.0 HISTORIC PRESERVATION

Clark County has a long and varied history, and many structures and sites remain which were a part of that history. These structures and sites define the unique character of the County and its communities. The following policies are to ensure a coordinated approach to their preservation.

13.1 County-wide Planning Policies

a. The County and each municipality should identify cultural resources within urban growth areas and the County.

13.2 Framework Plan Policies

13.2.0 The County, cities and towns are to identify federal, state and local historic and archaeological lands, sites or structures of significance within their jurisdictions.

13.2.1 Encourage owners of historic sites or structures to preserve and maintain them in good condition, consistent with their historic character.

13.2.2 Develop financial and other incentive programs for owners of historic properties to maintain their properties and make them available periodically for public education.

13.2.3 Establish county-wide programs to identify archaeological and historic resources, protect them, and educate the public about the history of the region.

13.2.4 Establish criteria for the identification of archaeological and historical resources, and establish a process for resolving conflicts between preservation of these resources and development activities.

C. Growth Management Act Planning Goals

The Vancouver Comprehensive Plan is consistent with the requirements of the Washington Growth Management Act (GMA). The following are the base GMA planning goals of RCW 36.70.A.020:

1. Urban growth. Encourage development in urban areas where adequate public facilities and services exist or can be provided in an efficient manner.

2. Reduce sprawl. Reduce the inappropriate conversion of undeveloped land into sprawling, low-density development.

3. Transportation. Encourage efficient multimodal transportation systems that are based on regional priorities and coordinated with county and city comprehensive plans.

4. Housing. Encourage the availability of affordable housing to all economic segments of the population of this state, promote a variety of residential densities and housing types, and encourage preservation of existing housing stock.

5. Economic development. Encourage economic development throughout the state that is consistent with adopted comprehensive plans, promote economic opportunity for all citizens of this state, especially for unemployed and for disadvantaged persons, promote the retention and expansion of existing businesse and recruitment of new businesses, recognize regional differences impacting economic development opportunities, and encourage growth in areas experiencing insufficient economic growth, all within the capacities of the state's natural resources, public services, and public facilities.

6. Property rights. Private property shall not be taken for public use without just compensation having been made. The property rights of land owners shall be protected from arbitrary and discriminatory actions.

7. Permits. Applications for both state and local government permits should be processed in a timely and fair manner to ensure predictability.

8. Natural resource industries. Maintain and enhance natural resource-based industries, including productive timber, agricultural, and fisheries industries. Encourage the conservation of productive forest lands and productive agricultural lands, and discourage incompatible uses.

9. Open space and recreation. Retain open space, enhance recreational opportunities, conserve fish and wildlife habitat, increase access to natural resource lands and water, and develop parks and recreational facilities.

10. Environment. Protect the environment and enhance the state's high quality of life, including air and water quality, and the availability of water.

11. Citizen participation and coordination. Encour age the involvement of citizens in the planning process and ensure coordination between communities and jurisdictions to reconcile conflicts.

12. Public facilities and services. Ensure that those public facilities and services necessary to support development shall be adequate to serve the development at the time the development is available for occupancy and use without decreasing current service levels below locally established minimum standards.

13. Historic preservation. Identify and encourage the preservation of lands, sites, and structures that have historical or archaeological significance.

APPENDIX B

VANCOUVER SHORELINE MANAGEMENT MASTER PROGRAM GOALS

(MARCH 2011 DRAFT)

2.1 General Shoreline Goals

The general goals of this Shoreline Master Program are to:

- Use the full potential of shorelines in accordance with the opportunities present ed by their relationship to the surrounding area, their natural resource values, and their unique aesthetic qualities offered by water, topography, and views; and

- Develop a physical environment which is both ordered and diversified and which integrates water and shoreline uses while achieving a net gain of ecological function.

2.2 Shorelines of Statewide Significance

Designated shorelines of state-wide significance (SSWS) are of value to the entire state. In accordance with RCW 90.58.020, shorelines of statewide significance will be managed as follows:

1. Preference shall be given to the uses that are consistent with the statewide interest in such shorelines. These are uses that:

   a. Recognize and protect the statewide interest over local interest;

   b. Preserve the natural character of the shoreline;

   c. Result in long term over short term benefit;

   d. Protect the resources and ecology of the shoreline;

   e. Increase public access to publicly owned areas of the shorelines;

   f. Increase recreational opportunities for the public in the shoreline; and

   g. Provide for any other element as defined in RCW 90.58.100 deemed appropriate or necessary.

2. Uses that are not consistent with these policies should not be permitted on shorelines of statewide significance.

3. Those limited shorelines containing unique, scarce and/or sensitive resources should be protected.

4. Development should be focused in already developed shoreline areas to reduce adverse environmental impacts and to preserve undeveloped shoreline areas. In general, preserve shorelines of state-wide significance for future generations and restrict or prohibit development that would irretrievably damage shoreline resources. Evaluate the short-term economic gain or convenience of developments relative to the long-term and potentially costly impairments to the natural shoreline.

2.3 Shoreline Use and Development

2.3.1 Goal

The goal for shoreline use and development is to both preserve and develop shorelines in a manner that allows for an orderly balance of uses. Resulting land use patterns will be compatible with shoreline designations and sensitive to and compatible with ecological systems and other shoreline resources. To help with this balance, shoreline and water areas with unique attributes for specific long term uses such as commercial, residential, industrial, water, wildlife, fisheries, recreational and open space shall be identified and reserved.

2.4 Economic Development

2.4.1 Goal

The goal for economic development is to create and maintain an economic environment that can coexist harmoniously with the natural and human environment.

2.5 Conservation

2.5.1 Goal

The goal of conservation is to protect shoreline resources, important shoreline features, shoreline ecological functions and the processes that sustain them to the maximum extent practicable.

2.6 Restoration

2.6.1 Goal

The goal of restoration is to re-establish, rehabilitate and/or otherwise improve impaired shoreline ecological functions and/or processes through voluntary and incentive-based public and private programs and actions that are consistent with the Shoreline Management Program Restoration Plan and other approved restoration plans.

2.7 Flood Prevention and Flood Damage Minimization

2.7.1 Goal

The goal for flood hazards is to promote public health, safety, and general welfare, and to minimize public and

private losses due to flood conditions in specific areas.

2.8 Archaeological, Historic, and Cultural Resources

2.8.1 Goal

The goal for archaeological, historic, and cultural resources is to preserve and prevent the destruction of or damage to any site having historic, cultural, scientific, or educational value. Such sites include those identified by affected Indian tribes, the Department of Archaeology and Historic Preservation, Clark County Historic Preservation Commission, and other appropriate authorities.

2.9 Public Access and Recreation

2.9.1 Goal

The goal of public access and recreation is to increase the ability of the general public to enjoy the water's edge, travel on the waters of the state, and to view the water and the shoreline from adjacent locations.

2.10 Transportation, Utilities, and Essential Public Facilities

2.10.1 Goal

The goal for transportation, utilities, and other public facilities is to provide transportation systems and essential public facilities in shoreline areas without adverse effects on existing shoreline use and development or shoreline ecological functions and/or processes.

2.11 Views and Aesthetics

2.11.1 Goal

The goal for views and aesthetics is to assure that the public's opportunity to enjoy the physical and aesthetic qualities of shorelines of the state, including views of the water is protected to the greatest extent feasible.

2.12 Shoreline Modification and Stabilization

2.12.1 Goal

The goal for shoreline modification and stabilization is to avoid or minimize the need for shoreline armoring along shorelines of the state, and when it is necessary, achieve it in a way that best protects ecosystem processes, shoreline functions, and downstream properties.

APPENDIX C

GROWTH ASSUMPTIONS

Vancouver internal projections

GMA requires local governments to indicate the land use assumptions used to estimate capital facilities and other needs. Existing and future growth capacity estimates are summarized below, with sources listed in parentheses:

- Employment includes only jobs covered in Washington Employment Security Department inventories. Non-covered jobs are estimated to account for approximately 3-4% of covered totals.
- Employment estimates and projections depend on a wider range of factors than population, and are typically much more speculative.

	2011 Existing Estimate		2030 Projected Capacity	
	Population	Employment	Population	Employment
City of Vancouver	162,300 persons (2010 US Census plus Vancouver permit records)	74,000 jobs (Washington Employment. Security Dept)	202,300 persons (Existing estimate plus Vancouver internal development assumptions applied to base land inventories provided by Clark County from GIS and assessor records. See accompanying table)	139,200 jobs (similar methodology as population)
Unincorp. VUGA	141,100 persons (Clark County GIS)	29,200 jobs (WESD)	227,700 persons (same)	72,900 jobs (same)
Total VUGA	303,400	103,200 jobs	430,000 persons	212,100 jobs

- Capacity estimates are projections of realistic long term growth capacity under existing plans, not policy goals for how much growth is desired.
- Capacity estimates are based on existing boundaries, and do not include future City annexations or future UGA expansions, which are likely during the planning period and will result in additional growth
- Capacity estimates do not attempt to project annual growth increments or rates within the 20-year period, which is likely to vary widely in individual years, particularly in areas like Vancouver with significant in-migration.
- Growth reflects the net gain in population and jobs, and is very sensitive to land supply as well as demand. The City of Vancouver, with a relatively lesser land supply, is projected to grow more slowly than the Vancouver UGA, which has more available land.
- Individual subareas or neighborhoods may grow faster or slower than the City or UGA as a whole.
- Projected citywide growth includes long term redevelopment capacity in downtown Vancouver, Section 30, Riverview Gateway, and other identified subareas and development nodes.

Clark County official forecasts for sizing Urban Growth Areas (As of 2011)

- For purposes of sizing Urban Growth Area boundaries, GMA requires counties to adopt 20–year countywide population and employment forecasts, and allocations for individual UGAs. The countywide population forecast must fall within a range provided by the Washington Office of Financial Management. In 2007 Clark County adopted an allocation of 376,226 persons for the Vancouver UGA, including the City of Vancouver, through 2024.
- The County future growth forecasts function as policy inputs as well as predictions. The fore casts, along with development assumptions devised by Clark County, are used to establish the size and zoning of UGAs. The size and zoning of UGAs in turn greatly influences the amount of growth that may occur.
- The methodology used by Clark County to determine necessary UGA sizes from the population and employment forecasts is based on a GIS based inventory of assessor parcel records, subject to various assumptions. It is usually referred to as the Vacant Buildable Lands Model (VBLM). Consult Clark County for details.

VANCOUVER GROWTH CAPACITY ANALYSIS 2011 through 2030

City of Vancouver

POPULATION

Residential High Density	Base Acres	Will not Convert	Infra Acres	Developable Acres	Units	Persons
Vacant	196.4	19.6	49.0	127.8	2044.8	4498
Vac Constrained	148.8	81.8	18.5	48.4	774.6	1704
Underutilized	54.1	16.2	10.5	27.4	438.1	964
Und Constrained	29.6	19.2	2.9	7.5	119.8	264
Low Density						
Vacant	292.6	29.3	72.9	190.4	1332.8	3598
Vac Constrained	246.1	135.4	30.7	80.1	560.5	1513
Underutilized	264.8	79.4	51.3	134.0	938.1	2533
Und Constrained	220.5	143.3	21.4	55.8	390.6	1055
Mixed Use						
Vacant	8.4	0.0	2.1	6.3	113.4	249
Vac Constrained	16.8	3.4	3.4	10.1	181.4	399
Underutilized	1.0	0.0	0.3	0.8	13.5	30
Und Constrained	11.0	2.2	2.2	6.6	118.8	261
Existing Small (2500-5000 sf) Lots						
High Density	249	base lots			199	438
Low Density	384	base lots			307	829
Redevelopment						21758
				TOTAL NEW PERSONS		40095
				TOTAL EXISTING PERSONS		162300
				TOTAL BUILDOUT POPULATION		202395

Unincorporated Vancouver UGA

POPULATION

Residential High Density	Base Acres	Will not Convert	Infra Acres	Developable Acres	Units	Persons
Vacant	355.0	35.5	88.5	231.0	3696.0	8131
Vac Constrained	241.4	132.8	30.1	78.5	1256.6	2765
Underutilized	180.1	54.0	34.9	91.1	1458.4	3208
Und Constrained	76.3	49.6	7.4	19.3	308.9	680
Low Density						
Vacant	1223.4	122.3	305.0	796.1	5572.5	15046
Vac Constrained	1096.9	603.3	136.7	356.9	2498.1	6745
Underutilized	2486.3	745.9	482.1	1258.3	8808.2	23782
Und Constrained	1565.6	1017.6	151.8	396.2	2773.2	7488
Mixed Use						
Vacant	130.9	0.0	32.7	98.2	1767.2	3888
Vac Constrained	69.3	13.9	13.9	41.6	748.4	1647
Underutilized	87.9	0.0	22.0	65.9	1186.7	2611
Und Constrained	47.4	9.5	9.5	28.4	511.9	1126
Existing Small (2500-5000 sf) Lots						
High Density	396	base lots			317	697
Low Density	461	base lots			369	996
Redevelopment						7881
				TOTAL NEW PERSONS		86689
				TOTAL EXISTING PERSONS		141100
				TOTAL BUILDOUT POPULATION		227789

DOCUMENTATION

1. Base acreage from County GIS 2010 V run (vanyielduga, vanvieldcity, crkyielduga files)
2. Will not convert, infrastructure, mixed use density and high density residential density estimates consistent with County VBLM methodology
3. Low Density residential density estimates (7 u/a city, 7 u/a VUGA) based on:
   a Capacity analyses is inherently future-oriented. State Buildable Lands Program Guidelines advise that “likely future trends should be considered”
   b. Observed local trends point to smaller lots. Average densities of new single family home development in Urban Low designation areas in 2008 was 5.8 u/a in city, 5.8 in VUGA, but these are skewed by development on a handful of previously created large lots. (Just four city lots ranging from .7 to 4 acres in size lowered citywide average from 7.4 to 5.8 u/a). Median density of newly created lots in Urban Low areas from 2007 through 2009 was 7.9 u/a in city, 7.2 in VUGA. 44% of all new city lots created in last three years are 5,000 square feet or less.

VANCOUVER GROWTH CAPACITY ANALYSIS 2011 through 2030

City of Vancouver

EMPLOYMENT

COMMERCIAL	Base Acres	Will not Convert	Infra Acres	Developable Acres	Jobs	
Vacant	439.1	0.0	109.8	329.3	8233.1	
Vac Constrained	96.2	19.2	19.2	57.7	1443.0	
Underutilized	19.4	0.0	4.9	14.6	363.8	
Und Constrained	0.2	0.0	0.0	0.1	3.0	
MIXED USE						
Vacant	5.6	0.0	1.4	4.2	84.0	
Vac Constrained	11.2	2.2	2.2	6.7	134.4	
Underutilized	0.7	0.0	0.2	0.5	10.5	
Und Constrained	7.4	1.5	1.5	4.4	88.8	
INDUSTRIAL						
Vacant	820.9	0.0	205.2	615.7	6772.4	
Vac Constrained	718.3	359.2	89.8	269.4	2963.0	
Underutilized	151.4	0.0	37.9	113.6	1249.1	
Und Constrained	243.4	121.7	30.4	91.3	1004.0	
Exempt V	156.1	0.0	39.0	117.1	1287.8	
Exempt VC	768.6	384.3	96.1	288.2	3170.5	
Exempt U	50.7	0.0	12.7	38.0	418.3	
Exempt UC	19.5	9.8	2.4	7.3	80.4	
Subtotal						27306
Redevelopment						32039
Government and non-profit jobs on residential lands						2967
Home Based Jobs						2967
TOTAL NEW COVERED JOBS						65280
TOTAL EXISTING COVERED JOBS						74009
TOTAL COVERED JOBS AT BUILDOUT						139,289

Unincorporated Vancouver UGA

EMPLOYMENT

COMMERCIAL	Base	Will not Acres	Infra Convert	Developable Acres	Jobs Acres	
Vacant	481.2	0.0	120.3	360.9	9022.5	
Vac Constrained	343.3	68.7	68.7	206.0	5149.5	
Underutilized	282.2	0.0	70.6	211.7	5291.3	
Und Constrained	266.8	53.4	53.4	160.1	4002.0	
MIXED USE		0.0				
Vacant	87.3	0.0	21.8	65.5	1309.5	
Vac Constrained	46.2	9.2	9.2	27.7	554.4	
Underutilized	58.6	0.0	14.7	44.0	879.0	
Und Constrained	31.6	6.3	6.3	19.0	379.2	
INDUSTRIAL						
Vacant	453.5	0.0	113.4	340.1	3741.4	
Vac Constrained	439.0	219.5	54.9	164.6	1810.9	
Underutilized	206.7	0.0	51.7	155.0	1705.3	
Und Constrained	242.2	121.1	30.3	90.8	999.1	
Subtotal						34844.0
Redevelopment						3484.4
Government and non-profit jobs on residential lands						3449.6
Home Based Jobs						1916.4
TOTAL NEW COVERED JOBS						43694
TOTAL EXISTING COVERED JOBS						29243
TOTAL COVERED JOBS AT BUILDOUT						72937

DOCUMENTATION (continued)

c. Ongoing outside trends point to smaller lots overall: Recession impacts on future homebuyer purchasing power and credit availability; Aging populations; Increase in non-traditional households; Increased gas costs

4. Persons per unit estimates (2.2 MFR, 2.7 SFR) from 2009 OFM Vancouver census
5. Existing developable residential small lots inventory from assessor inventory based on PT1 codes with taxable amount. 20% assumed not-to-develop
6. Vancouver redevelopment estimates based on anticipated population and employment growth at specific sites, primarily downtown Vancouver (VCCV), 192nd/SR-14 Quarries, Columbia Tech Center, Columbia Business Center, Section 30, Port of Vancouver, Fourth Plain corridor subarea, Evergreen Airport, SW Medical Center, others.
7. Vancouver existing persons estimates based on 4/1/09 OFM census and Tidemark permit records. VUGA estimate based on assessor data.
8. Industrial and commercial jobs per acre estimates (25 jobs/acre commercial, 11 industrial) from Clark County 2002 Buildable Lands Report
9. Home based work estimate based on 2000 US Census factor upwards to account for technological changes, primarily home computing
10. All jobs projections are for covered jobs only. Uncovered jobs estimated to account for additional 5% currently, per WESD Economist Scott Bailey

APPENDIX D

CAPITAL FACILITIES FUNDING SUMMARY

Introduction

The Growth Management Act requires the City to identify the sources of funding for each type of capital facility. This section presents the funding sources for City funded capital facilities. Those capital facilities include infrastructure related to transportation, water, sewer, storm water and solid waste utilities, and parks, fire, police and general government facilities. Additional funding information on these and other capital facilities provided by non-municipal agencies is contained in Chapter 5 of this Vancouver comprehensive plan, and in individual service area plans adopted by reference (see Appendix E for full list).

This section presents an overview of capital facility funding sources, additional information on selected revenues, a brief explanation of the City's capital facility funding process and a summary of capital facility funding by capital facility and funding source.

Overview of capital facility funding sources

The City's capital facilities are funded by a variety of resources including dedicated funding that must be used for capital purposes and unrestricted resources that can be allocated to fund capital projects. Funding comes from the City and other sources originating outside the City such as State and Federal grants, and contributions from other agencies or organizations. Each of these sources is briefly described below.

Impact fees. State law allows the City to collect fees from owners or developers as development occurs to fund park acquisition, park development and transportation capital projects. The fee amount is determined by estimating the appropriate private sector cost of the capital facilities that are required to meet expected demand and achieve the established service level standard. The appropriate private sector cost is allocated to new development based in its estimated impact on demand. These impact fees must be expended on projects located in the area where they were collected within ten years, from the date they were collected and must be matched by the appropriate amount of public funding. For example, it is typical to have a combination of impact fees, State grants and other City contributions used to fund City transportation capital projects.

Systems Development Charges (SDCs). Like impact fees, SDCs are collected from owners and/or developers as development occurs to fund improvements to the water and sewer utilities. These funds may be expended on projects that expand utility system capacity and can either pay for debt service on bonds or for direct project expenditures.

Real Estate Excise Tax (REET). State statute authorizes the City to impose two taxes of ¼% each on the sale of real estate within the city limits. The proceeds of the tax must be used for capital purposes as allowed by State law and as directed by the City Council. The City has implemented both taxes. The proceeds from one ¼% REET are dedicated to the City's pavement management program in Transportation. Proceeds from the other ¼% REET From 2005 through 2009, were split between parks and recreation and transportation. A total of 70% of the proceeds was dedicated to parks and recreation, largely funding the debt service for bonds issues to remodel Marshall and build Firstenburg Community Centers and the remaining 30% was dedicated to funding neighborhood traffic safety projects. Beginning in 2009 this funding source continues to fund debt service on the two recreation community centers, but the remaining balance has been allocated between funding the debt service on the Waterfront Access Project (20%), reduced in scope neighborhood traffic safety program (6% of revenue) and, if any funds remain, parks capital program.

Federal and State Grants. The City is very active in applying for grants from various federal and state agencies to fund capital facilities. These grants are typically available for a specific purpose or project. The City has had the most success in obtaining grants for transportation improvements, parks and trails, stormwater and water quality improvement projects, historic preservation and airport improvements. Both state and federal grants typically require the commitment of local funding as a match to the grant. Beginning in 2012, minimal local matching dollars are available for projects in Transportation and Parks capital programs. In addition to grants from state or federal agencies, the City is allocating a portion of its Community Development Block Grant funding to selected transportation and parks capital projects.

Other Agencies. The City actively seeks out partnerships with other federal, state and local agencies to help fund capital facilities. These partnerships have been used in a number of programs but are more likely to be used in transportation and parks and recreation capital programs. Participating agencies often include Clark County, CTRAN, the Port of Vancouver and other local governments in Clark County.

Restricted Donations. Individual residents, local businesses and other organizations may also provide funding for specific capital projects. Donations, with few exceptions are sufficient to cover only small portions of projects.

General Obligation Bonds. Funding for capital facilities projects may be provided by general obligation bonds issued for specific purposes. General obligation bonds were issued to help fund the City's transportation capital program and public safety facility construction over the last several years. The source for repayment of the bonds is either general fund revenue or other revenue sources

City Council dedicates for that purpose. The most recent bond issues were supported by new 2/10 of 1% in sales tax for Public Safety and a $50 per employee business license surcharge revenue that Council approved specifically to support debt for a number of specific high priority transportation projects. The maximum amount of non-voted debt the City can issue is limited by state law to 1.5% of the City's assessed value. In 2011 the City has approximately $107 million in available non-voted debt capacity with a projected amount of $246 million in voted capacity.

Water and Sewer Utility Revenue Bonds. Revenue bonds issued by the City's water and sewer utilities have been used to fund specific capital projects for the utilities including expansion of sewage treatment capacity. The bonds are repaid from user fees charged to the water and sewer utilities customers and from SDCs (see above). Utility revenue bonds are repaid exclusively from utility revenues.

Voter Approved Bonds. Voters can approve a property tax levy to pay for bonds issued to fund capital projects. Any proposed voter approved bond levy requires 60% voter approval. The City currently has no voter approved bonds outstanding.

Arterial Street Fund. The Arterial Street Fund is a special revenue fund that receives state-shared gas tax revenues that must be used for capital projects on streets defined as arterial streets in the City's Transportation Improvement Plan.

Operating Funds. The City may allocate operating or general funds for capital purposes. Operating funds have been used in the past to fund capital facility improvements for transportation, parks and recreation and Pearson Airpark. Operating funds can be used to pay for projects directly or to pay principal and interest on bonds issued to fund capital projects. Excess operating funds are also used to fund capital projects for the City's utilities.

Additional information on selected revenues

The City has a number of general revenue sources that could be used to fund its capital facilities. Several of these revenues are unrestricted and available to fund the needs of general operations and maintenance as well as capital projects. In addition, some transportation capital funding sources are available but cannot be accessed without County Commissioner or voter approval.

Often, general revenues are used to pay the principal and interest on bonds used to fund capital projects. For reference, the estimated annual debt service on $12 million in bonds carrying 5.5% interest and repaid over 20 years would be approximately $1 million per year. A brief summary of these revenues is provided in Table D-1.

Table D-1.

General City Taxes		
	Dollar Amount	**Notes**
Property Tax		
Levy lid lift (voted)	$1,800,000	Increase in city's levy up to statutory maxium. The dollar amount represents an amount of collections during a six year period, assuming an 8% further reduction in AV in 2011 for the 2012 taxes.
Voted excess levy bonds	$3,440,000	Amount represents a $0.25 per $1,000 AV in excess levy
Sales Tax (Voted)		
1/10 of 1% Public Safety local Sales and Use Tax	$2,140,000	Assumes City imposing the tax
Business and Occupation Tax (Council-matic)		
Re-establish B&O tax at 1992 rates	$9,900,000	
Business License Surcharge (Council-matic)		
$50/employee	$2,000,000	
Utility Tax on Privately Owned Utilities (voted)		
1% increase on electrical, natural gas, telephone, cable	$2,950,000	
Local Option Transportation Funding Sources, require creation of a Transportation Benefit District Motor Vehicle License Fee		
Local Option Vehicle License Fee $100 (voted)	$10,500,000	
Sales Tax		
Sales Tax 2/10 of 1% (voted)	$4,400,000	
Parks and Recreation Revenue Options, require creation of a Metropolitan Parks District		
Property Tax		
$0.50 levy per $1,000 in assessed valuation	$3,300,000	Assumes further AV reductions impact the ability to generate full $50 per $1,000 AV

CAPITAL FACILITY FUNDING PROCESS

In recognition of the scarcity of capital funding sources the City has developed a process to assess capital facility funding requirements and allocate capital funding to projects. That process includes department requests, a City Manager recommendation and City Council consideration Key elements of the City's capital facility budgeting approach include:

Department submission of capital budget requests. Using a template provided by City budget staff, the staff in selected City departments submit their capital facilities budget requests. This request includes an update on the budget, actual expenditures, and projected revenues of current projects as well as information on new projects expected to start in the next biennium. Although a project may have costs in future years, if it is scheduled to begin in the upcoming biennium the full cost of the project is included in that biennium's budget appropriation.

Balanced Budgets by Project. Each project has to have specific funding sources identified that must be in balance with the proposed expenditures.

Reasonably Funded Test. Budget staff compares the funding required for the capital facilities budget requests in each department to the revenues that are currently available and reasonably expected to be received in the biennium. All of the recommended projects are funded by available capital reserves and projected revenues.

Where future revenues are relied upon, department revenue estimates are reviewed and discounted by budget staff to determine the amount of funding available to support proposed projects.

Review with Senior City Management. The City Manager and his Senior Budget Review Team complete a review of the recommended capital budget. After their review the appropriate adjustments are made and discussed with department staff.

Council Appropriation. The recommended capital budget is presented to City Council for approval. Approval is in the form of an ordinance authorizing the appropriation.

Budget Monitoring. Once the appropriations are approved by City Council, capital projects are monitored by department, budget and accounting staff. Project expenses are compared to their authorized appropriation using a project length schedule and the appropriate project budget is reflected in the City's financial system. Budget controls in the City's financial system restrict a project from overspending its approved budget. If an additional appropriation for a specific project is required, the department must demonstrate to budget staff where the funding will come from. Any need for additional appropriation must be presented to City Council for approval.

Table D-2. Estimates for specific sources of funding for each capital facility over 6- and 20-year period.

Transportation	**2011-2016**	**2017-2030**
Total Impact Fees	10,871,782	10,826,945
State and Federal Grants	21,743,564	21,653,890
City REET - 1st 1/4% - Pvt Management	2,514,052	25,377,634
Motor Vehicle Fuel Tax, unobligated	18,766,400	50,803,000
Developer Contributions	1,500,000	4,500,000
Reserves for funded projects	14,700,000	-
GO Bonds	10,700,000	-
General Fund Support - Pvt Mgt	9,361,174	36,047,163
City REET - 2nd 1/4%	600,000	1,690,000
New Needed Undetermined Funding	5,770,699	319,663,881
Subtotal Transportation	96,527,671	470,562,514
City Parks		
Total City Impact Fees	9,406,713	5,842,473
Residual REET	750,000	-
City REET - 2nd 1/4%	-	4,944,612
Grants, Donations	11,152,137	-
New Desired Undetermined Funding	5,416,571	13,162,390
Subtotal Parks	26,725,421	23,949,475

Table D-2 Continued. Estimates for specific sources of funding for each capital facility over 6- and 20-year period.

Utilties	**2011-2016**	**2017-2030**
Water, System Develoment Charges	7,850,000	21,000,000
Sewer System Development Charges	8,450,000	22,400,000
Utility Operating Revenues for Capital	87,978,182	222,355,232
Utility Capital Reserves	39,000,000	-
Grants	-	-
Utility Revenue Bonds	-	-
Subtotal Utilities	143,278,182	265,755,232
General Capital		
REET, - 2nd 1/4%, unobligated	288,400	5,075,527
Grants	-	-
Bonds	-	-
Cash Reserves	900,000	-
New Needed Undetermined Funding	28,427,000	5,000,000
Subtotal General Capital	29,615,400	10,075,527
GRAND TOTAL FUNDING SOURCES	295,531,274	770,342,747

APPENDIX E: OTHER PLANS AND DOCUMENTS ADOPTED BY REFERENCE AS PART OF THE COMPREHENSIVE PLAN

The following separate documents, providing technical data, analysis, and background information, are adopted as part of the Vancouver Comprehensive Plan:

I. Facilities and Services Plans

- Vancouver Capital Facilities 6-year Project List
- Transportation Improvement Program – TIP (6-year plan updated annually in June) 2011-2016
- Vancouver Capital Facilities Budget 2009-2010
- Vancouver Transportation System Plan 2004
- SW Washington Regional Transportation Council Metropolitan Transportation Plan
- Coordinated Consolidated Water System Plan 1999
- Vancouver-Clark Parks & Recreation Comprehensive Parks, Recreation and Open Space Plan 2009
- Vancouver Urban Parks, Recreation and Open Space Plan 2002
- Vancouver, Evergreen, and Camas School District Capital Facilities Plans (6-year), 2011
- Pearson Airfield Business Plan 2005
- Pearson Airport Master Plan 2001
- Vancouver Water System Comprehensive Plan 2007

II. Additional Plans

- Vancouver Consolidated Housing & Community Development Plan 2009-2014
- 2004 Vancouver Walking and Bicycle Master Plan – Path & Trails Element (Central City Loop Trail amended 2009)
- Esther Short Subarea Plan 1998
- Fourth Plain Corridor Subarea Plan 2007
- Vancouver City Center Vision Plan 2007, Amended 2009
- Central Park Plan 2008
- Lower Grand Employment Area Subarea Plan 2008
- Riverview Gateway Subarea Plan 2009
- Shoreline Management Master Program, 1997, 2007
- Urban Forestry Management Plan 2007
- Section 30 Urban Employment Center Subarea Plan 2009
- Creating a more Sustainable Vancouver Plan, 2009
- 1990 Clark County Open Space Plan
- Vancouver Commute Trip Reduction Plan, July 2007
- Downtown Vancouver Growth and Transportation Efficiency Center Plan, September 2007.

III. Technical Documents

- Visual Preference Survey 1994
- Clark County Plan Monitoring Report 2007, 2009
- Clark County Buildable Lands Report 2007
- Vancouver Plan Monitoring Report 2010
- Code and Regulatory Barriers to the Living Building Challenge for Sustainable, Affordable Residential Development, 2009
- Draft and Final Environmental Impact Statements - Comprehensive Growth Management Plans of Clark County, Camas, La Center, Ridgefield, Vancouver, Washougal and Yacolt, 2006.
- July 2011 Transportation Analysis
- Individual City of Vancouver Capital project listings, 2011-16.
- June 2011 Clark County Public Health Rapid Health Impact Assessment of Vancouver Comprehensive Plan

Glossary

Acre A measure of land area containing 43,560 square feet.

Acre, net An acre of land calculated excluding all unusable spaces, e.g., roads, infrastructure, environmentally sensitive areas.

ADD average daily demand

Affordable housing Housing is considered affordable to a household if it costs no more than 30 percent of gross monthly income for rent or mortgage payments, or up to three times annual income for purchasing a home. This is the standard used by the federal and state government and the majority of lending institutions.

ALS Advanced Life Support

AMI Areawide median income

Arterial A major street carrying the traffic of local and collector streets to and from freeways and other major streets. Arterials generally have traffic signals at intersections and may have limits on driveway spacing and street intersection spacing.

Average Daily Traffic The weighted 24-hour total of all vehicle trips to and from a site Monday through Friday.

BBC Burnt Bridge Creek

Best Available Science Information that is based on existing professional peer-reviewed scientific research and applicable to local conditions. See WAC 365-195-900ff.

BLS Basic Life Support

BPA Bonneville Power Administration

CAA Clean Air Acts

Capital Facilities Program A local government program that schedules permanent capital improvements, usually for six years in the future to fit the projected fiscal capability of the jurisdiction. The program is generally reviewed annually, for conformance to and consistency with the adopted Comprehensive Plan.

Capital facilities Permanent physical infrastructure such as roads, sewer and water lines, police and fire stations, schools, parks, and government buildings.

Capital Improvement Program A local government program that schedules permanent capital facilities, usually for six years in the future to fit the projected fiscal capability of the jurisdiction. The program is generally reviewed annually, for conformance to and consistency with the adopted Comprehensive Plan.

CDBG Community Development Block Grant

CFP Capital Facilities Program

Collector A street for traffic moving between major or arterial streets and local streets. Collectors generally provide direct access to properties, although they may have limitations on driveway spacing.

Concurrency Requirement that proposed land uses be tested to ensure that public facilities and services necessary to maintain locally adopted minimum service levels are provided before or at the time of development. The Growth Management Act requires local concurrency standards for transportation facilities.

CPU Clark Public Utilities

CRC Columbia Resource Company

CREDC Columbia River Economic Development Council

CRESA Clark Regional Emergency Services Agency

Critical areas Defined by the Growth Management Act (RCW 36.70A.030[5]) to include wetlands, sensitive fish and wildlife habitat areas, critical recharge areas for groundwater aquifers, and geologically hazardous areas (such as landslide areas, earthquake fault zones, and steep slopes), and floodplains.

CSWMP Clark County Solid Waste Management Plan

CTR Central Clark County Transfer and Recycling Center

CWA Clean Water Act

CWSP Clark County Coordinated Water System Plan

Density For residential development, density means the number of housing units per acre. For population, density means the number of people per acre or square mile.

Density, gross Density calculations based on the total

acreage of an area, including streets, roads, easements, rights-of-way, parks, open space, and sometimes, other land uses.

Density, net Density calculations based on the actual area of land used, not including streets, roads, rights-of-way, easements, parks and open space.

DEQ Oregon Department of Environmental Quality

DNR Washington State Department of Natural Resources

DOE Washington Department of Ecology

EMS Emergency Medical Service

EPA Environmental Protection Agency

ESA Endangered Species Act

ESD Washington State Employment Security Department

FEMA Federal Emergency Management Agency

Family-wage job A job that pays the current "threshold cash wage" (as defined herein) and provides a benefit package with options that will allow a family of up to three members to function with a single wage earner without supplemental public assistance.

Flood hazard area Lowland or relatively flat area adjoining inland or coastal waters that is subject to a 1 percent chance of flooding in any given year. Also known as the 100-year floodplain.

Floodplain See "flood hazard area."

Floodway The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

Floodway fringe The area of land lying between the outer limit lines of the floodway and the outer limit lines of the "100-year floodplain."

FEMA Federal Emergency Management Agency

FVRLD Fort Vancouver Regional Library District

GIS Geographic Information System

GMA State of Washington Growth Management Act of 1990

Groundwater Water that exists beneath a land surface or beneath the bed of any stream, lake, reservoir or other body of surfacewater. It is water in a geological formation or structure that stands, flows, percolates or otherwise moves.

High occupancy vehicle (HOV) Locally defined as a vehicle carrying two or more people.

Household All persons living in a dwelling unit, whether or not they are related. Both a single person living in an apartment and a family in a house are considered a "household."

HOME Home Investment Partnerships Program

HSS Highways of Statewide Significance

Household income The total of all the incomes of all the people living in a household.

HUD U.S. Department of Housing and Urban Development

Human scale Development that encourages human use, interaction, and pedestrian activity through size, spacing, orientation or other features.

Impact fee Fee levied on the developer of a project by a city, county, or special district as compensation for the expected effects of that development. The Growth Management Act authorizes imposition of traffic, school, and park impact fees on new development and sets the conditions under which they may be imposed.

Implementation measure Action, procedure, program, regulation, or technique that carries out comprehensive plan policy.

Infrastructure Physical systems and services that support development and people including, but not limited to, streets and highways, transit services, water and sewer systems, storm drainage systems, and airports.

ISO Insurance Services Organization

Land absorption Occurs when vacant land is developed or underdeveloped land is redeveloped.

Level of service (LOS) Method of measuring and defining the type and quality of particular public service such as transportation, fire protection, police protection, library service, schools/education, etc. Transportation levels of service are designated "A" through "F," from best to worst. LOS A describes free flowing conditions; LOS E describes conditions approaching and at capacity; LOS F describes system failure or gridlock.

LOS Level of service

Low-income household Households earning between 51 percent and 80 percent of the countywide median income.

Median income Midpoint of all of the reported household incomes; half the households have higher incomes and half have lower incomes than the mid-point.

MDD maximum day demand

MFSA Maritime Fire and Safety Association

MG million gallon

MGD millions of gallons per day

MMSW mixed municipal solid waste

MPO Metropolitan Planning Organization

MPTP Marine Park Treatment Plant

MSW municipal solid waste

NAP Neighborhood Action Plan

NPDES National Pollution Discharge Elimination System

ODOT Oregon Department of Transportation

OFM Office of Financial Management

Open space Any parcel or area of land or water that is essentially unimproved and provides passive recreational opportunities compatible with resource protection.

PMSA Primary Metropolitan Statistical Area

Poverty level An income-based threshold set by the Census Bureau to define who is poor.

psi pounds per square inch

RDII Rainfall-Derived Infiltration and Inflow

REET Real Estate Excise Tax

Resource lands Under GMA (RCW 36.70A.170), lands that may be used for commercial forest, agriculture, or mineral extraction industries.

Riparian area Lands adjacent to a water body that are influenced by or influence the hydrology of that water body.

RTC Regional Transportation Council

RTPO Regional Transportation Planning Organization

SCIP Sewer Connection Incentive Program

SEPA State Environmental Policy Act (RCW 41.23C), as amended.

SMA Shoreline Management Act (RCW 90.58)

STEP Septic Tank Elimination Program

Stormwater Any flow occurring during or following any form of natural precipitation, and resulting from such precipitation, including snowmelt.

Surfacewater Water that flows across the land surface, in channels, or is contained in depressions in the land surface, including but not limited to ponds, lakes, rivers, and streams.

SWCAA Southwest Washington Clean Air Agency

TAZ Transportation Analysis Zone

TBD to be determined

Threshold cash wage Clark County's average annual covered wage plus 25 percent, based on data available from the Washington Employment Securities Commission.

TIF Traffic Impact Fee

TIP Transportation Improvement Program

TSP Transportation System Plan

Urban Growth Areas Areas designated by a county pursuant to RCW 36.70A.110 where urban growth will be encouraged.

Vancouver UGA Vancouver Urban Growth Area

VCPRD Vancouver-Clark Regional Parks and Recreation Department

VFD Vancouver Fire Department

Vehicle miles traveled Average number of miles traveled by a vehicle in a given area. This is both a measure of trip length and of dependency on private vehicles.

Very low income Households earning less than 50 percent of the countywide median income.

VPD Vancouver Police Department

VPOC Vancouver Plan Oversight Committee

VUGA Vancouver Urban Growth Area

Water-quality limited stream Surfacewaters that have been identified as not meeting water quality standards and not supporting identified beneficial uses, as defined in Washington regulations (WAC 173-201A).

WDFW Washington State Department of Fish and Wildlife

WSD Washington School for the Deaf

WSDOT Washington State Department of Transportation

WSSB Washington State School for the Blind

WSU-V Washington State University at Vancouver

WTP Westside Treatment Plant

WUCC Water Utility Coordinating Committee

WUTC Washington Utilities and Transportation Commission

WWRF Waste Water Reserve Fund

Ex5903-000156-CRK

City of Vancouver, Vancouver Comprehensive Plan:
2011–2030 (2011)