



Agenda
Planning Commission Workshop
Wednesday, April 19, 2017
City Manager's Conference Room | 975 George Washington Way

Commission Members: Chair Wallner, Vice-Chair Madsen and Commissioners Mealer, Wise, Palmer, Boring, and Berkowitz

Liaisons: Council Liaison Lemley and Alternate Council Liaison Luzzo Gilmour
Staff Liaison Development Services Manager Simon

Agenda Items:

Special Workshop - 7:00 p.m.

Call to Order / Attendance:

Business:

1. Comprehensive Plan Draft Review
 - Kerwin Jensen, Community Development Director
2. 2018 Transportation Improvement Program
 - Rick Simon, Development Services Manager
3. Review Draft Critical Areas Ordinance
 - Rick Simon, Development Services Manager

Adjournment

The next Planning Commission Workshop is April 26, 2017

The next Planning Commission Meeting is April 26, 2017

Richland City Hall is ADA accessible. Council Chamber parking and access is available at the entrance facing George Washington Way. Requests for sign interpreters, audio equipment, and/or other special services must be received 48 hours prior to the Planning Commission Workshop by calling the City Clerk's Office at 942-7388.



PLANNING COMMISSION AGENDA ITEM COVERSHEET

Meeting Date: 04/19/2017

Agenda Category: Business

Prepared By: Kerwin Jensen, Community Development Director

Subject:

Comprehensive Plan Draft Review

Request:

Recommended Motion:

Summary:

Oneza and Ben Floyd will review and provide information on the draft Comprehensive Plan Update and Supporting Analysis.

Attachments:

1. DRAFT Supporting Analysis
2. DRAFT Comprehensive Plan

City of Richland

DRAFT

COMPREHENSIVE

PLAN SUPPORTING

ANALYSIS

April 12, 2017

Prepared for:
City of Richland



Prepared by:
Oneza & Associates

With assistance from:
Anchor QEA
ECONorthwest
J-U-B Engineers Inc.

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INTRODUCTION AND BACKGROUND

SECTION ONE

INTRODUCTION

This document elaborates on the discussion in the Core Comprehensive Plan. It also contains technical analysis of most of the Comprehensive Plan elements. Organization of this document follows the same hierarchy of elements as in the Core Comprehensive Plan with additional information included in it.

Every comprehensive plan must include key pieces to fulfill its purpose of providing a yardstick for future government activities. The following terms have special meanings in comprehensive planning and it's important to understand their meaning and purpose.

Vision Statement: The Vision Statement is the target the City decides to aim for. It is a verbal picture of what Richland will be like at the end of the period covered by a comprehensive plan. An important part of future decision-making should be to ask, "Which of our choices will best help us become like the City described in the vision statement?"

Existing Conditions Inventory: We can't decide how to get from the present to our desired future without a clear picture of where we are today. That's why comprehensive plans must include a detailed inventory of the existing state of the City: How are our roads? Is our water system adequate to accommodate future growth? Do we have the parks and other recreation facilities to satisfy the community's desire for such public amenities?

Goals: If the Vision Statement defines the target for comprehensive planning, then goals are like individual points on the target. We set as goals the distinct achievements we hope for: maintain adequate and affordable housing; avoid traffic congestion; protect natural resources; ensure economic vitality. We have reached our vision if all our goals are accomplished.

Policies: Goals are what we want to accomplish; policies define how we accomplish them. For each goal established in a comprehensive plan, one or more policies define the steps that goal calls for. If we have a goal of protecting natural resources, for example, we might establish a policy that says that development shall be restricted on and near wetlands.

Planning Time Frame: A comprehensive plan must define time frames for achieving its vision and goals. These time frames are called the planning horizons. In Washington State, comprehensive plans use both a ten-year short-term planning horizon and a 20-year long-term planning horizon. The long-term planning horizon is the full period for achieving the vision in our Vision Statement. The short-term planning horizon is the period for which we can make more concrete plans for specific steps toward our goals.

These are the features that a Comprehensive Plan needs to include in order to act as our yardstick for the future. The Comprehensive Plan must apply these features to specific aspects of the City's life. The parts of a plan addressing each of these are commonly called "elements." Under State law, all Washington city and county comprehensive plans must address at least five specific elements: land use, transportation, utilities, capital facilities, and housing. Each element includes an inventory of existing conditions as well as goals and policies specific to the element. In addition to the

required five elements, the City of Richland has chosen to include an optional economic development element in this Comprehensive Plan.

The final feature of comprehensive plans in Washington is a Finance Plan. This is the proposal for specific capital improvements required over the short-term (six-year) planning horizon. It describes projects to be carried out, their estimated costs, a schedule for completing them, and a plan to pay for them. Financing plans from the City's Capital Improvement Plan (CIP) are included under the Capital Facilities and Utilities Chapters in this document.

GMA AND BACKGROUND

The Washington State Growth Management Act (GMA) includes 14 broad goals for comprehensive planning, which local governments must balance to develop an approach consistent with their vision of the future. The 14 GMA goals are as follows:

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 inappropriate conversion of undeveloped land into sprawling, low-density development.
3. Transportation - Encourage efficient multi-modal transportation systems 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 the 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 consistent with adopted comprehensive plans, promote economic opportunity for all citizens of the state, especially for the unemployed and the disadvantaged, and encourage growth in areas experiencing insufficient economic growth, all within the capacity 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. The property rights of landowners shall be protected from arbitrary and discriminatory action.
7. Permits - Application for state and local government permits should be processed in a timely and fair manner.
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 - Encourage the retention of open space and development of recreation opportunities, conserve fish and wildlife habitat, increase access to natural resource lands and water, and develop parks.
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 - Encourage the involvement of citizens in the planning process and ensure coordination between communities and jurisdictions to resolve conflicts.

12. Public Facilities and Service - Ensure that public facilities and services necessary to support development are adequate to serve the development at the time the development is available for occupancy and use, without decreasing the 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.
14. Shoreline Management – Develop a Shoreline Master Program (SMP) pursuant to Shoreline Management Act (SMA). The goals and policies of a shoreline master program for a county or city approved under chapter 90.58 RCW shall be considered a part of the county or city's comprehensive plan.

Under the GMA, comprehensive plans should identify essential public facilities that often are difficult to site and ensure that locations for them will be available. These facilities include airports, state education facilities, state, or regional transportation facilities, state and local correctional facilities, solid waste handling facilities, and in-patient facilities including substance abuse facilities, mental health facilities, and group homes. Local comprehensive plans may not prevent outright the location or provision of such facilities. Richland will participate in the siting study for any of these facilities when they are identified for potential siting within the City.

CONSISTENCY AND CONCURRENCY

GMA requires that the Comprehensive Plan must be internally consistent for objectives, goals, policies, text, and maps. At the same time, the comprehensive plans of adjacent jurisdictions must also be consistent and capital budget decisions must be made in conformance with each jurisdiction's adopted Comprehensive Plan.

The consistency progresses from the broad goal, through its policies, and then to specific actions. The maps of the Plan augment both the text and even the goals and policies. For example, the land use map included in the Land Use Element is, in essence, a graphic policy statement regarding future land development in Richland. As such, the land use policy serves, and is served by, the transportation, housing, utilities, and capital facilities elements. Based upon the land use designations on the Land Use Map, private and public sector service providers can project future locational demands for water, sewer, natural gas, electrical power, roads, fire protection, transit, emergency response, communications, and other services

All development regulations within the City of Richland are required to match with each other and with the Comprehensive Plan. These include the zoning and subdivision codes, the Critical Areas Ordinance, the Shoreline Master Program, and any other City regulation as contained in the Richland Municipal Code and other adopted plans such as the Park & Recreation Plan and the Storm Water Management Plan. A complete listing of adopted plans is included as an Appendix of the Core Comprehensive Plan.

The consistency also applies to adjacent jurisdictions such as Benton County, through the County-wide Planning Policies (CWPP), and the adjacent cities of West Richland and Kennewick.

GMA defines concurrency to mean that needed improvements for water, sewer, and transportation are in place at the time of development; or in the case of transportation, that a financial commitment exists to complete the improvements within six years.

There must be a baseline standard established to use when evaluating the anticipated impacts of new development to determine if concurrency can be met. The minimum acceptable performance level has been chosen as the baseline, and is defined as the level of service (LOS). Levels of service

should be realistic. Setting them too high could result in little or no growth, and would be contrary to GMA. Setting them too low could cause unmanaged growth without optimum service.

AMENDMENTS

Amendments to the comprehensive plan are legislative actions requiring City Council approval. Amendments must be approved as prescribed by GMA. With a few exceptions, they cannot be considered more often than once per year and in accordance with specific procedures. Major updates occur by legislative action on an eight-year cycle as established by RCW 36.70A.130 (4)(c).

Amendments can be requested by the City or by private individuals. Multiple applications for amendments will be considered in a single legislative review process in order to evaluate the potential cumulative effect of the requests. All amendment requests require a public hearing with the Planning Commission. They make a recommendation to the City Council. The City Council will approve or deny the amendments in a public hearing. Public involvement with this process is required and encouraged through direction of the Richland Public Participation Plan.

Annual amendments will address the issues of major or minor land use classification changes; changes to the goals, policies, and text of the comprehensive plan; changes to supporting data and implementation; changes to the land use maps; and changes to the inventories and technical documents.

Every ten years, the annual amendment review may be combined with the required review of the urban growth area to determine the next twenty-years' anticipated growth. This ten-year review will use the comprehensive plans of each county and city and the permitted densities of the incorporated and un-incorporated areas pursuant to RCW 36.70A.130(3).

Exceptions to the annual amendment limitation, according to RCW 36.70A.130, include the adoption of a subarea plan; the development of an initial subarea plan for economic development located outside of the one hundred year floodplain in a county that has completed a state-funded pilot project that is based on watershed characterization and local habitat assessment; shoreline master programs; or the amendment of the capital facilities element occurring concurrently with the adoption or amendment of the City's budget.

ECONOMIC DEVELOPMENT

SECTION ONE

INTRODUCTION

PURPOSE

The economic development element of the comprehensive plan is intended to guide investments through a framework of strategy and policy with the overall goal of growing economic opportunities in the City. The intent is to identify sound economic development practices to build a strong economy where local businesses are welcomed and encouraged by the City and ensure the economy is resilient, dynamic, and sustainable for current and future generations.

The City's ability to understand their competitive advantages and proactively work to attract cutting edge employers will in turn create more living wage jobs which will in turn produce municipal revenues for maintaining and enhancing quality service levels, infrastructure, and facilities.

Strategies outlined in the economic development element are designed to work in concert with the other comprehensive plan elements herein. This element is intended to be consistent with and build upon existing documents such as the policies and strategies outlined in the CWPP, Strategic Leadership Plan, and community visioning documents. The roles of the policies laid out in this plan are to 1) create strong City leadership for economic development, 2) ensure that appropriate land capacity and infrastructure can support future employment and housing growth, and 3) articulate a business environment that supports a dynamic, prosperous, and equitable economy.

BACKGROUND AND OVERVIEW

Washington State's GMA includes economic development as a central goal and integral to a thriving city. Economic development connects to and is instrumental in informing the other elements of the comprehensive plan; without a strong local economy, goals related to land use, housing, capital planning, and transportation serve little value.

It is due to the hard work and good fortune of the residents and businesses located in the City of Richland that the City has a strong and growing economic base. It is important, however, to consider Richland within the context of the other two Tri-Cities – Pasco and Kennewick – to which the region's economy is inextricably linked.

The City of Richland's economy is explored in this section by first examining what drives the growth in the regional economy and then discussing Richland's role in the economy and some implications for growing as part of this plan.

SECTION TWO

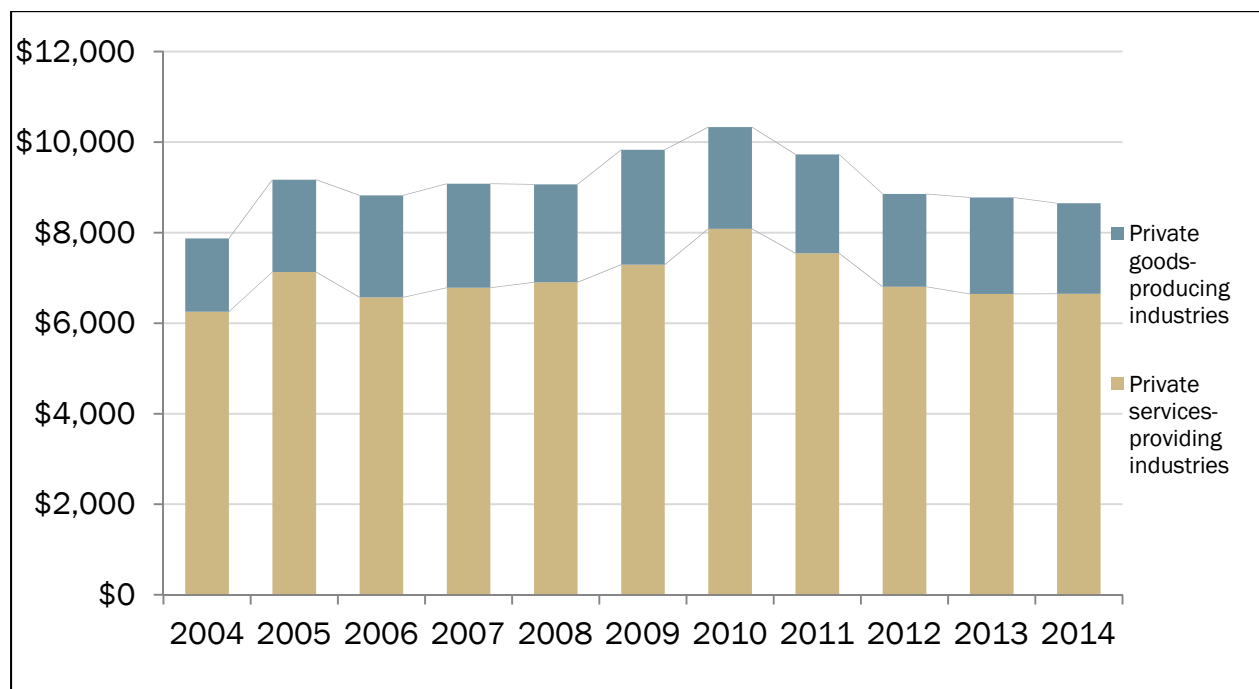
EXISTING CONDITIONS

REGIONAL ECONOMIC TRENDS

Gross Domestic Product

The economy of the Tri-Cities region is primarily a service-based economy. Goods producing industries (such as manufacturing) make up less than 25 percent of the total economic output. Figure ED-1 shows the trend of gross domestic product (GDP) in 2016 inflation-adjusted dollars. The Tri-Cities economy was less impacted by the recession in 2008 than the rest of the nation due to the increase in employment at the Hanford Site as part of the American Recovery and Reinvestment Act (ARRA) of 2009. The total output declined from \$10.3 billion in 2010 to \$8.6 billion in 2014, partly due to the end of ARRA and partly reflecting the national recession trends. However, most recent data (not shown) have indicated that economic conditions have continued to improve over the past two years.

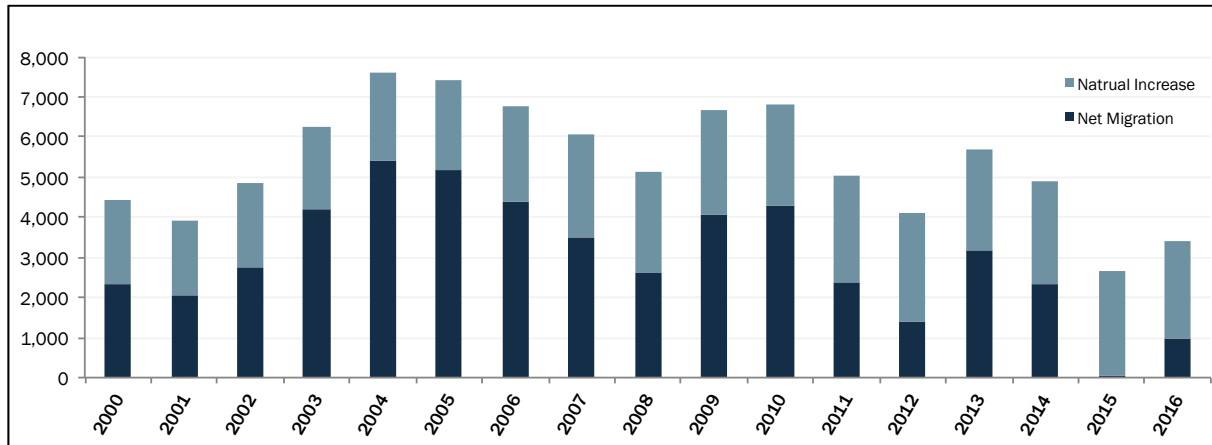
Figure ED-1: Real GDP Kennewick-Richland Metropolitan Statistical Area (in millions)



Source: Bureau of Economic Analysis, 2016

The Tri-Cities region (Benton and Franklin Counties) has realized strong population growth over the last 20 years, averaging an annual growth rate of 2.4 percent. Much of that growth occurred in the mid 2000's fueled by in-migration responding to the growth in jobs, but population growth has slowed since 2010. Calendar year 2015 was the first year in 20 years where net in-migration was nearly zero, where the same amount of people moved out of the region than to the region.

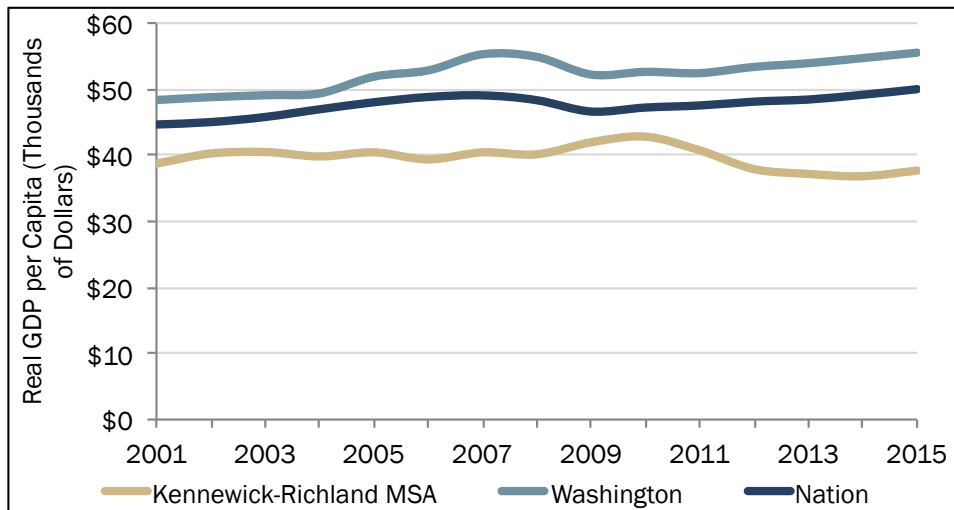
Figure ED-2: Benton and Franklin County Annual Population Growth, 2000-2016



Source: Washington Office of Financial Management, 2016

On a GDP per capita basis, the Tri-Cities region is not as productive when compared to Washington State and to the nation. On this measure, the region has been slower to recover than the state as whole. GDP per capita is the most common economic performance indicator of regions. GDP per capita is calculated by measuring Gross Domestic Product in a year, and dividing it by the population. The reasons for the lower GDP per capita in the region are complex but are due to the large presence of government-supported activities. These activities are, on the whole, less productive than emerging information technology or business services, which have become increasingly productive by comparison.

Figure ED-3: GDP per Capita, 2001-2015



Source: Bureau of Economic Analysis, 2016

EMPLOYER TRENDS

The Tri-Cities is unique in that its employment base is dominated by a select number of large employers. Roughly one in five of estimated 116,000 jobs in the Benton-Franklin area are for one of the ten largest firms/agencies listed below. Eight of the ten top employers in the Tri-Cities are

located in Richland, a legacy largely of significant federal investments in the Hanford Site. These sectors employ many talented workers, many of whom live in Richland.

Table ED-1: Top Ten Tri-Cities Employers

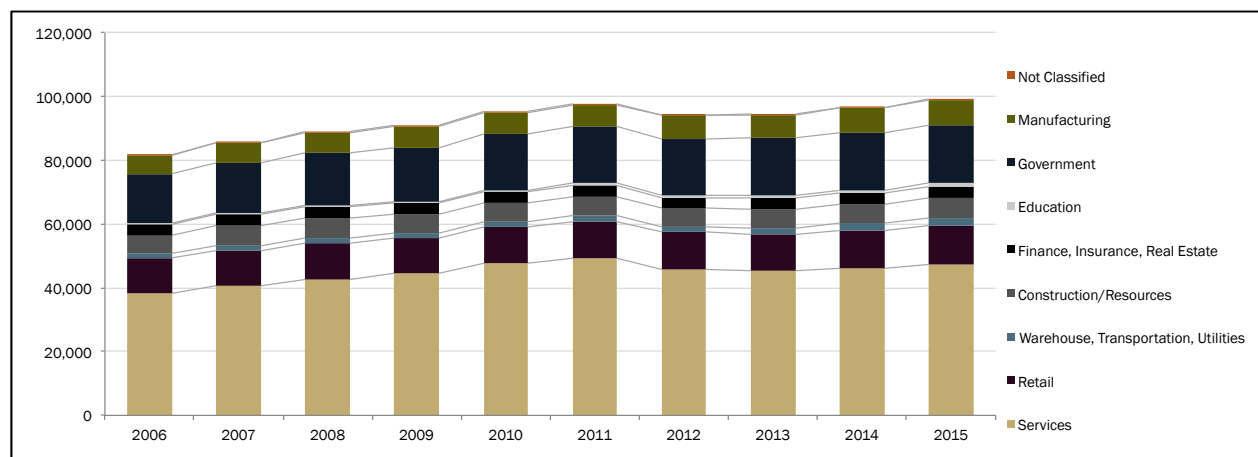
	Company	Industry	Employees
1	Battelle/Pacific Northwest National Laboratory	Research & Development	4,365
2	Kadlec Regional Medical Center	Health Services	3,304
3	Bechtel National	Engineering & Construction	2,898
4	ConAgra Foods	Food Processing	2,727
5	Kennewick School District	Education	2,130
6	Washington River Protection Solutions	Environmental Remediation Services	2,077
7	Pasco School District	Education	2,015
8	Mission Support Alliance, LLC	Support Services, Hanford/DOE Site	1,928
9	Richland School District	Education	1,500
10	CH2M Hill	Environmental Remediation Services	1,400

Source: Tri-City Development Council (TRIDEC), [link](#). Accessed February 14, 2017

Total Employment by Industry sector

Employment in the Tri-Cities region increased from 2006-2015 by over 22,000 jobs with an average annual growth rate of 2.0 percent. There are roughly 116,000 jobs in the region. All industries experienced positive employment growth by the end of the 10-year period. However, from 2011 to 2014 employment slightly declined as spending cuts at the Hanford Site impacted the entire regional economy.

Figure ED-4: Benton and Franklin Counties Cumulative Employment by Sector

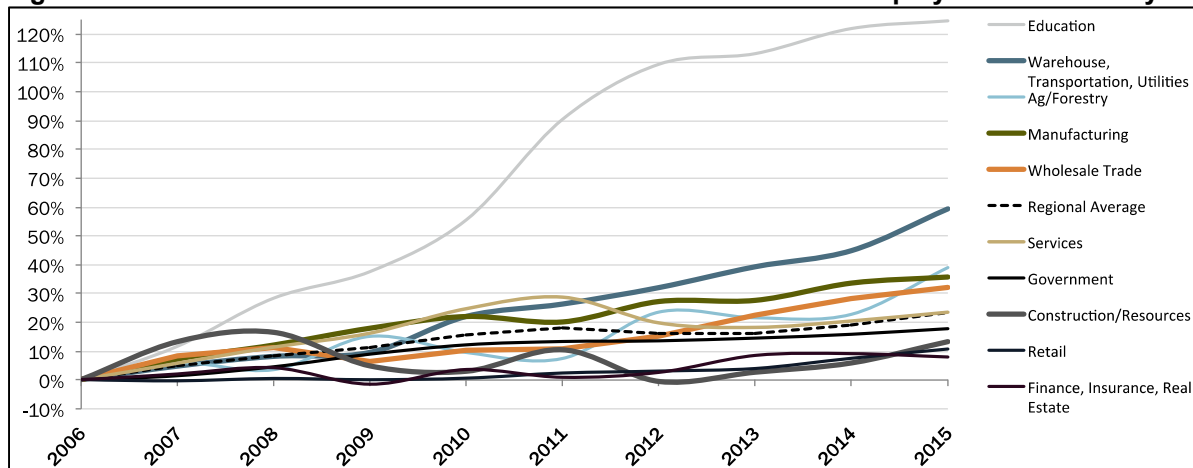


Source: Washington State Employment Security Department

Education, while small in total numbers, grew the most in the region. Warehousing, transportation, and utilities; manufacturing; wholesale trade (the main users of industrial land); and agriculture all

grew faster than the regional average. Employment in the retail and finance, insurance, and real estate sectors grew the least.

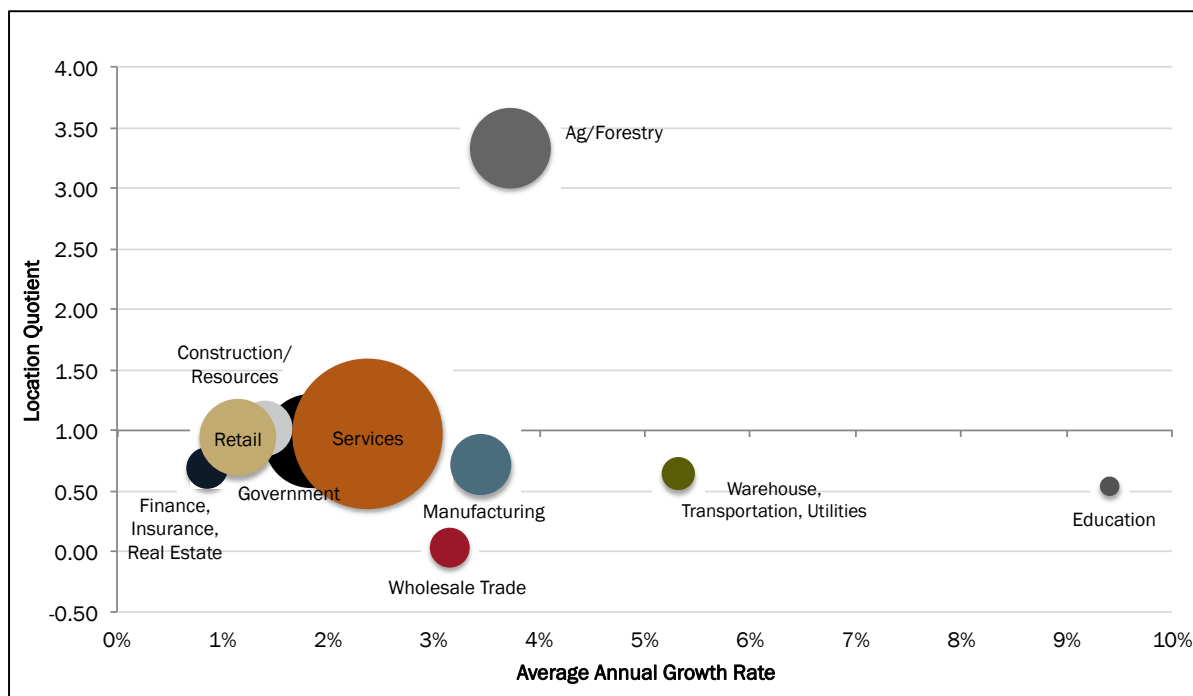
Figure ED-5: Benton and Franklin Counties Cumulative Percent Employment Growth by Sector



Source: Washington State Employment Security Department

The chart below shows the local concentration of jobs by sector (location quotient) along with measures of industry size and average annual employment change in the Tri-Cities region. Location quotients measure the concentration of jobs in a sector compared to the statewide average. A value of 1.0 signifies that the sector possesses the same level of employment concentration as the state. Values above 1.0 are more concentrated than the state average. The size of the bubble represents the number of jobs within that sector. Sectors with sizable employment and higher than average concentration, represent strengths for the region. Fast growing sectors, even if they are not very large, represent potential opportunity areas.

Figure ED-6: Benton and Franklin Counties Employment Concentration and Change by Sector, 2006-2015



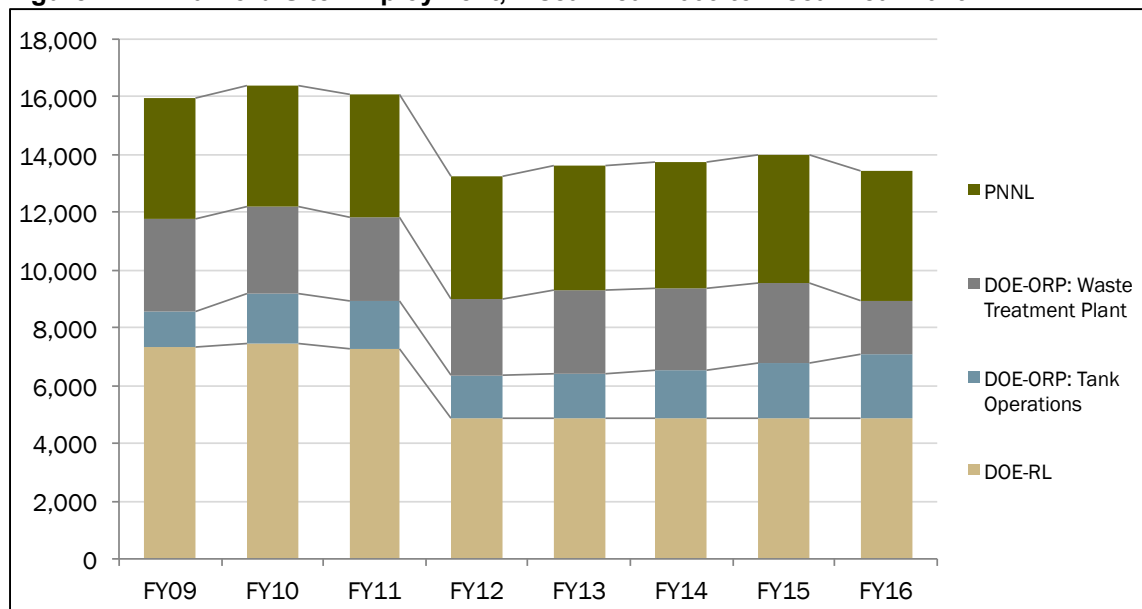
Source: Washington State Employment Security Department

In the Tri-Cities region, the largest sectors - services and government - have a similar concentration as the state and the region are growing at a rate of one to three percent a year, indicating they are the base of the regional economy. The agriculture sector is a strength in the Tri-Cities; it is much more concentrated relative to the state and is growing at a rate of 3.7 percent per year. Education; manufacturing; wholesale trade; and warehousing, transportation, and utilities are also growing at a rate of more than three percent a year, but are smaller and less prevalent in the Tri-Cities compared to the state. Much of the growth in food manufacturing; wholesale trade; and warehousing, transportation and utilities may be related to the growth and prevalence of the agriculture sector in the Tri-Cities.

Hanford Site Employment

While total employment increased over the last ten years, employment at the Hanford Site decreased by over 2,800 jobs in the 2012 fiscal year as part of federal spending cuts. This decrease was part of a region-wide decline in employment from 2012 and 2013, and also the end of ARRA funding. It may also be what led to the decrease in regional GDP shown in Figure ED-1.

Figure ED-7: Hanford Site Employment, Fiscal Year 2009 to Fiscal Year 2016



Source: Tri-City Development Council (TRIDEC), 2016

COMMERCIAL REAL ESTATE TRENDS

With much of the Hanford Site and health care activities located in Richland, the City is home to much of the built commercial real estate in the region. It trails only Kennewick, which is home to the region's shopping malls. According to the Benton County Assessor, Richland holds the highest share of office and industrial building square footage but lags considerably with respect to retail businesses, primarily located in Kennewick.

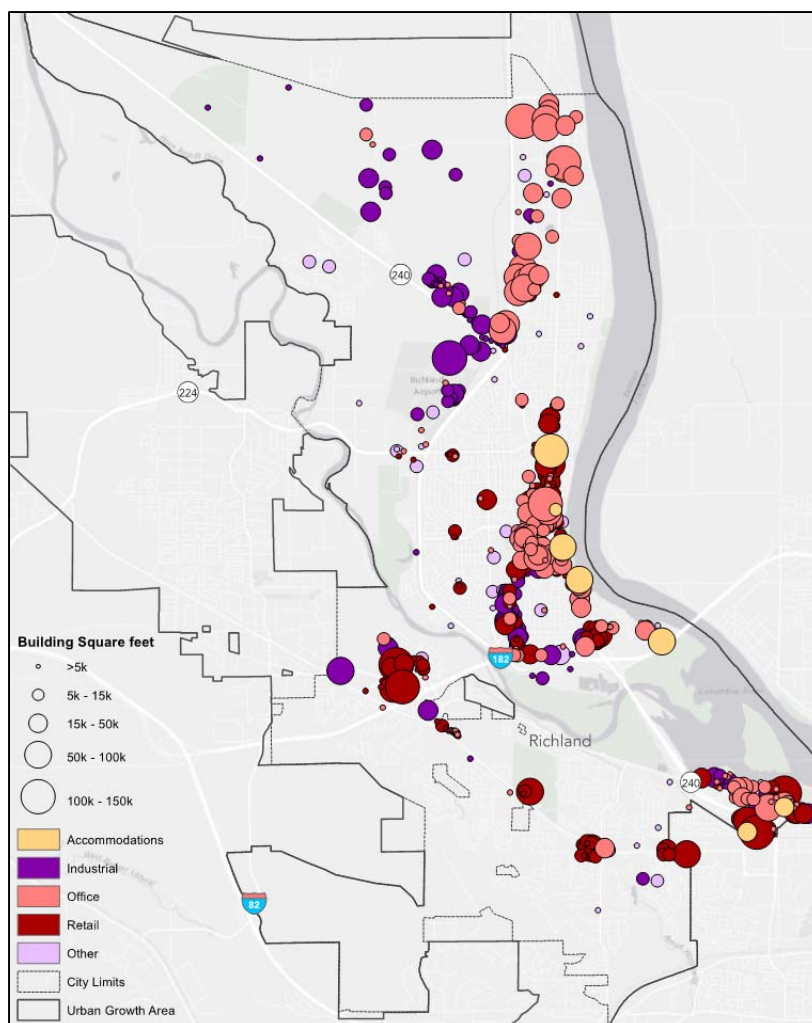
Table ED-2: Building Square Footage, by Type

Use	Richland	West Richland	Kennewick	Prosser	Rest of County	Total
Retail	2,775,000	205,000	5,089,000	421,000	123,000	8,613,000
Industrial	2,803,000	282,000	2,475,000	924,000	1,381,000	7,866,000
Office	,259,000	52,000	2,645,000	110,000	57,000	6,123,000
Accommodations	462,000	-	633,000	54,000	-	1,149,000
Other	326,000	59,000	1,087,000	57,000	259,000	1,788,000
Total Commercial	9,626,000	597,000	11,930,000	1,566,000	1,821,000	25,540,000

Source: Benton County Assessor, 2016, Washington Office of Financial Management Estimates.

Figure ED-8 below shows that office and retail uses are clustered in the downtown core as to be expected; retail is also heavy but isolated near the Queensgate area; a considerable amount of industrial development is located to the north in Horn Rapids; and a cluster of office and retail to the south in Island View.

Figure ED-8: Commercial Building Sizes and Types in Richland



Source: Benton County Assessor, 2016

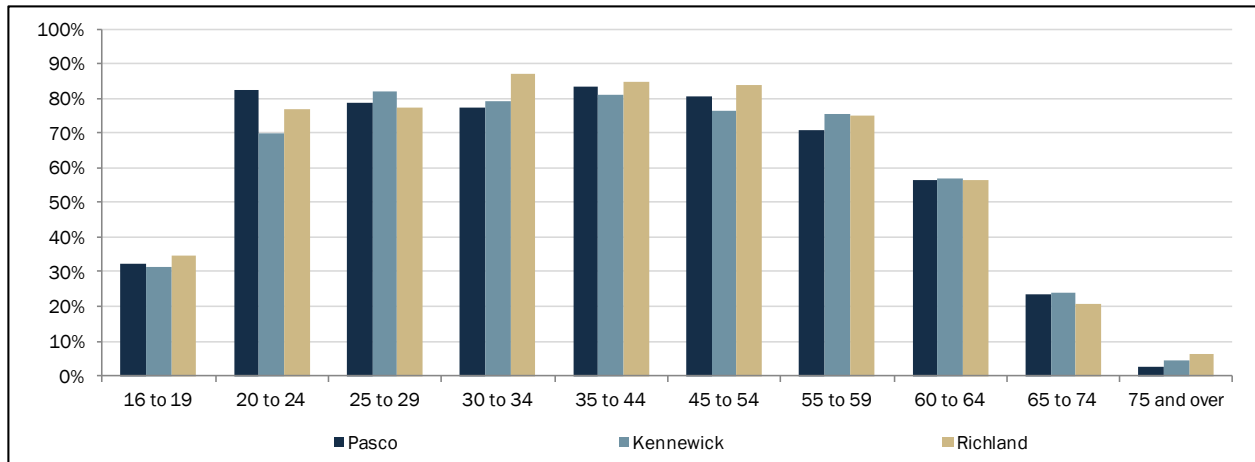
EMPLOYMENT AND HOUSEHOLD TRENDS

The following section summarizes selected relevant employment and household characteristics that frame the economic performance in Richland.

Employment Status, Income, and Demographic Characteristics

Relative to Kennewick and Pasco, Richland has high labor force participation for residents with ages between 30 and 54. This typically is the prime working age for most Americans, a time when they are most productive as workers. Rates for younger populations are slightly lower than in Pasco due to a higher share of full-time students in higher education. Similarly, rates are lower for those 65 and older due to their long-term financial stability enabling retirement.

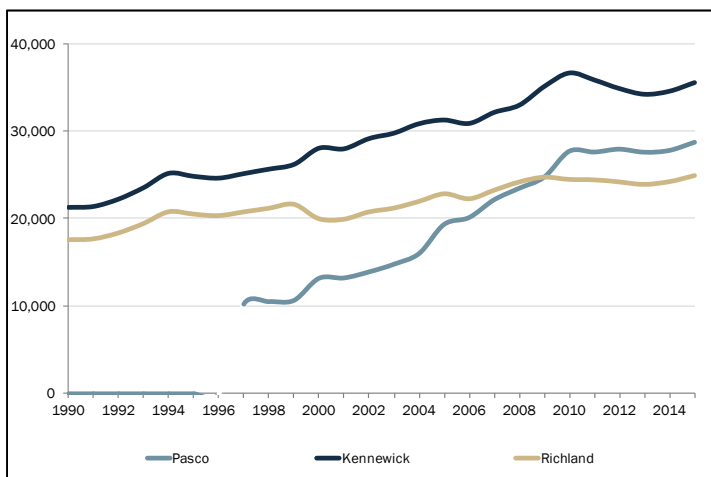
Figure ED-9: Labor Force Participation



Source: US Census Bureau, American Community Survey, 5-Year ACS, Table S2301

Total employment in Richland has grown over the past 25 years. Current estimates of employment in the City place the number at approximately 25,000. Growth in employment in Kennewick and Pasco has been a function of higher rates of population and labor force growth over the same time.

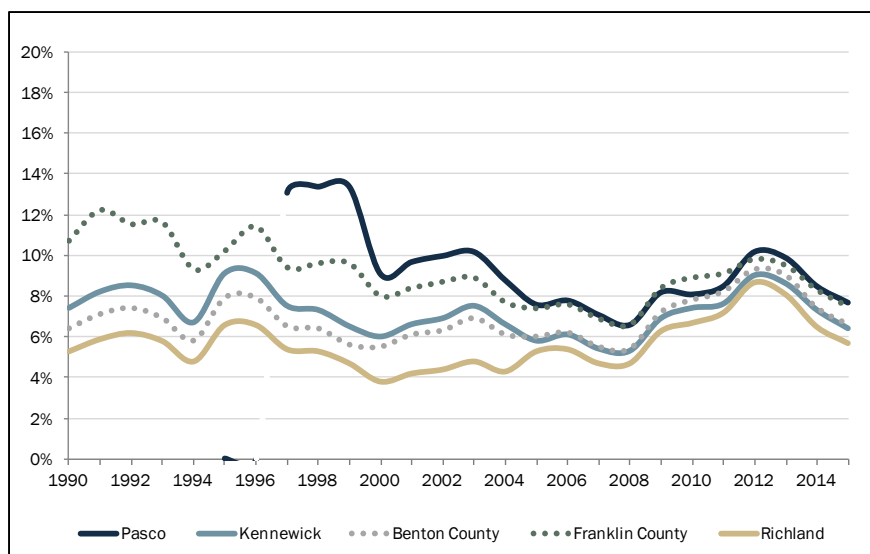
Figure ED-10: Total Employment, 1990 - 2016



Source: Bureau of Labor Statistics, Local Area Unemployment Statistics.

Benton County's unemployment rate is currently 7.0%, which is higher than the state average of 5.3%, but lower than in adjacent Franklin County (Employee Security Department/LMPA, March 2016). Richland has consistently fared better than the cities of Kennewick and Pasco as well as Benton County and Franklin County.

Figure ED-11: Unemployment Rate, 1990 - 2016

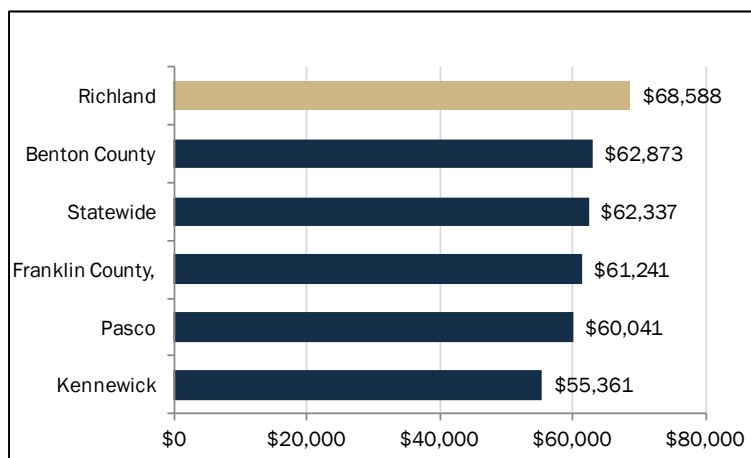


Source: Bureau of Labor Statistics, Local Area Unemployment Statistics.

Federal funding for the Hanford Site has been a significant economic catalyst for the Tri-Cities Region, generally with Richland at the forefront. Even with significant downsizing at the Hanford Site in the 1990s, household incomes in Franklin and Benton Counties continued to grow steadily.

Today, household incomes for Richland residents are nearly ten percent higher than the County average and more than twenty percent higher when compared to those of Kennewick residents. Richland enjoys economic prosperity not just compared to its Tri-Cities neighbors, but compared to state averages as well as illustrated in Figure ED-12 below. Higher incomes are the result of technical and professional positions that require higher levels of education, as illustrated below in Table ED-3- Educational Attainment, 2011 - 2015.

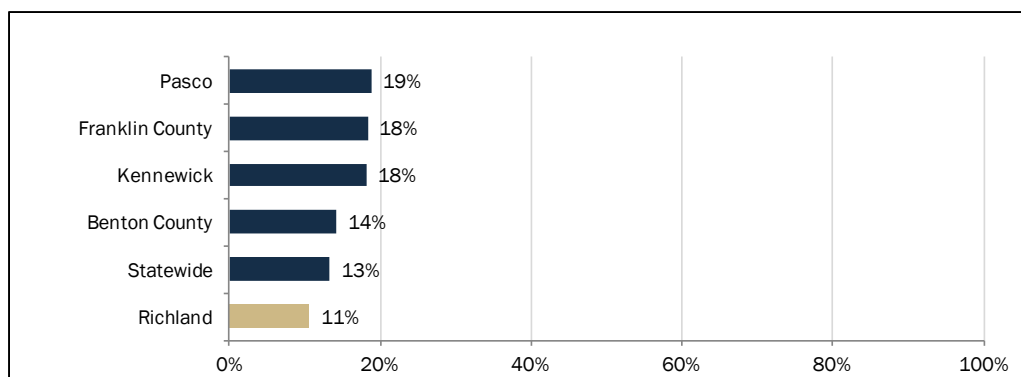
Figure ED-12: Median Household Income



Source: US Census Bureau, American Community Survey, 2015 5-year, Table B19013A

Similarly, Richland has fewer households living in poverty when compared to Benton County on the whole, Franklin County, and the statewide average. This indicates a strong economy and access to opportunity.

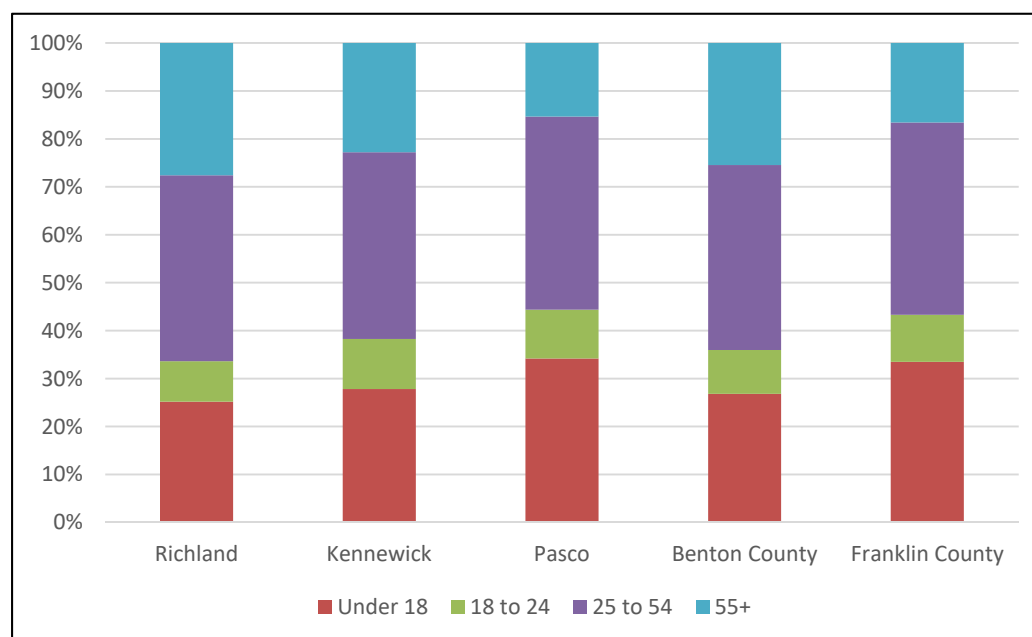
Figure ED-13: Share of Population Living in Poverty, 2011 - 2015



Source: US Census Bureau, American Community Survey, 2015 5-year, Table S1701.

The population living in Richland is not drastically different from the region with respect to age, but upon further examination of job force impacts there are some important differences. For employment purposes, prime working age is defined as 25 to 54 years old. The statewide average for population that falls into prime working age is 41%. Richland's is 39%, the same for Kennewick, and slightly lower than Pasco's 40%. However, Richland has a relatively high population of residents over age 55 (28%) as compared to Kennewick (23%) and Pasco (15%). Given this, the share of children, those under 18 years of age, in Richland is low (25%) as compared to Kennewick (28%) and Pasco (34%).

Figure ED-14: Age Distribution, Average from 2011 - 2015



Source: US Census Bureau, American Community Survey, 2015 5-year, Table B01001.

Relative to Kennewick and Pasco, Richland is home to a highly educated workforce. The demand for educated engineers and scientists generated by the Hanford Site and its subsidiary research and development activities has been a central employment and demographic characteristic for the Tri-Cities Region, in particular for Richland.

Table ED-3: Educational Attainment, 2011 - 2015

	Population 25 Years and Over	High School Diploma/GED	Associate's Degree	Bachelor's Degree	Graduate Degree
Richland	34,712	95%	56%	45%	19%
Kennewick	47,478	86%	33%	22%	7%
Pasco	37,479	72%	25%	16%	5%
Benton County	118,423	89%	40%	29%	11%
Franklin County	49,013	74%	25%	16%	5%
Statewide	4,721,438	90%	43%	33%	12%

Source: US Census Bureau, American Community Survey, 2015 5-year, Table B15003.

Housing Stock

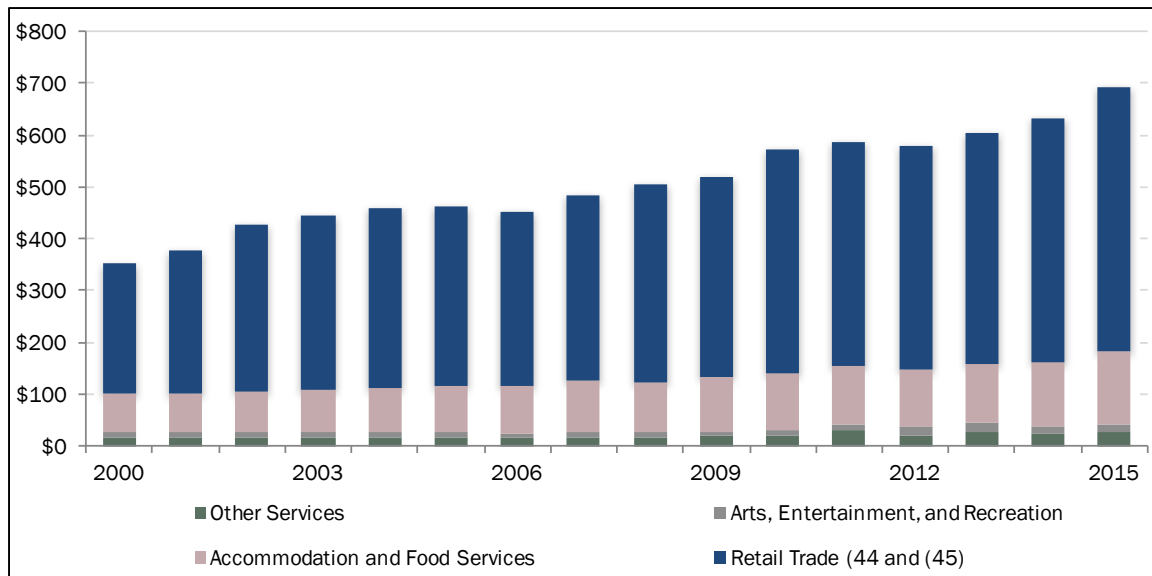
Housing in Richland is generally characterized as single-family (62%) and mostly owner-occupied (65%) with moderate vacancy rates similar to those seen in Kennewick and double that of Pasco; roughly 6%. Most homeowners spend less than 20% of their income on housing (57%) – a larger share than in Kennewick (50%) or Pasco (41%). However, 18% of homeowners are considered cost-burdened defined as spending more than 35% of their income on housing. This is slightly higher than the 17% seen in Kennewick and Pasco. For more on housing conditions, see the Housing Element.

Retail Performance

The location of retail stores and their economic performance are important to cities for two reasons. First, the proximity and mix of retail services is an essential service and amenity for area residents. Second, the importance of sales taxes in funding essential services means jurisdictions have a built-in preference for maximizing the scale, scope, and productivity of the retail sales base. The following set of charts examines the productivity data of taxable retail sales in Richland.

As shown below, the data for Richland show steady growth in retail sales over the past 15 years. The City has seen strong growth in the accommodation and food service sectors with more restaurants taking hold in recent years. Compared to its regional neighbors, Richland has comparable sales to Pasco but both are about half of Kennewick's totals.

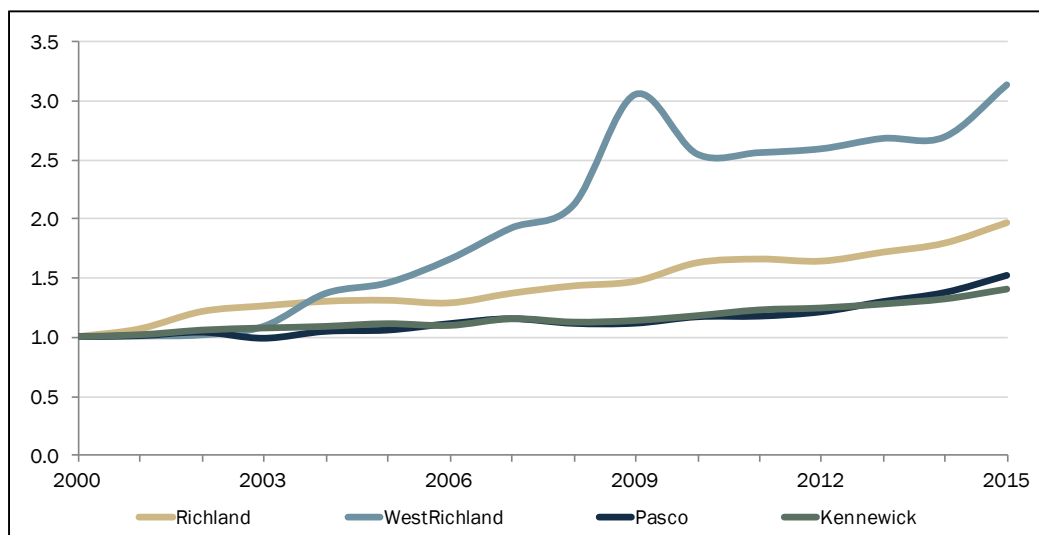
Figure ED-15: Select Category Sales, Richland in 2016 Dollars (in Millions)



Source: Washington State Department of Revenue, Taxable Retail Sales [Link](#). Accessed October 24, 2016

Richland has seen higher increases in taxable retail sales relative to both Kennewick and Pasco since 2000, as seen in Figure ED-16. This indicates the retail sector is growing and increasing its market share while retail sales in Pasco and Kennewick have slowed relatively. While West Richland has seen significant increases (2009 saw three times their 2000 sales), it continues to provide only a very small share of the overall market.

Figure ED-16: Taxable Retail Sales in Millions Indexed to 2000



Source: Washington State Department of Revenue. Accessed October 24, 2016

FUTURE GROWTH FORECASTS

Employment Forecasts

Short-term industry forecasts for the region continue to expect positive growth in the region. Strongest growth is forecast in the service sector, specifically business and health services – two

sectors where Richland is driving the region's growth and that are well positioned for future growth.

Table ED-4: Employment Forecast by Industry for the MSA

	2014	2019	2024	Change		
				#	%	AAGR
Construction	6,300	7,300	7,600	1,300	21%	1.9%
Manufacturing	7,800	8,200	8,400	600	8%	0.7%
Wholesale Trade	3,300	3,700	3,900	600	18%	1.7%
Retail Trade	12,200	13,400	14,100	1,900	16%	1.5%
Transportation, Warehousing and Utilities	2,700	3,000	3,100	400	15%	1.4%
Information	800	800	900	100	13%	1.2%
Financial Activities	4,300	4,400	4,400	100	2%	0.2%
Professional and Business Services	20,600	23,400	26,000	5,400	26%	2.4%
Education and Health Services	14,400	16,100	17,600	3,200	22%	2.0%
Leisure and Hospitality	9,900	10,900	11,800	1,900	19%	1.8%
Other Services	3,300	3,600	3,800	500	15%	1.4%
Government	18,500	19,800	20,700	2,200	12%	1.1%
Federal	1,200	1,200	1,200	0	0%	0.0%
State	8,100	8,600	8,900	800	10%	0.9%
Local	9,200	10,000	10,600	1,400	15%	1.4%

Source: Benton Franklin Council of Governments

The Benton Franklin Council of Government's transportation and land use model also provides some forecasts on land use and employment for transportation planning purposes. Based on these model results, Richland is estimated to reach some 40,000 jobs by 2030.

Table ED-5: Employment Forecast in Richland

	2010	2020	2030	Change		
				#	%	AAGR
Industrial/Manufacturing	1,398	3,369	5,269	3,871	277%	6.9%
Retail	3,498	4,640	7,537	4,039	115%	3.9%
Finance	7,019	8,914	9,699	2,680	38%	1.6%
Regional Mall	0	0	0	0	NA	NA
Airport	7	40	60	53	757%	11.3%
Schools	5,566	6,596	6,958	1,392	25%	1.1%
PNNL Hanford Inner of Employees	9,378	8,306	7,507	-1,871	-20%	-1.1%
Offices Lacking Heavy Client Traffic	0	0	0	NA	NA	NA
Hotels/Motels	1,786	1,786	1,786	0	0%	0.0%
Assisted Living Facilities	886	687	687	-199	-22%	-1.3%
Total	29,538	34,338	39,503	9,965	34%	1.5%

Source: Benton Franklin Council of Governments

Using the same annual rate of 0.6 percent job growth from 2030, the 20-year employment forecast for Richland is 41,192 jobs in 2037.

SUMMARY OF EXISTING ECONOMIC CONDITIONS AND FORECAST

Richland is at the epicenter of the major driving economic forces on the Tri-Cities area. The work performed at the Hanford Site, in tandem with the research at Pacific Northwest National Laboratory (PNNL), has driven economic development in the region and City for decades. This circumstance is currently the region's largest economic strength and a source of its greatest economic fears. These dual assets have driven the need for urban land development and created strong markets for housing, retail, and household services. Along with the agricultural sector, they have also created the foundation for a larger regional economy, which has supported more economic opportunity overall, allowing other unrelated industries to take hold in the area. However, the exposure of such a large segment of the economy to a single entity is a cause for concern for regional leadership and local residents. Recent spending cuts following the recession demonstrate the extent to which the economy depends on government spending to support these activities.

The region has shown strong growth in economic output over the past several decades leading to sustained employment growth. From a regional economic perspective, the agricultural sector is one of the most competitive for the region, which is not surprising given the region's agricultural advantages. The region has a strong industrial/manufacturing base that has sustained itself over time yet the largest portion of the economy is service-based (both professional/business and personal) that continues to drive economic growth in the recent decade. However, growth in most other sectors have mirrored the nation as a whole; fueling economic conversations that the region needs to find new growth in sectors that can produce and sustain both comparative and competitive advantages.

The City of Richland specifically has been the location where much of the professional service sector is located. The City is home to the two largest non-governmental employers in the region in PNNL and Kadlec Health that account for nearly 8,000 employees in the City. From a land use

perspective, Richland has more than half of the region's commercial office space and industrial space, respectively; and is second only to Kennewick in the amount of retail space. Examination of the recent commercial real estate productivity suggests that much of the built space is well occupied and rents have been resilient. Richland has seen stronger retail growth and has outpaced growth in the region as a whole.

Richland has strong demographics for future economic growth. Employees and households are on average better educated, better paid, and with a larger segment of the population in its prime working age. The community is also relatively less-burdened with the costs of poverty when compared to the region. Future forecasts of economic growth remain positive of the regions outlook with growth in the service and health sector continuing to drive growth in the future. From this perspective, the City should be well positioned to capitalize on its past performance and existing assets to extend its economic growth.

SECTION THREE

CHALLENGES AND OPPORTUNITIES

Upon review of existing economic conditions, survey results, and in conversations with elected officials, local economic development professionals, visioning work sessions, and through public outreach with business leaders and the general public, stakeholders collectively identified several recurring themes: the need for stronger economic resiliency able to withstand future economic shocks; the need to harness the entrepreneurial spirit and create a more dynamic economy and economic opportunity; leverage the natural landscape and heritage within the City and region to create sustainable economic development opportunities; and diversify and more intensely use the available land within the City. The following is a summary of the primary concerns and goals related to achieving a thriving Richland economy.

Area 1. Create a Resilient Economy

The single greatest threat to the Richland and Tri-Cities economy is the winding down of business and employment and the Hanford Site without suitable economic opportunities in place that would provide for a comparable standard of living. A reduction in work at the Hanford Site will mean less direct employment in Richland and large negative impacts on the businesses that support them directly as well as the resulting households whose wages they support. However, the Hanford Site is also an asset to the community and has been effective at attracting a highly educated workforce in science and technology. These fields produce professional-wage jobs and have produced spinoff businesses coming from PNNL.

To ensure the stability and resiliency of the economy, the City should leverage existing assets but adapt them to a changing economy. These efforts should focus on increasing primary sector, non-Hanford Site-related science and tech employment by creating a business environment that encourages and welcomes local business. Additionally, the City should develop partnerships with the Tri-Cities Development Council (TRIDEC), PNNL, Kadlec Medical Center, and other major employers to plan for expansion and delivery of adequate infrastructure and services.

Area 2. Build and attract a more entrepreneurial and dynamic economy

Richland is the regional hub for highly educated, science and technology professionals. Labor force participation is high, particularly for the most productive segment of the population – 30 to 54 year olds. With access to innovation partners and relatively low land costs when compared to bigger cities like Seattle, the climate for entrepreneurial startup companies is present. However, attracting

innovation and investment is a goal of many municipalities. The City can advance this environment through infrastructure investment, streamlined regulation, and “second paycheck” benefits such as livability and access to recreation. Working with its regional education and economic development partners, the City can play its role creating and supporting a rich “entrepreneurial ecosystem” in the area.

Area 3. Leverage the natural landscape as an asset for economic development

Richland’s location along the Columbia and Yakima Rivers offers exceptional opportunities to easily access attractive, natural, recreational spaces, as well as close proximity to the region’s vibrant agritourism and wine industries. In addition to this, professional service employees living in Richland enjoy lifestyle amenities, also called the “second paycheck.” These include access to parks, walkable business districts, good schools, diverse housing options, quality restaurants, and arts and cultural activities. Richland’s ability to leverage its natural environment to directly spur economic activities and provide an attractive setting for professionals will further enhance its competitive advantage. However, residents must be cognizant of maintaining a healthy balance between environmental preservation and economic development activities.

Area 4. Closely monitor zoning and land use in the City

The City has the dual challenge of planning for urban infill development as well as planning to accommodate development on many large and relatively undeveloped sites within the City. To ensure zoning is responsive to market conditions, it should be monitored periodically to evaluate potential hindrances. Working to concentrate development in areas with existing infrastructure and near jobs centers will be instrumental to optimize the City’s funding.

LAND USE

SECTION ONE

INTRODUCTION

Due to the linear geographic pattern of the City along the Columbia River, Richland's land is distributed primarily from north to south covering a little over 27,000 acres in the current incorporated City limits and additional 3,000 acres in the Urban Growth Area (UGA).

Land use patterns determine individual neighborhoods, businesses, amenities, public facilities, and the types and locations of future development and redevelopment. Land use patterns also determine traffic patterns. This element includes future population projections and needs for land use types for the next 20 years. The Comprehensive Plan land use map identifies land use categories within the City limits and the UGA. This section also elaborates on critical areas, shoreline and open space lands in Richland.

DESCRIPTION OF LAND USES

Agriculture (AG) - This category includes uses devoted primarily to the tilling of soil, the raising of crops, horticulture, livestock, poultry, feed lots, and related commercial and industrial activities. It allows residential densities up to one dwelling unit per five acres.

Low Density Residential (LDR) - The LDR category includes single-family residential uses with an average density of 3.5 dwelling units per acre.

Medium Density Residential (MDR) - The MDR category includes single-family residential uses with an average density of eight dwelling units per acre.

High Density Residential (HDR) - The HDR category includes multifamily residential uses with an average density of 15 dwelling units per acre. In transitional areas between more intensive commercial uses and lower density residential uses, limited office/institutional uses may also be located within the HDR designated areas.

Badger Mountain South (BMS) - This includes land uses set forth in the Badger Mountain Subarea Plan as adopted by the Richland City Council on September 7, 2010.

Multifamily Residential Office (RO) - This designation applies to areas within Island View where senior housing and condominium projects would be encouraged. Compatible office projects and light commercial uses also would be allowed within this designation.

Central Business District (CBD) - This classification includes a mix of residential, retail, service, and business uses that provide for the daily convenience needs of on-site and nearby employees and residents. The purpose is to provide for pedestrian- and transit-oriented high density employment and cultural uses together with limited complementary retail and higher density residential and other compatible uses that enhance the Central Business District.

Commercial (C) - The commercial land use category includes a variety of retail, wholesale, and office uses. Within this category are professional business offices, hotels, motels, and related uses. It also includes a variety of retail and service uses oriented to serving residential neighborhoods, such as grocery stores, hardware supply, and garden supply. Other commercial uses include automobile-related uses, and uses that normally require outdoor storage and display of goods. In transitional

areas between more intensive commercial uses and lower density residential uses, high-density residential development may also be located within the Commercial designated areas.

Retail Business (RB) - This designation is applied to the existing retail area that is commonly known as Columbia Center North, as well as other nearby locations on Columbia Center Boulevard and Fowler Street. Within this designation infill development is encouraged. Large format region-serving retail establishments are also encouraged on parcels large enough to support such uses.

General Commercial (GC) - This designation is applied to lands in the southernmost portions of Island View that are adjacent to and visible from SR 240. Within this category, new and used auto sales, RV, truck dealers, and similar retail uses are encouraged. Service-related businesses that require a central location within the Tri-Cities are also included in this designation.

Business Commerce (BC) - This designation applies to the Spaulding Business Park and some adjacent properties. It is intended to encourage a variety of professional office buildings, medical and/or dental laboratories, and light industrial uses.

Single Family Overlay (SFO) - This designation is applied to several pockets of single family residences throughout the Island View area where property owners have expressed a preference for this designation. The comprehensive land use plan map identifies a land use designation other than single family residential for all properties within Island View. For these identified parcels, there are two land use designations: the Single Family Overlay designation and another land use designation. The Single Family Overlay designation will remain in effect, allowing for continued residential use of the property, until such time the owner(s) seeks a change in the use of the property. At that time, the City will remove the Single Family Overlay and apply the other land use designation as identified in the comprehensive plan land use map in accordance with Land Use Goal #9, Single Family Overlay.

Commercial Recreation (CR) - This designation typically applies to properties under the ownership of the local, state or federal government. These properties are typically used to site regional recreational, water-oriented facilities, and associated uses.

Waterfront (WF) - The Waterfront category includes a variety of water-oriented uses such as marinas, boat docks, resorts, mixed commercial/residential development, hotels, motels, and offices along the Columbia River shoreline. The intent is to bring significant development to the Columbia riverfront that is consistent with the City's vision and that incorporates public access recreational features and attractive and high quality development.

Industrial (I) - This category includes a variety of light and heavy manufacturing, assembly, and warehousing and distribution uses. It also includes uses devoted to the sale of retail and wholesale products manufactured on-site, and a variety of research and development uses for science-related activities.

Business/Research Park (BRP) - The Business/Research Park designation provides for a variety of office and research and development facilities in a planned business park setting. Permitted uses include science-related research and development and testing facilities; administrative offices for those uses; and other general office uses.

Public Facility (PF) - This category includes a variety of public and institutional uses including facilities operated by federal, state, county, municipal, or other government agencies; public educational institutions; public libraries; hospitals; cemeteries; and some developed parks.

Developed Open Space (DOS) - This category includes golf courses, federal power transmission and irrigation wasteway easements, private open space, riverfront parks, undeveloped parks, and parks intended for long-term open space.

Natural Open Space (NOS) - The Natural Open Space category includes public lands intended to remain as long-term undeveloped open space with appropriate public access. This category primarily includes, for example, lands associated with the Yakima River floodplain, islands in the Columbia River, steeply sloped areas, sensitive areas along the Amon Basin, and other designated areas. Natural Open Space lands are managed as natural areas and may include riparian corridors along creeks and rivers, wetlands, shrub-steppe, open ridges, and hillsides.

Mineral Resource (MRL) - This classification includes lands that have long-term significance for the extraction of minerals on a commercially-viable basis and are not already compromised by on-site, immediate, or adjacent urban growth. Mineral Resource designation must be requested by the owner of the property and/or of the mineral rights, or her/his designated agent.

Urban Reserve (UR) - The Urban Reserve designation is assigned to lands that are to be held in reserve during the 20-year planning period of the comprehensive plan. A significant amount of the land in this designation is in agricultural use. Uses of land designated Urban Reserve are intended to be temporary to provide the City a basis to evaluate future needs for additional land in other land use designations.

Table LU-1 below indicates the land use distribution within the City and in the UGA.

Table LU-1: Land Use Acreage

Land Use Designation	City Limits (acres)	Area within UGA(acres)	Total Acreage¹	% of total
Residential				
Low Density Residential	4,598	689	5,287	19.06
Med. Density Residential	1,427		1,427	5.14
High Density Residential	530		530	1.91
Badger Mountain South	1,431		1,431	5.16
Commercial				
Business Commerce	28		28	0.10
Central Business District	222		222	0.80
Commercial	1,046	16	1,062	3.83
General Commercial	79		79	0.28
Regional Retail	31		31	0.11
Waterfront	140		140	0.50
Public Lands/Open Space				
Developed Open Space	2,170	144	2,314	8.34
Natural Open Space	2,154	322	2,476	8.93
Public Lands/Facilities				
Public Facility ²	1,014	27	1,041	3.75
Industrial				
Business Research Park	750	437	1,187	4.28
Industrial	4,190	1,050	5,240	18.89
Mixed Use Designations			0	
Agricultural	903		903	3.25
Residential Office	21		21	0.08
Urban Reserve	1,214		1,214	4.38
Public Service Lands				
Rights of Way	2,947	163	3,110	11.21
Total	24,895	2,848	27,743	100.00%
¹ Does not include water area				
² Public facilities lands include public school sites, WSU campus, City owned facilities, and cemeteries				

SECTION TWO

POPULATION TREND

Richland and the Tri-Cities area experienced strong growth from 1973 to 1981 due to the development of nuclear power plants for the Washington Public Power Supply System. In the 1980s, however, the power plant program was discontinued, as was the federal government's production of nuclear material at the Hanford Site. These changes created a difficult economic period throughout Benton County and neighboring Franklin County as indicated in the reduced growth in 1990 data.

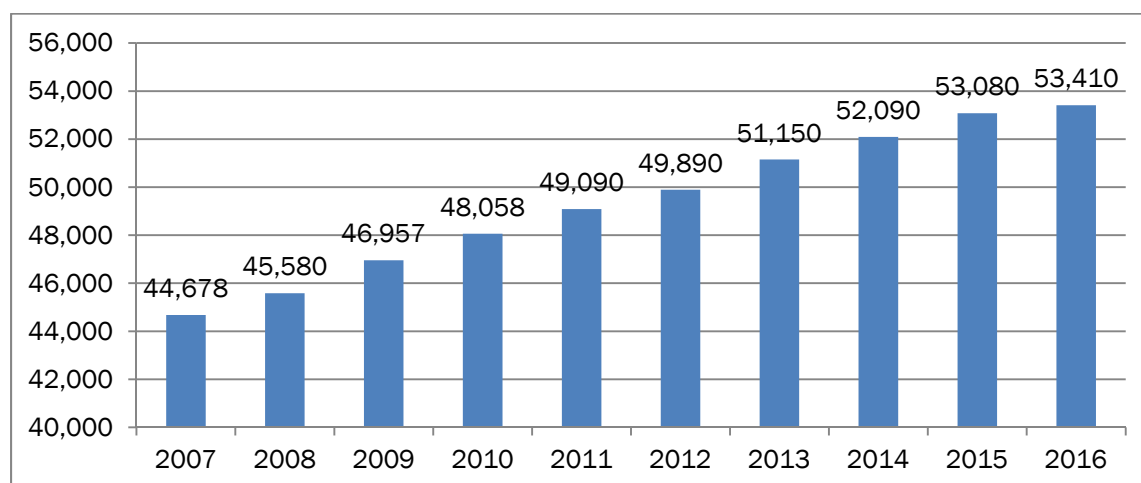
With plutonium production discontinued at the Hanford Site, the federal government redefined its mission there. The new mission became environmental restoration or cleanup of the site, together with ongoing management of the hazardous wastes stored there. In association with these missions, areas near the Hanford Site has become a hub for research and development into energy, health, waste management, and the environment, as well as development for new technologies in these fields in the last two decades. As a result, population in Richland grew 13.87% in a decade in 2000, and 24.16% in a decade in 2010. Table LU-2 below indicates the historic population growth in Richland and Benton County.

Table LU-2: Historic Population Growth in Richland and Benton County

Year	Richland	% Change Richland	Benton County	% Change Benton County
1950	21,809	n/a	Data not available	Data not available
1960	23,548	7.97%	62,070	Data not available
1970	26,290	11.64%	67,540	8.81%
1980	33,578	27.72%	105,800	56.65%
1990	33,993	1.24%	112,560	6.39%
2000	38,708	13.87%	142,475	26.58%
2010	48,058	24.16%	175,177	22.95%

Population in Richland has grown significantly in the last decade from 44,678 in 2007 to 53,410 in 2016. Much of this growth can be linked with the Department of Energy's nuclear cleanup and related operations at the Hanford Site. However, the economy in the Tri-Cities area is becoming more diverse with the growth of other employment sectors such as healthcare and education. It appeared from the past trends that many of the individuals retiring from the Hanford Site chose to stay in Richland or in the Tri-Cities area. Table ED-14 indicates about 28% of Richland's population are 55 years or older, and 25% of the total population are 18 years or under. These contribute to Richland's family-friendly environment and education sector improvement.

Figure LU-1: Population Growth in Richland in the Last 10 Years



As discussed in the Economic Development section, Richland's median household income is the highest in the Tri-Cities, \$70,806 in 2017, with Kennewick at \$52,831 and Pasco at \$53,950 (TRIDEC, 2017). Over 95% of the residents in Richland are high school graduates or graduates with higher degrees (US Census, 2015).

POPULATION FORECAST

WASHINGTON GMA REQUIREMENTS

The Washington State GMA requires the Land Use Element to include population densities and estimates of future growth (RCW 36.70A.070(1)). The Benton County CWPP contains several provisions addressing population growth and capacity. They include agreement or cooperation in determining the following:

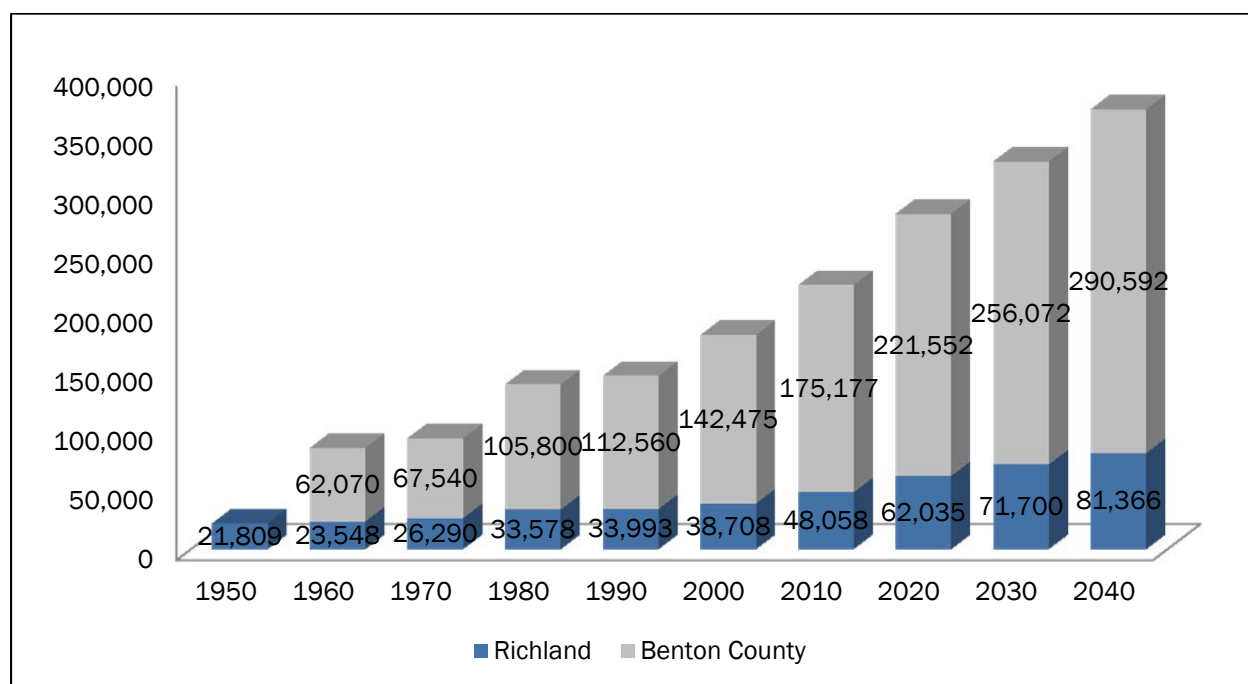
- The portion of the 20-year population forecast allocated to the City of Richland.
- The boundaries of the urban growth area.
- The amount of land necessary to provide sufficient service capacity to meet projected populations at urban densities and service standards.
- Consistency with Benton County CWPP.

FORECAST

Based on the 2016 estimate of Office of Financial Management (OFM), Richland and its UGA contain a population of 54,733 (53,410 within City limits, 1,323 in the UGA). Benton County's county-wide allocation and projected population for Richland are 76,533 for the year 2035, and 81,366 for the year 2040.

The current population and the additional 20-year projected population equals 78,431 persons in the year 2037. The projected additional population that will be added to the City during the next twenty years, per consultation between the cities and Benton County and based upon the official projections from the OFM, is 23,699 persons.

Figure LU-2: Richland and Benton County's Population Forecast



FUTURE LAND CAPACITY

In order to identify land necessary to meet the future demand, a land capacity analysis was performed. The analysis used the City's existing land use density and land inventory.

The first part of this analysis is based on the capacity of existing vacant and underdeveloped residential land to add additional units. This doesn't reflect the property owners' intention of development; neither does it require the property owners to develop their properties.

In this methodology, all vacant and undeveloped lands were identified. Critical areas or environmentally sensitive lands present on the land were excluded in order to estimate the amount of buildable land. Twenty percent of the buildable land area was allocated for infrastructure. The remaining acreage was identified to be buildable and units were projected according to the City's average land use density.

As discussed in the previous section, 23,699 persons will be added to the City during the next twenty years. This will require 9,874 residential units ($23,699/2.4$) considering Richland's average household size of 2.4 persons/unit. In order to assess adequate land for future growth, the second phase analyzes residential units projected primarily on Low Density, Medium Density, High Density lands, and the Badger Mountain South area. Additionally, a percentage of vacant Commercial and Waterfront lands are projected to be developed with multi-family housing. Table LU-3 below indicates projected residential development within different land use categories.

Table LU-3: Land's Capacity for Future Residential Development

Land Use Category	Projected Units
Low Density Residential Undeveloped = 1230 acres	BLM ownership (135 acres) 300 Area (23 acres) McDonald (14 acres) = 172 acres 515 acres constrained by steep slopes $1,058 \text{ acres} - 515 = 543 \text{ acres}$ $543 \text{ acres} \times 80\% \text{ (after infrastructure)} = 434 \text{ acres @ } 3.5 \text{ units/acre} = 1,520 \text{ units}$ $515 \times 80\% \text{ (after infrastructure)} = 412 \text{ acres @ } 2 \text{ units/acre} = 824 \text{ units}$ <i>2,344 units projected</i>
Medium Density Residential Undeveloped = 255 acres	Horn Rapids Open Space areas = 25 acres $230 \text{ acres} \times 80\% \text{ (after infrastructure)} = 184 \text{ acres}$ $184 \times 6.5 \text{ units/acre} = 1196 \text{ units}$ <i>1,196 units projected</i>
High Density Residential Undeveloped = 107 acres	$107 \times 80\% \text{ (after infrastructure)} = 86 \text{ acres}$ $86 \times 75\% \text{ (market factor)} = 65 \text{ acres}$ Average density = 15 units/acre $65 \times 15 = 975$ <i>975 units projected</i>
Badger Mountain South Undeveloped = 1416 acres	Currently 60 dwellings Total Projection at Full Build Out: 4,150 to 5,000 units <i>4,090 units projected</i>
Commercial Undeveloped = 471 acres 39 acres undeveloped in Commercial Limited Business zoned land (8% of undeveloped commercial land)	Average density = 15 units/acre $39 \times 80\% \text{ (after infrastructure)} = 31 \text{ acres}$ <i>465 units projected</i>
Waterfront Undeveloped = 56 acres	10 acres unusable (landfill/shoreline setback areas) $1/3 \text{ waterfront area used for residential}$ $15 \text{ acres @ } 15 \text{ units/acre} = 225 \text{ units}$ <i>225 units projected</i>
Total	9,295 units projected

As indicated in the table above, 9,295 residential units can be developed at full buildout to accommodate 22,308 people. This still leaves the City with the need to accommodate an additional 580 people (23,699-22,308) in a full buildout scenario. The City currently has an urban reserve land use category. Re-designation of this land for residential uses will satisfy the City's need for an additional residential land base.

Table LU-4: Vacant and Developed Commercial, Industrial and Public Lands

Land Use	Developed (acres)	Vacant (acres)	Total Acres
Commercial (City)	1,007	538	1,546
Commercial (UGA)	11	5	16
Industrial (City)	2,914	2,026	4,940
Industrial (UGA)	447	783	1,487
Public Lands ¹ (City)	4,385	953	5,338
Public Lands ¹ (UGA)	351	0	351

¹Includes open space and public facilities land

The amount of vacant commercial land is anticipated to be sufficient to meet the needs of the projected population expected over the 20-year planning period. Re-development of underutilized lands within the Central Business District will also help to satisfy the demands for commercial lands created by an expanding population.

The City's industrial land base has recently been expanded significantly by an act of Congress that transferred 1,341 acres from the Department of Energy (DOE) to the City, the Port of Benton, and Energy Northwest. This land is located north of Horn Rapids Road and is specifically set aside for industrial development. The City and Port plan to market the property to industrial developers as "mega-sites" of 200 acres or larger. The proximity of this land to highways, rail, and utility services together with the large acreages available provide development opportunities for industries that exist in very few places throughout the Pacific Northwest.

Industrial lands located south of Horn Rapids Road will continue to be developed with industrial developments of a more typical scale. The available industrial lands within these two areas will ensure that the City has an adequate industrial land base throughout the planning period.

LANDS FOR PUBLIC PURPOSES

According to RCW 36.70A.150, the county and jurisdictions within it are required to work together to identify the needs for public facilities, including lands for public purposes. Current City-owned public facilities include parks and open spaces, transportation, water, sewer, storm water, solid waste, energy, and municipal facilities. Other public facilities include schools, irrigation, natural gas, and telecommunication services. Table LU-1 indicates public facility and transportation rights of way lands.

Table LU-5: Public Land in the City and UGA

Land Use	Acres in the City	Acres in the UGA	Total
Developed Open Space	2,170	144	2,314
Natural Open Space	2,154	322	2,476
Public Facility ²	1,014	27	1,041
Public Lands Subtotal	5,338	493	5,831

²Public facility lands includes public school sites, WSU campus, City owned facilities and cemeteries

Excluding the open space land, there are about 361 acres of vacant public facility land within the City limits. Richland's current land per capita for public facility use (without including open space per capita) is 0.0122 acres. Based on this ratio, the additional 23,699 people will require 289 acres (23,699 x 0.0122) of land. Considering the vacant 361 acres, the City will have a surplus of approximately 72 acres of land for public facilities.

This analysis indicates the total land deficits and surpluses. However, the surplus land may not always be useful to meet specific needs due to its location and compatibility for specific public use. Additional information regarding park and open space lands can be found in the Capital Facilities Chapter of the Plan under "Parks, Recreation, and Open Space".

ADDRESSING THE DEMAND

The City is planning to accommodate additional growth in two currently undeveloped areas to the north and west sides all within the City limits. One area is located on the southwest side of the City near the City View and Queensgate area, abutting Kennedy Road to the south and Queensgate Drive to the east. The other area is located on the north side abutting the Horn Rapids residential development to the south. See Figure LU-3 for details.

The land use in these areas is re-designated from underutilized Urban Reserve to a mix of Low, Medium, and High Density Residential, Commercial, Public Facility, and Developed and Natural Open Spaces as shown in Table LU-6.

Table LU-6: Proposed Land Use Acreage

Land Use	Acres
Low Density Residential	385
Medium Density Residential	70
High Density Residential	31
Commercial	41
Public Facility	40
Developed Open Space	5
Natural Open Space	34
Total	606

Additional land use re-designation includes a portion of an area in Columbia Point South, re-designated from Natural Open Space and Public Facility to Commercial Recreation. In this area, about 33 acres of Public Facility land, and 72 acres of Developed Open Space land use will change to

89 acres of Commercial Recreation and 16 acres of Natural Open Space land use as shown in Table LU-7 below. Also see Figure LU-3, the Future Land Use Map.

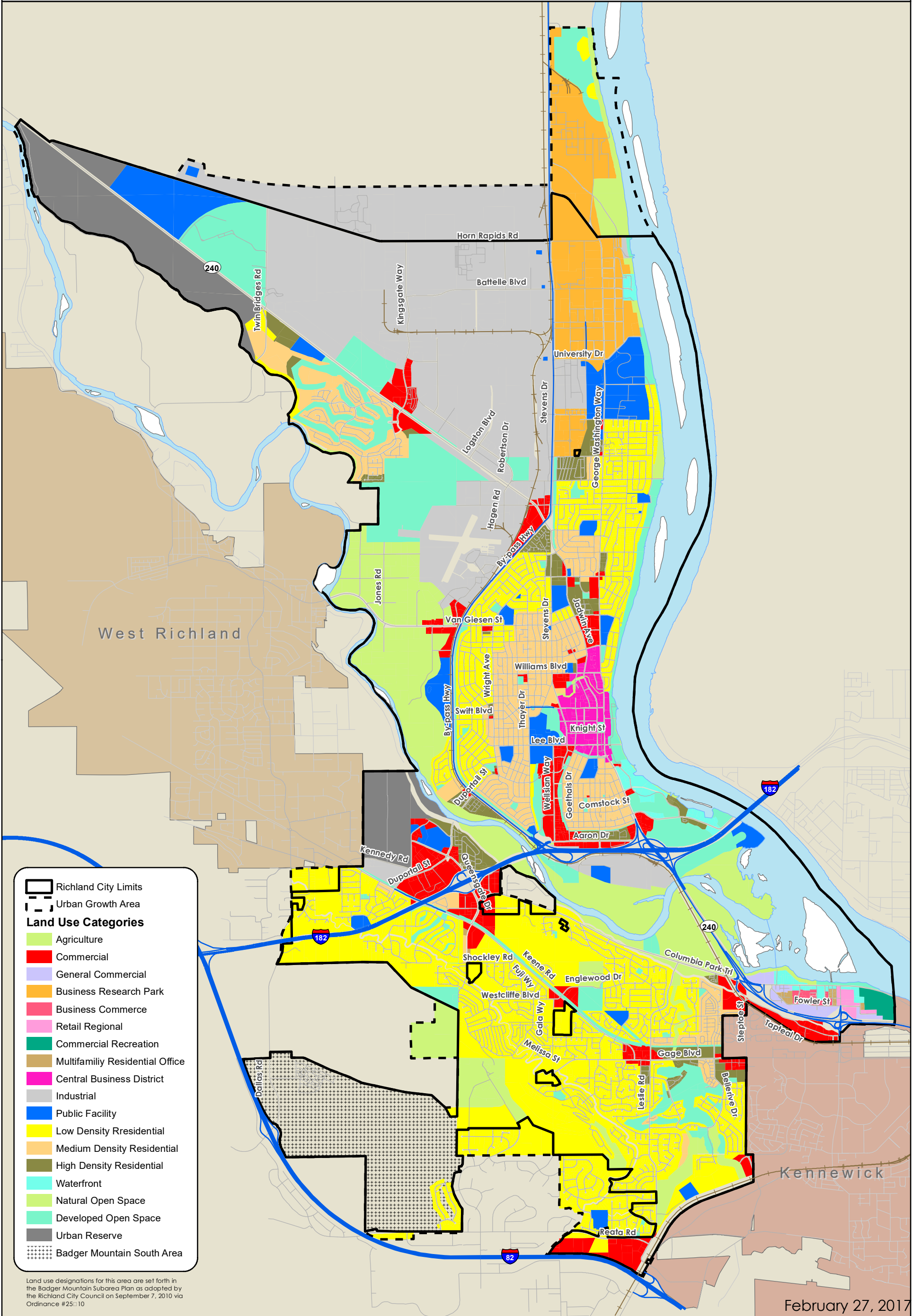
Table LU-7: Proposed Land Uses in Columbia Point South (Preferred Alternative)

Land Use	Existing Acres	Proposed Acres
Developed Open Space	72	
Public Facility	33	
Commercial Recreation		89
Natural Open Space		16
Total	105	105



City of Richland

LU-3 - Future Land Use



February 27, 2017

SECTION THREE

NATURAL ENVIRONMENT

CRITICAL AREAS

Richland's critical areas include wetlands, fish and wildlife habitat areas, aquifer recharge areas, and geologically hazardous areas.

The critical areas map in the Comprehensive Plan, Figure LU-4, indicates floodplains, geologic hazard areas (steep slopes), and wetlands in Richland.

- **Wetlands.** Wetlands are natural ecosystems that serve a number of important beneficial functions. They help maintain water quality, store and convey storm water and floodwater, and recharge groundwater. Wetlands provide important wildlife habitat and serve as areas for recreation, educational and scientific study, and aesthetic appreciation.
- **Fish and Wildlife Habitat Areas.** These areas are important for maintaining flora and fauna species diversity; providing opportunities for food, cover, nesting, breeding, and movement for fish and wildlife; serving as areas for recreation, educational and scientific study, and aesthetic appreciation; helping to maintain air and water quality; controlling erosion; and providing neighborhood separation and visual diversity within urban areas.
- **Frequently Flooded Areas.** Floodplains and other areas subject to flooding perform important hydrologic functions and may present a risk to persons and property. Classifications of frequently flooded areas should include, at a minimum, the 100-year floodplain designations of the Federal Emergency Management Agency (FEMA) and the National Flood Insurance Program (NFIP).
- **Aquifer Recharge Areas.** Critical aquifer recharge areas are defined as those areas having a critical recharging effect on aquifer use for potable water in community systems. They consist primarily of wellhead protection areas associated with City water supplies and are intended to protect public health and safety, prevent degradation of ground water supplies, and control risks to the degradation of ground water quality and quantity.
- **Other Critical Areas.** These are characterized by geologic hazards that pose a risk to public and private property and human life and safety. Geologically hazardous areas include areas susceptible to landslide, erosion, or seismic activity. Because of this susceptibility, these areas may not be suitable for new development. In many cases, hazards can be reduced or mitigated through engineering design or modified construction practices.

The City uses the best available science (BAS) in developing policies and development regulations to protect the functions and values of critical areas and give special consideration to conservation or protection measures. The BAS involves adopting information from local, state, or federal natural resource agencies that are appropriate for local circumstances; consultation with a qualified scientific expert or team to assess applicability to the local critical area; and determination if a person is a qualified scientific expert.

SHORELINE

The GMA requires that Shoreline Management Plan (SMP) goals and policies are included in the Comprehensive Plan and that they are consistent with each other. The City of Richland received grant funding from the Washington State Department of Ecology to develop an updated SMP. A primary purpose of this effort is to update the SMP to comply with Chapter 90.58 Revised Code of

Washington (RCW), the Shoreline Management Act (SMA), and the Department of Ecology's 2003 Shoreline Master Program Guidelines (Chapter 173-26 Washington Administrative Code [WAC]).

The City of Richland worked closely with the citizens and the Department of Ecology and updated the SMP in 2014. The goals and policies of the SMP are incorporated by reference in the Comprehensive Plan.

The City has prepared an Inventory and Analysis of local shoreline ecological, land use, and other resources to provide the scientific basis of the program. The City has approximately 2,600 acres of land on the Columbia and Yakima Rivers shoreline. The City's overall approach of shoreline use is as follows:

- The utilization of shorelines for economically productive uses that are particularly dependent on shoreline location or use.
- The utilization of shorelines and the waters they encompass for public access and recreation.
- Protection and restoration of the ecological functions of shoreline natural resources.
- Protection of the public right of navigation and corollary uses of waters of the state.
- The protection and restoration of buildings and sites having historic, cultural, and educational value.
- Planning for public facilities and utilities correlated with other shoreline uses.
- Prevention and minimization of flood damages.
- Recognizing and protecting private property rights.
- Coordination of the SMP with other relevant local, state, and federal programs.

OPEN SPACE

Open space in the Richland and its UGA comprises over 17 percent of the total land. These areas include natural areas (Natural Open Space) and more formal developed parks and trails (Developed Open Space). Park and trail facilities are discussed in detail in the Capital Facilities Element. This section discusses the natural elements of Richland's open space system, which comprise approximately 9 percent of the land area within the City.

The Tapteal Greenway, located on the lower Yakima River, is one of Richland's most notable open space areas. The Greenway is a 35-mile natural corridor that runs from Kiona at Benton City to the river's confluence with the Columbia River at Bateman Island in Richland. It has been preserved as an area where wildlife, natural vegetation, and people can co-exist. It provides potential opportunities for non-motorized recreation, education, and habitat protection.

The Chamna Natural Preserve is about 276 acres and is located on the north bank of the Yakima River. It is part of the Yakima River delta and is managed by the Tapteal Greenway Association. The Tapteal Greenway Association manages other lands owned by the USACE as a nature preserve with limited non-motorized access. Habitat area includes about 100 acres of upland, with 50 acres of abandoned farm fields (Anchor QEA, 2014). Riverview Preserve is a 268-acre area owned and managed by the USACE at the confluence of the Yakima and Columbia Rivers; Bateman Island is 160 acres in the Yakima River Delta under USACE ownership and leased to the City.

W.E. Johnson Park is primarily a natural open space area consisting of 236 acres. It has about a half mile of Yakima River frontage. It is located south of Van Giesen Street.

On the Columbia River, the City managed major open space land includes Leslie Groves Park located between Snyder Street and Ferry Street; and the Columbia Point South area, which is a largely

undeveloped area of 230 acres located at the confluence of the Yakima River and the Columbia River. Other major open space land includes the islands on the river that are part of the McNary National Wildlife Refuge.

MINERAL RESOURCES

Mineral resource lands are natural resource lands primarily devoted to the extraction of minerals or that have known or potential long-term commercial significance for the extraction of minerals.

Each city and county planning under the Washington State GMA is required to designate natural resource lands where appropriate, and adopt development regulations to assure the conservation of agricultural, forest, and mineral resource lands (RCW 36.70A.060, RCW 36.70A.170). Jurisdictions need to designate mineral resource lands that are not already characterized by urban growth and that have long-term significance for the extraction of minerals.

In order to classify mineral resource lands, cities and counties are required to consult with the Department of Natural Resources. Lands from which extraction of mineral occurs or can be anticipated shall be identified and classified as mineral resource lands (WAC 365-190-070).

Classification criteria shall be established according to the state guidelines in WAC 365- 190-070. Areas shall be classified as mineral resource lands based on geologic, environmental, and economic factors, existing land uses, and land ownership. Cities and counties should classify lands with long-term commercial significance for extracting at least one of the following minerals: sand, gravel, and valuable metallic substances. Other minerals may be classified as appropriate. Classification should be based on the maps and information provided by the Washington State Department of Natural Resources and the United States Bureau of Mines.

The City undertook a detailed analysis of its mineral resources in 1998 and determined that no lands within the Richland Urban Growth Area should be designated as mineral resource lands.

HOUSING

SECTION ONE

INTRODUCTION

The Washington State GMA established Housing as one of the fourteen planning goals to be used exclusively for guiding the development of comprehensive plans and development regulations. The adopted goal for Housing states: “Encourage the availability of affordable housing to all economic segments of the population of this state, promote a variety residential densities and housing types, and encourage preservation of existing housing stock.” This section analyzes existing housing and projected housing demand in Richland.

EXISTING INVENTORY AND PROGRAMS

The 2015 American Community Survey (ACS) data indicates 22,130 housing units in Richland. About 65 percent of the housing units are owner-occupied, and 35 percent renter-occupied. Table HE-1 below indicates housing types and occupancy.

Table HE-1: Existing Housing Inventory

	Estimate in 2015	%
Total Housing units	22,130	100.00
Occupied housing units	20,792	94.00
Vacant housing units	1,338	6.00
Owner-occupied housing units	20,792	65.50
Renter-occupied housing units	13,622	34.50
Unit types		
1-unit, detached	13,858	62.60
1-unit, attached	1,142	5.20
2 units	1,356	6.10
3 or 4 units	666	3.00
5 to 9 units	1,098	5.00
10 to 19 units	1,077	4.90
20 or more units	2,112	9.50
Mobile home	786	3.60
Boat, RV, van, etc.	35	0.20

Source: American Community Survey, 2015

The US Department of Housing and Urban Development provides the City of Richland with federal Community Development Block Grant (CDBG) and Home Investment Partnership Program (HOME) funds on an annual basis.

In 2016, \$468,330 of HOME funds was awarded to the Tri Cities HOME Consortium (Cities of Richland, Kennewick, and Pasco). Each year, ten percent of the award is used for administrative purposes, fifteen percent is set aside for a Community Housing Development Organization (CHDO) affordable housing development project, and the balance of the award is divided among the three Cities. The HOME funds were used to provide eligible low- and moderate-income first-time homebuyers with the necessary funds to assist with down payment and closing costs, making it more affordable to purchase their first home in Richland. In 2016, the City provided approximately \$ 163,581 in funding to assist sixteen borrowers with the purchase of their first home.

A portion of CDBG funds are made available each year through the revolving loan fund to eligible low- and moderate-income homeowners to make needed health and safety repairs to the home they own and are living in through the Owner-Occupied Rehabilitation program. Homeowners can apply for up to \$20,000 to make needed repairs and weatherization improvements to their home. The loan is secured by a lien on the property. The loan is zero percent interest, non-payment. The loan is due and payable when the homeowner refinances, sells, or no longer uses the property as their primary residence.

PROJECTED NEEDS

As discussed in the Land Use Chapter, Richland's population is expected to grow from 53,410 in 2016 to 78,431 in 20 years, adding 23,699 people in the City and UGA by 2037. Using the average household size of 2.4 persons per unit, this additional population will require 9,875 housing units. According to the land use analysis, existing vacant buildable land will provide 9,295 units in a variety of housing types (single-family, multi-family, townhome, condo, etc.). An additional 580 housing units will be required to meet the demand of future housing.

Currently, there is a shortage of senior affordable housing in Richland. Based on the discussion with the affordable housing groups for seniors (Shalom Ecumenical Center and Luther Senior Center), over the period of 2010 and 2016, occupancy at the senior housing communities averaged 98%. Some senior rental housing communities also have a long waiting list.

RECOMMENDATIONS

This demand of additional housing will be met by developments in the existing planned areas, infill developments, and by re-designating two underutilized areas currently designated Urban Reserve to a mix of residential, commercial, and public facilities land use. One area is located on the west side near the City View area, and the other area is located on the north side near the Horn Rapids development. Details of the land uses are discussed in the Land Use Chapter of this Plan.

The City's current housing assistance programs - CDBG and HOME - will continue to assist homeownership for Richland citizens.

TRANSPORTATION

SECTION ONE

INTRODUCTION

Washington's 1990 GMA requires rapidly growing cities and counties in Washington State to develop comprehensive plans that describe and plan for their future development. These plans must discuss facilities, functions, and financing for specific elements of the community. The specific goal of the GMA with regard to transportation is to "encourage efficient multi-modal transportation systems that are based on regional priorities and coordinated with county and city comprehensive plans." The GMA also requires that local comprehensive plans, including the land use and transportation elements, be consistent and coordinated with required regional programs.

The ability to move goods and people is essential for a healthy community, and the Transportation Element of Richland's comprehensive plan describes how it is done now and will be done in the future. To meet GMA requirements, the Transportation Element must identify existing transportation system characteristics, establish standards for levels of service (LOS), and identify existing and future deficiencies based on traffic growth projections.

The GMA also requires that a jurisdiction's transportation plan contain a funding analysis of the capital transportation projects it recommends. This analysis covers funding needs and resources, and includes a multi-year funding plan. The purpose of the analysis is to ensure that each jurisdiction's transportation plan is affordable and achievable.

PURPOSE AND INTENT

Over the next 20 years Richland is projected to experience a 28 percent increase in population. This growth will result in an increase in traffic volumes to, from, through, and within the City. Transportation strategies must be developed to maintain or achieve acceptable levels of congestion and roadway condition. This Transportation Element will serve as Richland's strategy for accommodating anticipated growth. It combines technical and financial analyses of the City's transportation system using methods that meet GMA requirements.

The Transportation Element analyzes the current transportation system, identifies what improvements need to be made to serve the City, and determines how the improvements can be financed. Levels of service have been developed to reflect the system's ability to serve City users, applied to the existing facilities to determine current deficiencies, and used to predict deficiencies for the horizon years. Each year the City prepares a 6-year Transportation Improvement Program. In accordance with the GMA, the plan will be updated each year, maintaining the 6-year planning horizon.

Coordination with other elements of the City's Comprehensive Plan and the plans of adjacent jurisdictions is important to the success of this element. The land use designations from the Land Use Element are used to forecast traffic, and the City's transportation goals and policies are used to guide project selection. The City has shared information and coordinated with the Benton-Franklin Council of Governments (BFCOG), the Washington State Department of Transportation (WSDOT), and neighboring cities in the preparation of this element. The plan meets the concurrency requirement of the GMA, under which improvements are required to match growth and development.

This element is divided into the following sections: existing conditions, level-of-service development and analysis, and existing and future deficiencies and recommendations. The roadway system inventory detailed in the Existing Conditions section and land use information from the Land Use Element are used together with a traffic model and the desired level of service to form the basis for the analysis of conditions in 2040. The results of this analysis are reported in the Deficiencies and Recommendations section. In addition to the roadway system, non-motorized transportation systems, air, rail and transit systems are also discussed.

ANALYSIS METHODOLOGY

The Transportation Element of the 2008 Comprehensive Plan was based on the 2005 Transportation Plan and the significant evaluation of the transportation system that was completed at that time. The City of Richland has completed many of the projects identified in the current Transportation Plan and continues to perform studies and develop projects that address transportation needs within the City. Since a formal update of the City Transportation Plan has not been completed since 2005, substantial evaluation of the system has been undertaken for this current effort. For the purposes of this Comprehensive Plan Update, four primary inputs have been used to evaluate the transportation system for the need for transportation improvements.

1. Results of recent studies where known deficiencies exist and solutions have been identified.
2. Roadway segment traffic volumes collected by the Benton Franklin Council of Governments during 2016 were used to evaluate the vast majority of functionally classified roadway segments and intersections of functionally classified roads at a planning level.
3. Other projects developed by City staff to address issues and concerns.
4. Future conditions have been evaluated through the use of the Benton Franklin Council of Governments' regional traffic model which incorporates future population and land use projections to forecast year 2040 traffic volumes throughout the Tri-Cities region.

SECTION TWO

EXISTING CONDITIONS

The Tri-Cities is the largest metropolitan area between Spokane to the northeast, Seattle to the northwest, Portland to the west, and Boise to the southeast. Because of its location, the Tri-Cities is

a major transportation hub for travelers and commodities in the Pacific Northwest. As part of the Tri-Cities, Richland has easy, direct access to all modes of commercial transportation services. This section provides an inventory of the existing transportation system, which will be used as the baseline for assessing future development of the system.

DATA COLLECTION AND REVIEW

This element focuses on facilities operated by the City of Richland, as well as those operated by others, within the UGA. Additional facilities and services operated outside this area by other jurisdictions that are critical to the functioning of the transportation system are briefly described. Data for this section were obtained from the City of Richland Public Works Department, Information Services Department and the Benton Franklin Council of Governments. Data for non-City-operated transportation systems were obtained from service providers and secondary documents.

EXISTING ROADWAY SYSTEM

Each City roadway is classified according to its function within the system. The currently approved functionally classified roadway system is shown in Figure T-1. The City uses the following street classifications, based on the amount of traffic and the origin and destination of the traffic:

- Interstate (5.48 miles)
- Other freeway/expressway (14.87 miles)
- Principal arterials (15.57 miles)
- Minor arterials (28.62 miles)
- Collectors (22.97 miles)
- Local (residential) streets (191.97 miles)

The Tri-Cities is connected to the interstate highway system. I-82 links the Tri-Cities metropolitan area to I-90 to the north and west, through Yakima, and to I-84 to the south, in northern Oregon. I-182, which passes through Richland, links Richland to these interstates and US 395. US 12 links the Tri-Cities to the interstates and to US 395, and provides access to Walla Walla and other southeastern Washington locales. The limited-access interstates serving the Tri-Cities carry between 40,000 and 60,000 vehicles per day. SR 240, which originates at US 395, links Richland and Kennewick and provides a western bypass route around the City to the Hanford Site, then continues northwest to connect with SR 24. Access to West Richland is via SR 224 (Van Giesen Street) and I-182. WSDOT is responsible for maintaining an adequate level of service on these highways.

Arterials are used in an urban setting and are divided into principal and minor arterials. They carry the highest volumes of traffic within the urban roadway system, provide connections within the system for traffic using other classifications of roadways, and link high-volume destinations and land uses, such as major employers or larger commercial centers

Collectors connect traffic from residential streets to arterials. They can be used for through trips, or they may be the origin or destination of trips for purposes such as neighborhood services. Collectors are approximately 36 feet wide and designed for speeds up to 30 miles per hour.

Residential streets are low volume roadways serving specific residential areas. They are typically not used for through trips, and are often the origin or destination of vehicle trips. Residential streets are typically designed for travel at no more than 25 miles per hour and are 28 to 32 feet wide.

The existing number of lanes on City streets is shown in Figure T-2, with the existing traffic control at intersections of functionally classified roads shown in Figure T-3. As shown in Figure T-3, there are 66 traffic signals within the City of Richland, some of these are operated by the Washington State Department of Transportation or through partnership by the City of Kennewick.

The Benton Franklin Council of Governments collected roadway segment volumes on the vast majority of the functionally classified roadways in the region from which to calibrate the regional traffic model. The results of these traffic counts within the City of Richland are shown in Figures T-2 and T-3 representing average weekday traffic volumes and PM peak hour traffic volumes.

EXISTING NON-MOTORIZED SYSTEM

Pedestrian Facilities

Pedestrian facilities within the City of Richland are mainly composed of sidewalks constructed in association with streets and a separate bicycle and pedestrian trail discussed below. Current design standards for residential collectors and residential streets include provisions for 5-foot sidewalks; however, not all existing residential areas have sidewalks. Bicycle paths, described below, also serve as pedestrian pathways.

Bicycle Facilities

The City of Richland currently has a bicycle/pedestrian path network of about 30 miles of Class I trails that run along the Columbia River as part of the Sacajawea Heritage Trail network that traverses both sides of the Columbia River throughout the Tri-Cities area, Keene Road, SR-240 By-Pass, and a portion of the Yakima River. The bicycle/pedestrian network of facilities also includes 6.38 miles of secondary trails and more than 36 miles of soft trails primarily in natural areas of Badger Mountain, South Columbia Point, Chamna Natural Preserve, and the Amon Basin. There are continued plans to expand this bikeway network through the construction of additional segments. Since the last Comprehensive Plan Update, the City has designated about 68 miles of City streets as bicycle routes, including principal and minor arterials and some collectors, which now provide major routes through and across the City. Links to the other cities in the area are also included in the bicycle route network. Figure T-3 shows the existing bicycle route system.

OTHER TRANSPORTATION SYSTEMS

Airport Facilities

Primary air traffic to Richland uses the Tri-City Airport in Pasco. Downtown Richland and Richland's industrial areas are a 20 minute drive via I-182 to the airport. The airport is classified as an air carrier airport, and offers direct passenger service to Seattle, Portland, Salt Lake City, San Francisco, Minneapolis/St. Paul, Denver, Los Angeles, Las Vegas, and Mesa, Arizona. Commuter airlines also link the Tri-Cities with other regional cities. Tri-City Airport passenger carriers include Allegiant, Delta, Alaska/Horizon, and United Express. UPS, Federal Express, and Ameriflight freight service is also provided. MedStar provides air ambulance service from the Tri-Cities Airport. In 2016, annual passenger enplanements at the Tri-Cities airport was over 375,000, making it the third busiest airport in the state of Washington. The Port of Pasco owns the Tri-City Airport, which features a newly expanded 110,000 square-foot terminal with state of the art services. The airport contains 2,235 acres and has three runways. The airport master plan identifies a runway extension to accommodate larger aircraft to serve the region.

The Richland Airport, owned and operated by the Port of Benton, is classified as a commuter service airport. Located northwest of Richland's core area, it is the second largest airport in the

area. A system of roadways links hangars, fixed-based operators, and commuter terminal facilities to associated industrial properties. The 650-acre airport has two 4,000-foot runways capable of supporting commuter aviation. The airport master plan calls for a runway extension to the north for a total of 5,000 feet in order to accommodate faster aircraft and corporate jets. This runway extension will require study and potential mitigation since the Runway Protection Zone will be extended over SR 240 and some developed industrial properties. At this time, the airport serves general aviation aircraft only, with 165 aircraft based there. This is a marked increase in recent years due to the closure of Vista Field in Kennewick. DHL provides daily flights for domestic and international shipping from the Richland Airport. MedStar also provides air ambulance service from the Richland Airport.

Rail Freight Facilities

Both the Burlington Northern and Union Pacific railroads provide mainline rail service to more than 35 states from the Tri-Cities, including service from Richland's industrial area. The Tri-Cities urban region is the only major metropolitan and manufacturing area between the Cascade Range and the Rocky Mountains offering this level of service from these two major national carriers.

Burlington Northern, the nation's longest railroad, has its Pacific Northwest hub in the Tri-Cities. Union Pacific, the nation's second longest railroad, connects the Tri-Cities to the Great Lakes and the Gulf of Mexico. Union Pacific operates the largest fleet of refrigerated rail cars in the nation.

Tri-City rail service passes through Pasco's computerized terminal or through the Kennewick rail yard. Both are within 10 miles of downtown Richland. Computerized rail service and flatcar ramps provide quick, efficient truck-to-rail exchanges, an important consideration for the area's large fresh, frozen, and processed food industry. Significant extensions of the rail system have been made in recent years to serve the Horn Rapids Industrial Park, including a loop that accommodates Unit Trains which are typically longer than one mile in length. Total length of railroad track within the City of Richland is 30 miles and is shown in Figure T-7. There are 13 at-grade street crossings of the railroad.

The United States Department of Energy controls rail entry into the Hanford Site north of Richland. Both Burlington Northern and Union Pacific have unlimited access to these tracks, which pass near Richland's industrial areas. A public rail dock has been constructed on Richland's northwest side, and there are plans to extend tracks west into Richland's vacant industrial area, north of the Richland Airport.

Passenger Rail Facilities

Amtrak's Empire Builder line provides passenger rail service daily from the Tri-Cities to Spokane and to Portland. Trains use the passenger station at West Clark Street and Tacoma Avenue in Pasco.

Port Facilities and Barge Services

Three port districts operate on the Columbia and Snake Rivers in the Tri-Cities metropolitan area. The Port of Benton has more than 6,000 feet of Columbia River frontage zoned for heavy industrial use at the Richland Industrial Park, which includes a barge facility that includes a high dock as well as a barge slip with 14 feet depth berths. The Port of Pasco has nearly two miles of waterfront, including a 650-foot dock, 20-foot-depth berths, and a 36-ton overhead crane. The neighboring 28-acre marine terminal facility has the largest bulk cargo tonnage movement on the upper Columbia River system. The Port of Kennewick has dock facilities along a 12-mile stretch of the Columbia

The Columbia-Snake River System is one of the most modern transportation networks in the nation. Numerous barge lines dock in the Tri-Cities, 325 river miles inland from the Pacific Ocean,

furnishing easy, direct access to domestic and Pacific Rim markets. River transportation is a cost-effective shipping mode for the Tri-Cities. Commodities often move from the Tri-Cities to Pacific Rim nations at a time advantage when compared to ports in San Francisco and Los Angeles. Nearly three million tons of barge freight, composed of a wide variety of bulk and raw agricultural and industrial cargoes and intermodal container cargoes, enter and leave the Tri-Cities annually. Seven barge companies service the Tri-Cities, with a container dock offering direct access to truck and rail service. Port facilities are shown in Figure T-7.

Public Transit System

Ben Franklin Transit provides community fixed route bus service in Richland as shown in Figure T-8 and throughout the Tri-Cities area. This service radiates from the Bob Ellis/Knight Street Transit Center in the core area of Richland, with routes, 23, 25, 26, 27, and 39 providing local service within the Richland City limits. Route 10 serves West Richland; routes 110, 120, 170, 225 and 815 provide inter-city connections between West Richland, Richland, Kennewick, and Pasco. Current fares are \$1.50 for adults and \$1.00 for youths (ages 6 to High School); senior citizens 65 and over and children under 6 ride free. Monthly passes are available as well. The fixed route bus system does not operate on Sundays, but evening and Sunday transit service can be obtained through TransPlus. Ben Franklin Transit serves some areas of the community through a shuttle service called Taxi Feeder. Such areas within and near Richland include: Broadmoor/Bellerive, Crested Hills, Rancho Reata and Willowbrook. Ben Franklin Transit also provides transit and vanpool services to the Hanford Site.

Trucking Lines

Richland and the Tri-Cities metropolitan area are served by more than 35 local, regional and national trucking lines. Eleven western states, Alberta, and British Columbia are within second-morning delivery service of the Tri-Cities.

Other Services

Several taxi and limousine services operate in the Tri-Cities area. Greyhound Bus Lines also serves the Tri-Cities, with daily stops at the joint Amtrack station in Pasco. Connections can be made there through the Ben Franklin Transit System. In addition, several transportation companies offer charter bus service throughout the region on an as-needed basis.

SECTION THREE

LEVEL OF SERVICE

LOS DEVELOPMENT

The GMA requires jurisdictions to maintain standards for transportation LOS. These standards are used during transportation studies to determine appropriate improvements to achieve acceptable Levels of Service. For future conditions, these standards are also used in conjunction with forecasts that come from a computerized model of the City's roadway system to analyze the transportation network and determine deficiencies under the Comprehensive Plan.

A capacity-based system for measuring LOS, developed by the Transportation Research Board, is outlined in the Highway Capacity Manual. Levels of service for different types of transportation facilities are based on parameters that best describe operating conditions for that type of facility, as well as the perceptions of drivers and passengers. These parameters are called measures of

effectiveness. The measures of effectiveness used for Richland's transportation system are outlined in Table T-1.

Table T-1: LOS Measures of Effectiveness

Type of Facility	Measure of Effectiveness
Freeways (basic segments)	Density (vehicles/mile/lane)
Multi-lane highways	Density (vehicles/mile/lane) or Free-flow speed (miles/hour)
Arterials	Average travel speed (miles/hour)
Signalized intersections	Average stopped delay (seconds/vehicle)
Un-signalized intersections	Average total delay (seconds/vehicle)

Levels of service are expressed using a scale with letter designations ranging from A to F. LOS A represents the highest level and the best operating conditions, and LOS F is the lowest level. The computerized traffic model replicates the operating conditions of the network and is used to assign an LOS to each roadway segment and intersection. Table T-2 generally defines the LOS rating scale.

LOS MEASUREMENT

Methodology

Levels of Service for Richland used during traffic impact studies and corridor studies are measured using the Highway Capacity Manual procedures and methods.

The afternoon peak time period (PM peak hour) was used for the traffic modeling; this has been determined through research to provide the best overall results and is a standard used in all traffic model preparation. Roadway data collected from City records included traffic counts, locations of stop signs and signals, speed limits, and lane configurations. Land use data were collected for existing employment and housing. The model output can be expressed in terms of both traffic volumes and average speeds. These are used to determine levels of service.

Table T-2: Level of Service Criteria for Intersections

LOS Rating	Signalized Intersections Control Delay per Vehicle (s/veh)	Un-signalized Intersections Control Delay per Vehicle (s/veh)
A	> 0-10	>0 - 10
B	> 10-20	>10 - 15
C	> 20-35	>15 - 25
D	> 35-55	>25 - 35
E	> 55-80	>35 - 50
F	> 80	>50

Threshold LOS

To determine whether service levels of a roadway system are deficient, a threshold LOS must be established. Any roadway with an LOS better than the threshold is considered acceptable, and a roadway with an LOS worse than the threshold is considered deficient. For this analysis, the threshold is LOS D, which is the same level adopted by Benton Franklin Council of Governments and used in the Regional Transportation Plan. Existing conditions was evaluated using a single peak-

hour calculation. As with the previous analysis, the minimum threshold LOS will be D, and roads with an average LOS of E or F will be considered deficient.

SECTION FOUR

DEFICIENCIES AND IMPROVEMENTS

The City meets its transportation concurrency requirements by identifying deficiencies based on the LOS established above, and addressing deficiencies through short and long term improvements,. The City plans to provide adequate transportation facilities within it growth areas as growth occurs according to the GMA.

SHORT TERM IMPROVEMENTS

As mentioned above, existing conditions analysis was performed for the purposes of this Comprehensive Plan update by reviewing recent studies that have been performed within the City of Richland to determine the impacts of proposed development. Other studies have been commissioned by the City to evaluate corridors for which short and long-range improvements were necessary in order to address congestion caused by growth in the region. City staff's knowledge of the transportation system has also contributed to identifying where problems are, especially at existing stop-controlled intersections.

Traffic volumes collected by the Benton Franklin Council of Governments in 2016 were reviewed as well and examined at a planning level for both roadway segments and intersection levels to identify other potential areas of concern that may not meet City LOS standards. The resulting roadway network PM peak hour existing volume to capacity ratios are shown in Figure T-9. Intersection entering volumes were also examined and evaluated for two conditions. First, whether stop control is adequate when comparing major street and minor street traffic volumes. Second, for signalized intersections, whether additional turn lanes are warranted based on volume to capacity ratios. Because of these studies, several roadway network improvements have been identified and are shown in Figure T-10.

As shown in Figure T-10, new traffic signals, and associated roadway improvements as applicable, are proposed at six existing un-signalized intersections. Improvements to existing signalized intersections are proposed, as determined through various studies to increase capacity at six locations as well. The most significant areas of concern are in the Queensgate Corridor from just north of I-182 south to Keene Road, and George Washington Way north of I-182.

Table T-3: City of Richland 2017 - 2022 Transportation Improvement Program

Project Title	Project Description	Total Cost (\$)
Duportail Bridge	New bridge and roadway over Yakima River	35,000,000.00
Center Parkway Extension	Extend Center Parkway from Tapteal Drive to Gage Boulevard	1,334,120.00
I-182/Queensgate Drive Ramp Terminal Improvements	Construct roundabout at EB I-182 ramp terminals	2,715,000.00
Queensgate Drive/Columbia Park Trail Improvements	Add lanes to Queensgate Drive between Keene Road and I-182. Construct roundabout at Queensgate/Columbia Park Trail	1,700,000.00

Project Title	Project Description	Total Cost (\$)
Swift Boulevard Improvements	Pavement rehab, widen sidewalks, reduce lanes, streetscaping	1,365,000.00
Vantage Highway Pathway - Phase 2	Separated multi-use pathway between Robertson Drive and Stevens Drive	670,000.00
S. George Washington Way Intersection Improvements	Reconfigure GWW/Col. Point Drive intersection and modify I-182/SR 240 ramps	9,890,000.00
Columbia Park Trail - East	Reconstruct roadway to provide 3 lanes, curb and gutter, sidewalks, bike lanes, and streetscaping	1,300,000.00
Steptoe Street/Tapteal Drive Intersection Improvements	Realign Tapteal Drive to construct a new intersection with Steptoe Street including modifications to the at-grade rail crossing	1,380,000.00
Rachel Road Improvements	Construct a collector street between Bellerive Drive and Leslie Road	2,200,000.00
Queensgate Drive Extension	Construct a 3-lane roadway between Shockley Road and Keene Road	1,100,000.00
Gage Boulevard Improvements	Add bike lanes, shoulders, sidewalks, street lights, and storm drainage between Penny Royal and Morency	825,000.00
Bellerive Drive Extension	Construct a two-lane collector street between Wenatchee Lane and Rachel Road	70,000.00
Marcus Whitman Elementary - SRTS	Construct sidewalks and frontage improvements and overlay on Snow Avenue between Duportail Street and Hoffman Street, and Gray Street between Snow Avenue and Winslow Avenue	491,200.00
Stevens Drive Pathway	Construct a separated multi-use pathway on the east side of Stevens Drive between Spengler Street and Horn Rapids Road	950,000.00
Queensgate Drive - Phase II	Construct a two-lane collector street between Bermuda Road and Alla Vista Road, including frontage improvements	3,400,000.00
Vantage Highway Pathway - Phase 3	Construct a separated multi-use pathway on the north side of SR 240 between Twin Bridges Road and Kingsgate Way	600,000.00

LONG TERM IMPROVEMENTS

This section discusses the future roadway network to serve the anticipated growth within the City. It identifies additional bicycle and pedestrian projects as well.

Future Functionally Classified Roadway Network

Growth in the City of Richland is anticipated in several undeveloped areas, including the south Richland area south of the Yakima River, as well as the Badger Mountain South sub-area and the Horn Rapids Industrial Park in north Richland. The City of Richland has planned a roadway network to serve these developing areas and many of the improvements will be paid for by private development.

The City Municipal Code has definitions for various types of streets, identifying the purpose for each road along with associated standards. The code divides collectors into two types, the Arterial Collector and Neighborhood Collector, which is somewhat different than the currently approved state classified system. The future functionally classified street system of roadways is shown in Figure T-11 and is the network towards which the City is working to provide in order to serve development. It includes the following mileages of the various types of roads.

FUTURE DEFICIENCIES

Roadway System

The GMA requires that communities forecast anticipated growth in traffic volumes for at least a 10-year horizon based on the adopted land use plan to provide information on the needs of future growth.

As a tool in preparing the Regional Transportation Plan (RTP), the Benton Franklin Council of Governments maintains a set of regional computerized transportation models. The model is developed using current traffic data and land uses in the region using Transportation Analysis Zones (TAZs) that are defined by various attributes describing the number and type of households and employees as well as other land uses within each zone. The model is calibrated for existing conditions using Federal Highway Administration procedures and methods. Once calibrated for existing conditions, changes in assumptions for future land uses and roadway networks can be made to determine the potential impacts of developments and roadway scenarios. Land use assumptions representing future conditions are developed to determine various impacts on the roadway network at a regional level. The future year model representing the year 2032 developed by Benton Franklin Council of Governments and prepared in 2012 represents the best land use and roadway assumptions available at the time it was created and substantially represents the land use scenario presented in this Comprehensive Plan Update. The current RTP is in the process of being updated to the year 2040 but is unavailable during this Comprehensive Plan Update. Once updated, the City will review the results and plan accordingly to address congestion that is anticipated in the long-range scenarios beyond those that are already identified.

It must be recognized that although traffic models are calibrated within acceptable ranges, the model is just one tool in transportation planning and traffic forecasting. The Benton Franklin Council of Governments model is a PM peak hour model that provides roadway segment volumes (not specific turn movement volumes).

Congested locations identified in the 2032 regional traffic model have been studied by the City in order to understand future conditions in more detail and to determine appropriate solutions to address anticipated issues. Such studies have considered the following locations and improvements for these corridors, and are already included above in Table T-3 Transportation Improvement Program projects.

- Southern portion of the George Washington Way corridor in the vicinity of I-182 interchange
- Queensgate Drive Corridor from I-182 south to Shockley Road

- **Swift Boulevard Corridor**

Other projects, such as the completion of Steptoe Street south of Gage Boulevard and the extension of Rachel Road between Leslie Road and Steptoe Street, will help to address congestion on other facilities such as Gage Boulevard. Some long-range projects, in addition to those listed above, have already been identified by City Staff and included in the 2040 regional modeling process, which continues the analysis of issues identified in the 2032 regional traffic model. These projects are listed below in the recommendations section as well, along with other projects identified in the South Richland Collector Financing Program that have set impact fees for development.

The Benton Franklin Council of Governments also conducted a study for an additional crossing of the Columbia River. Although not likely to be funded within the next 20 years, the City of Richland is supportive of an alternative north of the Hanford 300 Area in north Richland.

Air and Rail Services

Growth in Richland and the Tri-Cities area will increase demand for airport services, but air transportation demand is more directly related to regional changes. For example, the closure of Vista Field in the City of Kennewick significantly increased the number of based aircraft at the Richland Airport and therefore the demand for more hangars. As mentioned earlier, the Richland Airport Master Plan calls for a runway extension to the north for a total of 5,000 feet in order to accommodate faster aircraft and corporate jets. This runway extension will cause the Runway Protection Zone (RPZ) to be extended over SR 240 and some developed industrial properties. The Federal Aviation Administration (FAA) in recent years has taken significant interest in development within Runway Protection Zones, thus this action will require study and potential mitigation. Of note also is the fact that the future roadway deficiencies list the widening of SR 240 between Stevens Drive and Kingsgate Way. Since this roadway widening is within the future RPZ, the FAA would require an RPZ Analysis as well.

Demand for freight and passenger rail facilities could increase, depending on the type of new commercial and industrial development the plan's economic strategy attracts. The City of Richland has put significant investment into additional rail lines to serve the Horn Rapids Industrial Park. Additional rail lines may be warranted as well to serve areas to the north of Horn Rapids Road.

Bicycle and Pedestrian Facilities

The Benton Franklin Council of Governments completed a Regional Active Transportation Plan in 2016. As part of the planning process several workshops were held to give participants the opportunity to identify issues and concerns with providing facilities that foster active transportation. Specific issues within the City of Richland ranged from specific maintenance locations as well as barriers such as missing trail segments, railroad crossings, freeway overpasses, and shared parking lanes that make bicycle travel more challenging. Five specific projects within the City of Richland were identified, four of which were listed in the TIP projects for 2017 – 2022 in Table T-3. The fifth project is a pedestrian overpass along Columbia Center Boulevard over SR 240.

The City also considers multi-modal needs in new corridors and in street standards for when new roadway facilities are constructed.

Improvement Projects

The Comprehensive Plan will require improvement projects for both planning periods to address level of service deficiencies. Additional improvements will be needed as part of the Plan's proactive strategy to encourage economic development. Projects also may be needed to address safety or maintenance needs. Table T-4 shows the preliminary recommended improvements to address LOS

deficiencies. It also includes projects anticipated to be constructed not just to address LOS deficiencies, but to provide the future functionally classified network shown earlier in Figure T-11. Improvements identified in both tables T-3 and T-4 are shown in Figure T-12.

Some projects will be City's responsibility; others will be the responsibility of the Washington State Department of Transportation (WSDOT), and in many cases developers will be required to construct improvements associated with proposed subdivisions or other developments.

Table T-4: Long Range Transportation Improvements

Project Title	Project Description	Total Cost ¹ (\$)
Queensgate North Extension	New arterial route from the existing west end of Queensgate to SR224 (Van Giesen)(Portions of the route will likely be on Jones Road right of way)	60,000,000
Kingsgate South Extension	New arterial route from south end of Kingsgate @ SR 240 to SR 224 (Van Giesen). Portions of the route will likely be on the Jones Road right of way	4,280,000
I-182 / Eastbound Onramp	New eastbound onramp at Queensgate / I-182 Interchange	15,000,000
I-182 / SR240 / Aaron Drive Interchange Improvements	Interchange improvements to grade-separate key movements	40,000,000
SR240 Pedestrian Overpass	Pedestrian bridge parallel to Columbia Center Blvd. over SR240	4,000,000
SR240 / Twin Bridge Road Improvements	Twin Bridge extension to Horn Rapids Road and signal at SR240	1,425,000
SR240 Widening	Add travel lanes between Kingsgate and Stevens Drive	1,700,000
Gage Boulevard Improvements	Extension from Morency to Queensgate	1,250,000
Badger Mountain Parkway	New route extension from Dallas Road to Queensgate	2,625,000
Dallas Road Improvements	Urban street improvements between I-82 and Keene Road	2,904,300
Shockley Road	New route extension from Keene Road to Columbia Park Trail	360,000
Reata Road Improvements	Urban street improvements between KID Canal and Leslie Road with signal at Leslie	3,045,735
Van Giesen, Swift Blvd. Duportail Street / SR240 Intersection Improvements	Add lanes	1,700,000

Project Title	Project Description	Total Cost ¹ (\$)
Columbia Park Trail/Leslie Road	Add traffic signal	300,000
Aaron Drive/Goethals Road	Add traffic signal	300,000
Badger South Sub-Area Plan	Collector roadway network	TBD, Developer Funded
Horn Rapids Industrial Area	Collector roadway network	TBD, Developer Funded

¹Funding for these projects will come from a variety of sources, including impact fees, developer construction, City General Funds, Transportation Improvement Board grants, Highway Safety Program grants, State funding, Federal Surface Transportation Program funding as well as other Federal Grants.

Transportation Demand Management

Another mitigation measure included in the Comprehensive Plan is the policy calling on the City to encourage transportation demand management measures, which reduce the need for new facilities by reducing the number of automobile trips. These measures typically include promotion of such travel options as transit, bicycling, and walking. They not only benefit the roadway system through reduced traffic levels, but also contribute to a reduction in air pollutants.

Typical transportation demand management involves adoption of a commute trip reduction ordinance. Such ordinances usually require large employers - generally those with more than 100 employees - to submit annual transportation management plans to the City. The employers' plans outline steps they will take to meet an ordinance-mandated reduction in single occupant vehicle trips to and from their business sites during peak commute hours. Common strategies to achieve these reductions include the following:

- Assignment of a transportation coordinator to help employees find alternative commuting options;
- Cash-out parking programs that pay employees to give up their parking spaces;
- Employer-sponsored shuttles or vanpools;
- Carpool or vanpool incentives or subsidies;
- Ride-matching services;
- Preferential carpool and vanpool parking;
- Commute alternatives information;
- Provision of showers and locker facilities for bicycle and pedestrian commuters;
- Employer-provided travel allowances that employees can use to pay for parking or to commute by a travel alternative;
- Flexible work hours;
- Compressed work-week schedules; and
- Telecommuting programs allowing employees to work from home for certain tasks or positions.

The City also can take steps such as the following to further develop commute alternatives.

- Provide employers with information on transportation demand management measures.
- Form a transportation demand management committee made up of major employers and government representatives.
- Develop park-and-ride facilities near freeway interchanges.
- Develop pedestrian and bicycle facilities between key destinations.

FINANCING AND RECOMMENDATIONS

The City receives funding for transportation projects from a variety of sources, including impact fees, developer construction, City General Funds, Arterial Street Funds, Transportation Improvement Board grants, Highway Safety Program grants, State funding, Federal Surface Transportation Program funding as well as other Federal Grants.

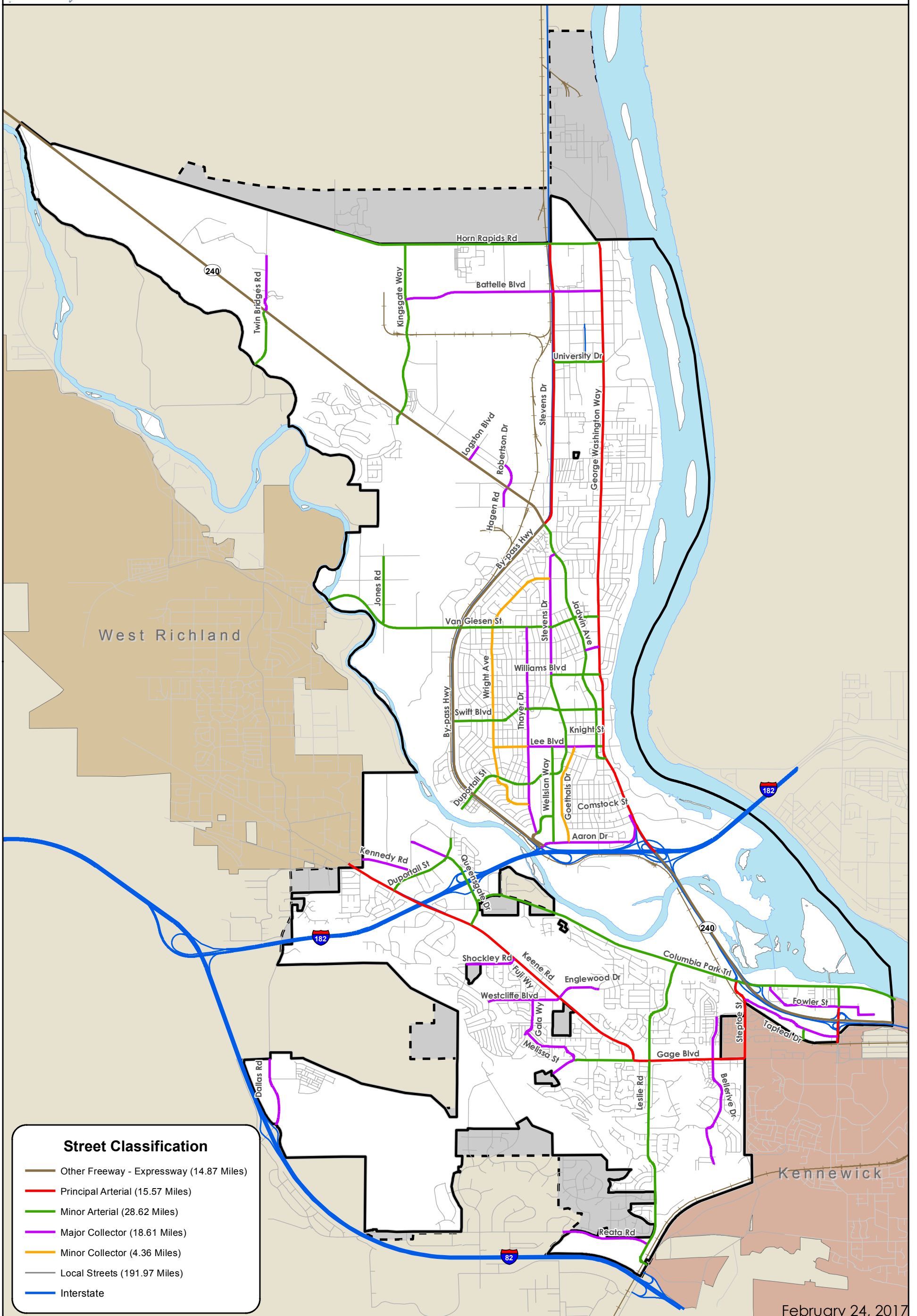
The City collects impact fees established in the Richland Municipal Code (12.03) and began in 2004. It is called the South Richland Street Collector Financing Plan and assists to develop the arterial street network in south Richland and to make other improvements such as traffic signals as traffic volumes grow. The impact fee area generally involves two zones and covers the area south of the Yakima River with the exception of the Badger Mountain South Sub-Area. The impact fee was updated in 2008 and 2012 and is expected to be updated again in 2017.

Richland CIP is updated biennially. The CIP and Transportation Improvement Plan (TIP) prioritize projects as identified below.



City of Richland

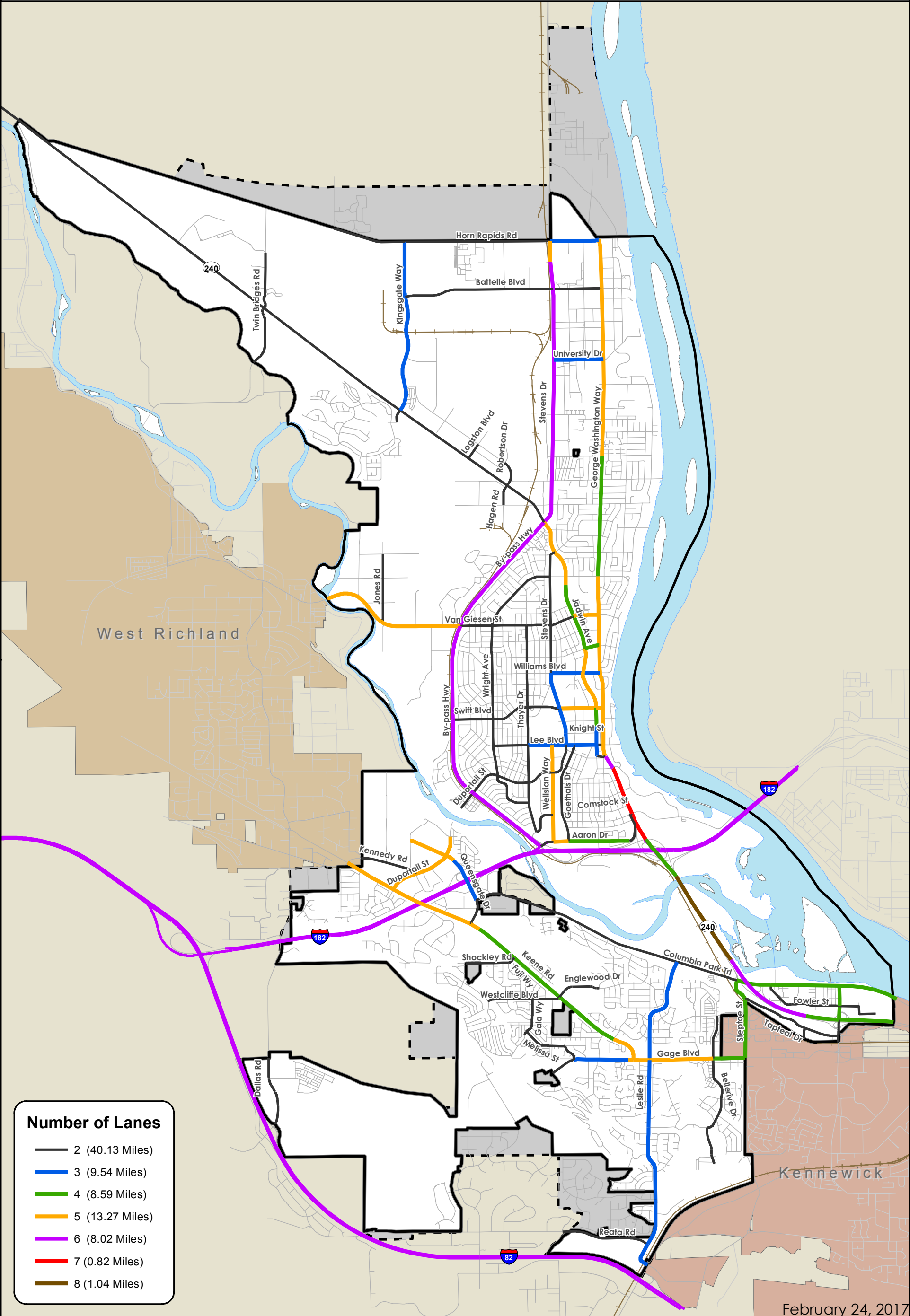
T-1 - Street Functional Classification System





City of Richland

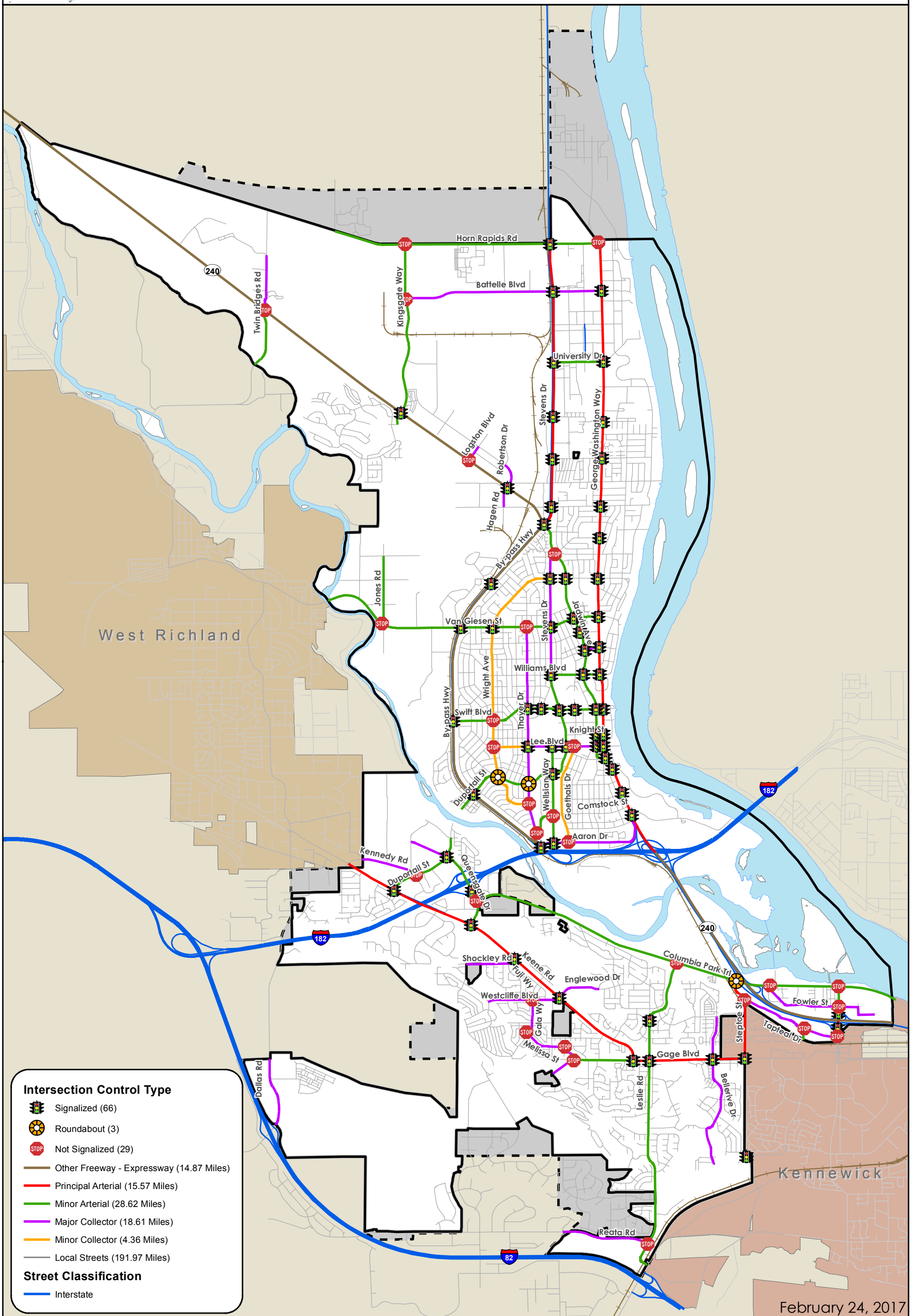
T-2 - Number of Lanes





City of Richland

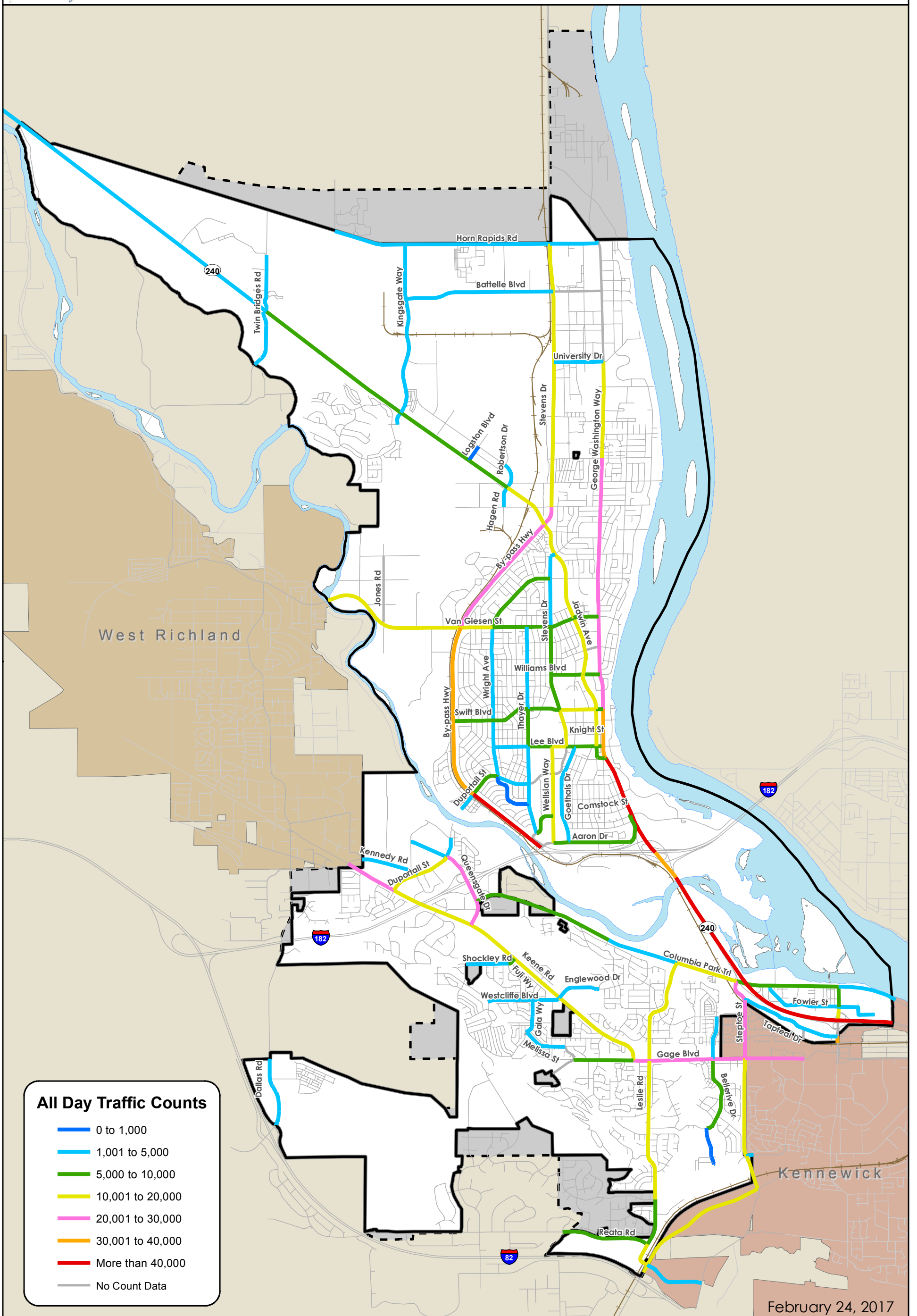
T-3 - Intersection Traffic Control





City of Richland

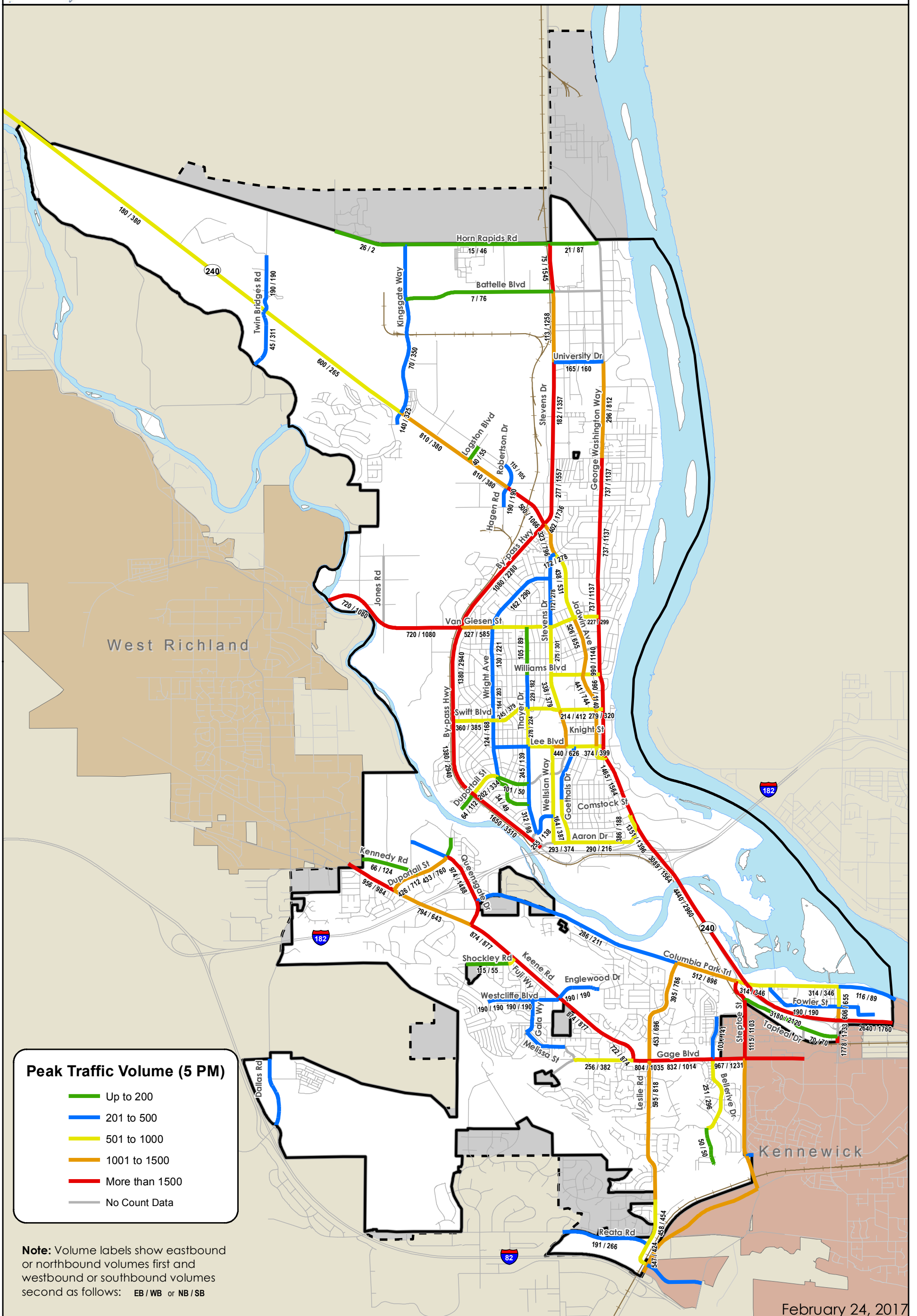
T-4 - 2016 All Day Traffic Counts





City of Richland

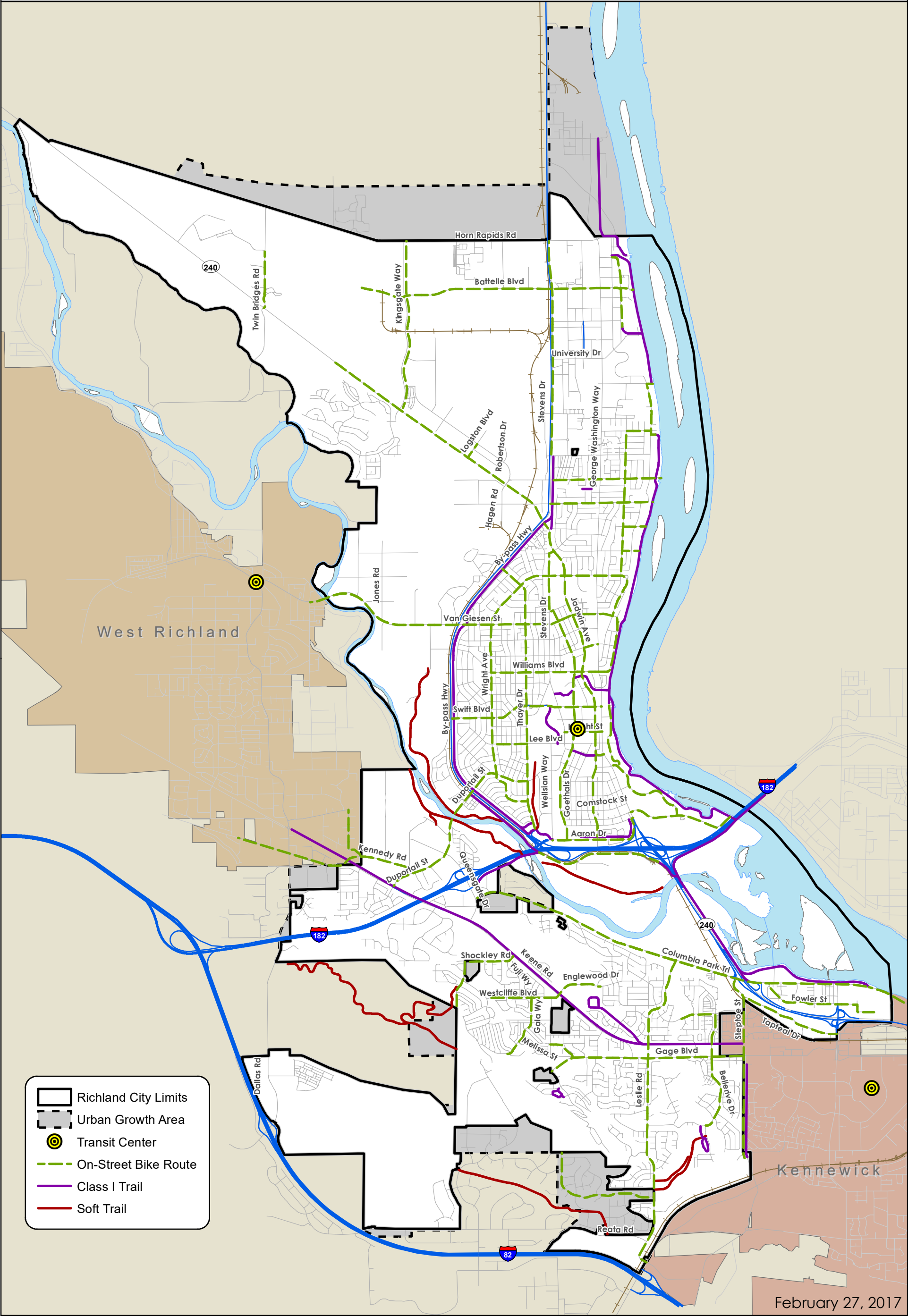
T-5 - 2016 Peak Traffic Volumes

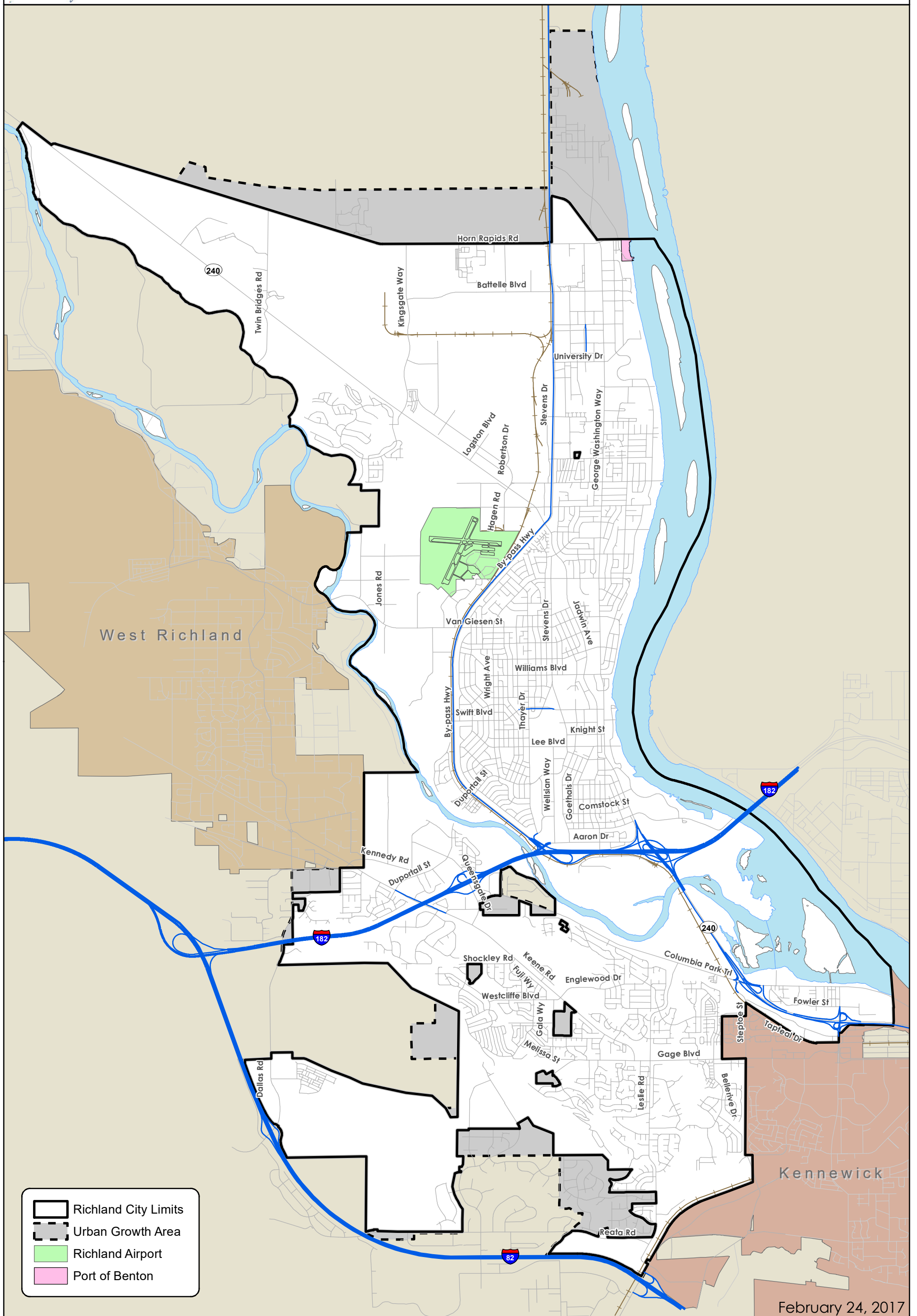




City of Richland

T-6 - Bike Routes and Paths



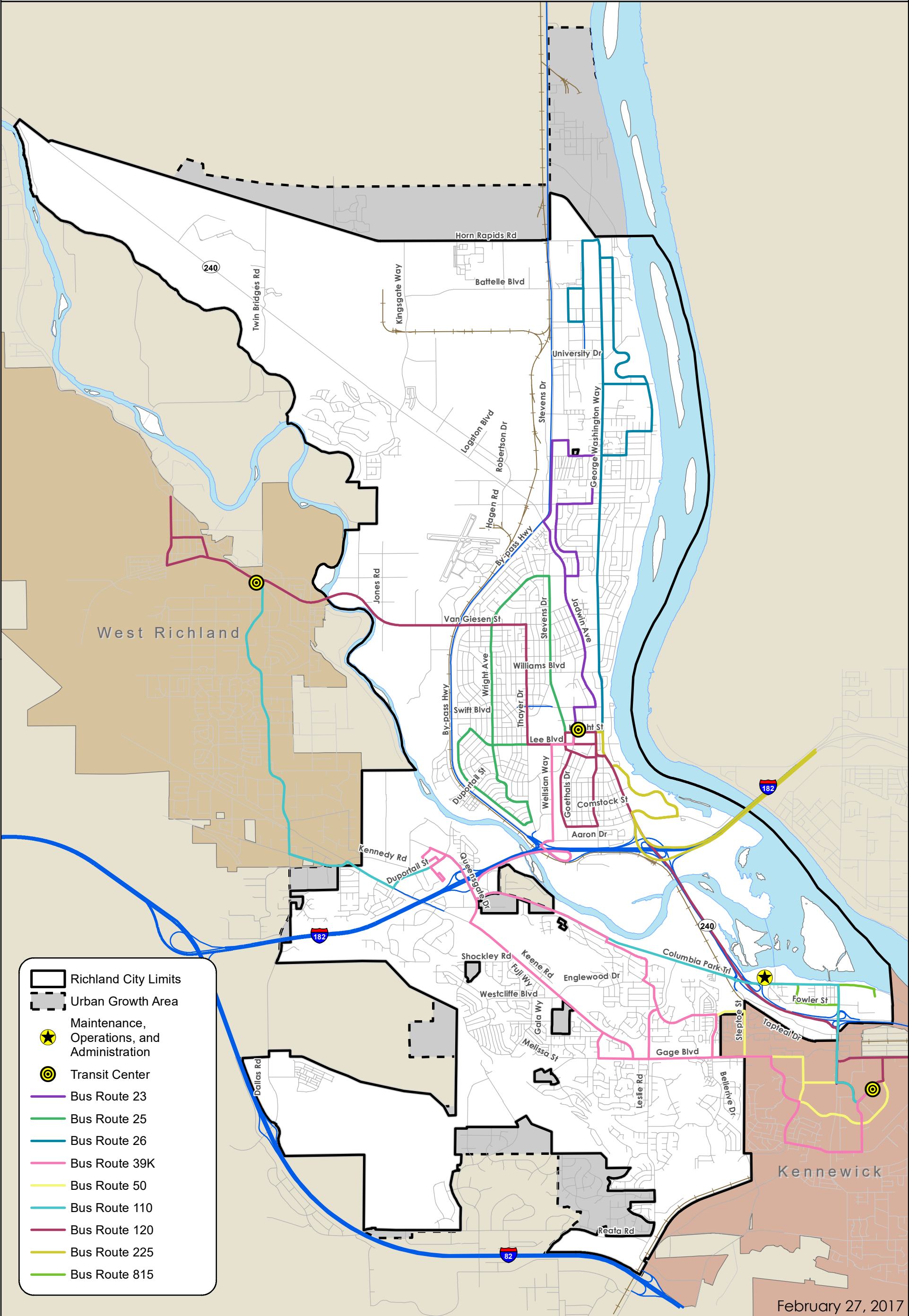


February 24, 2017



City of Richland

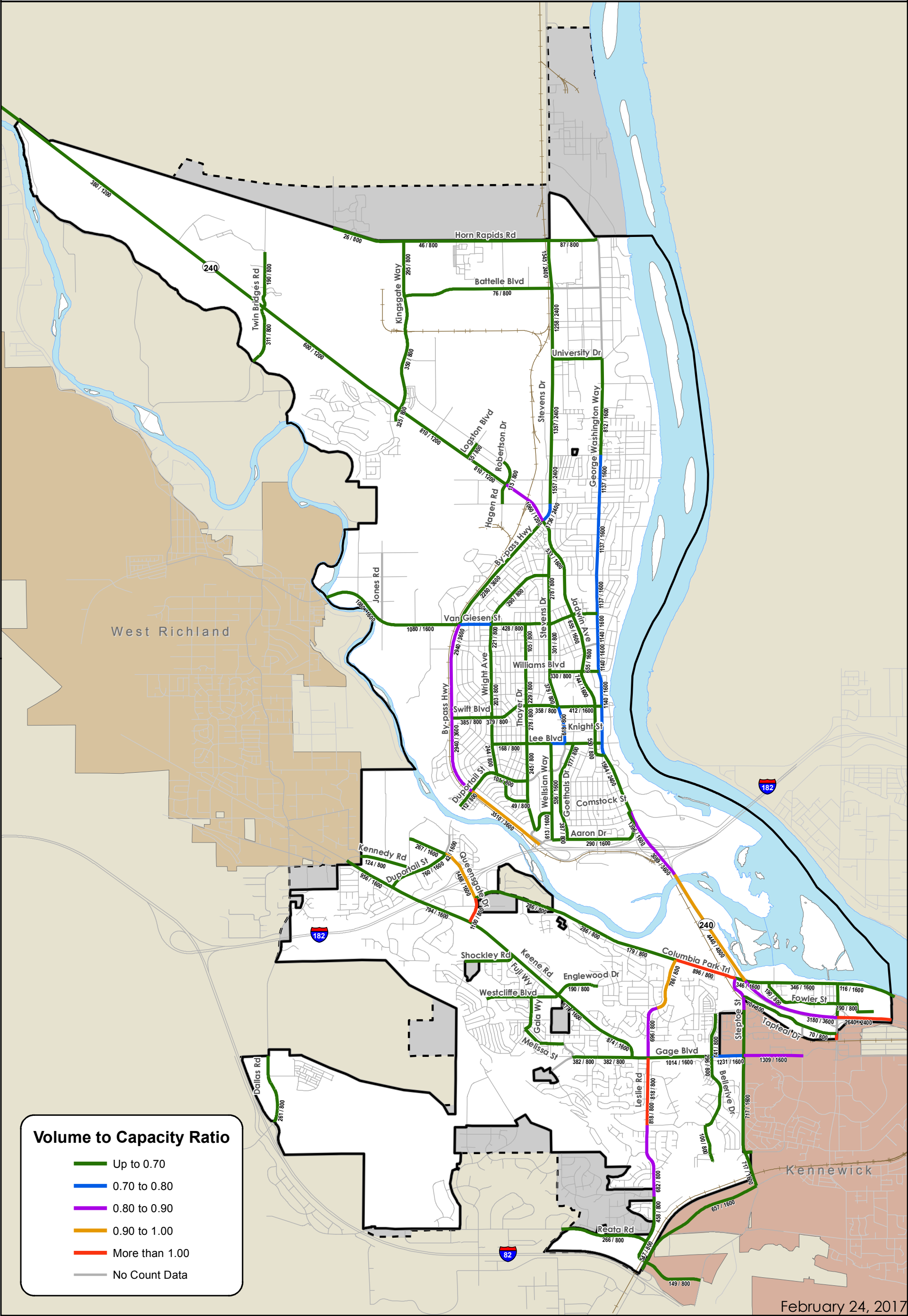
T-8 - Transit Routes





City of Richland

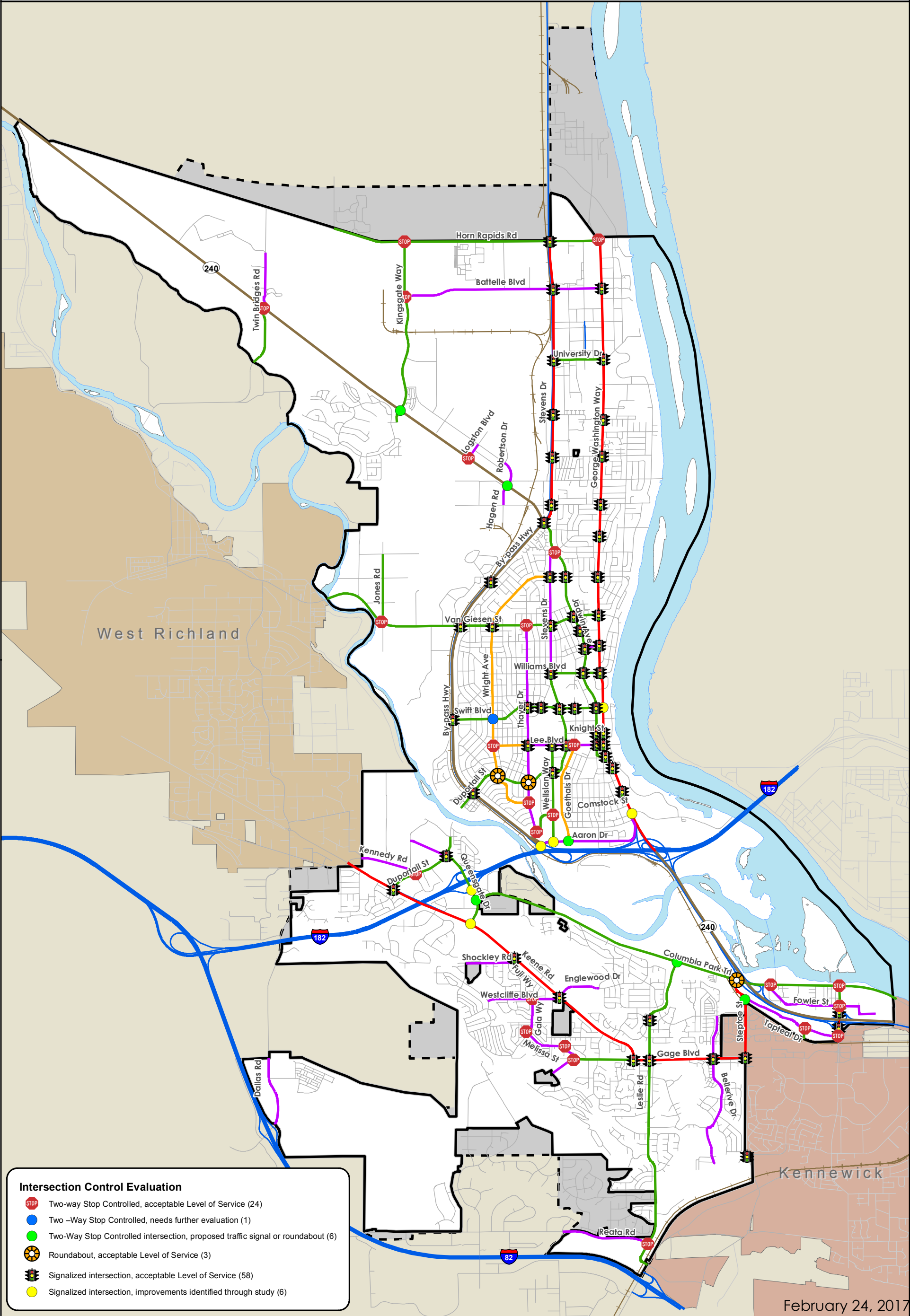
T-9 - Volume to Capacity Ratios





City of Richland

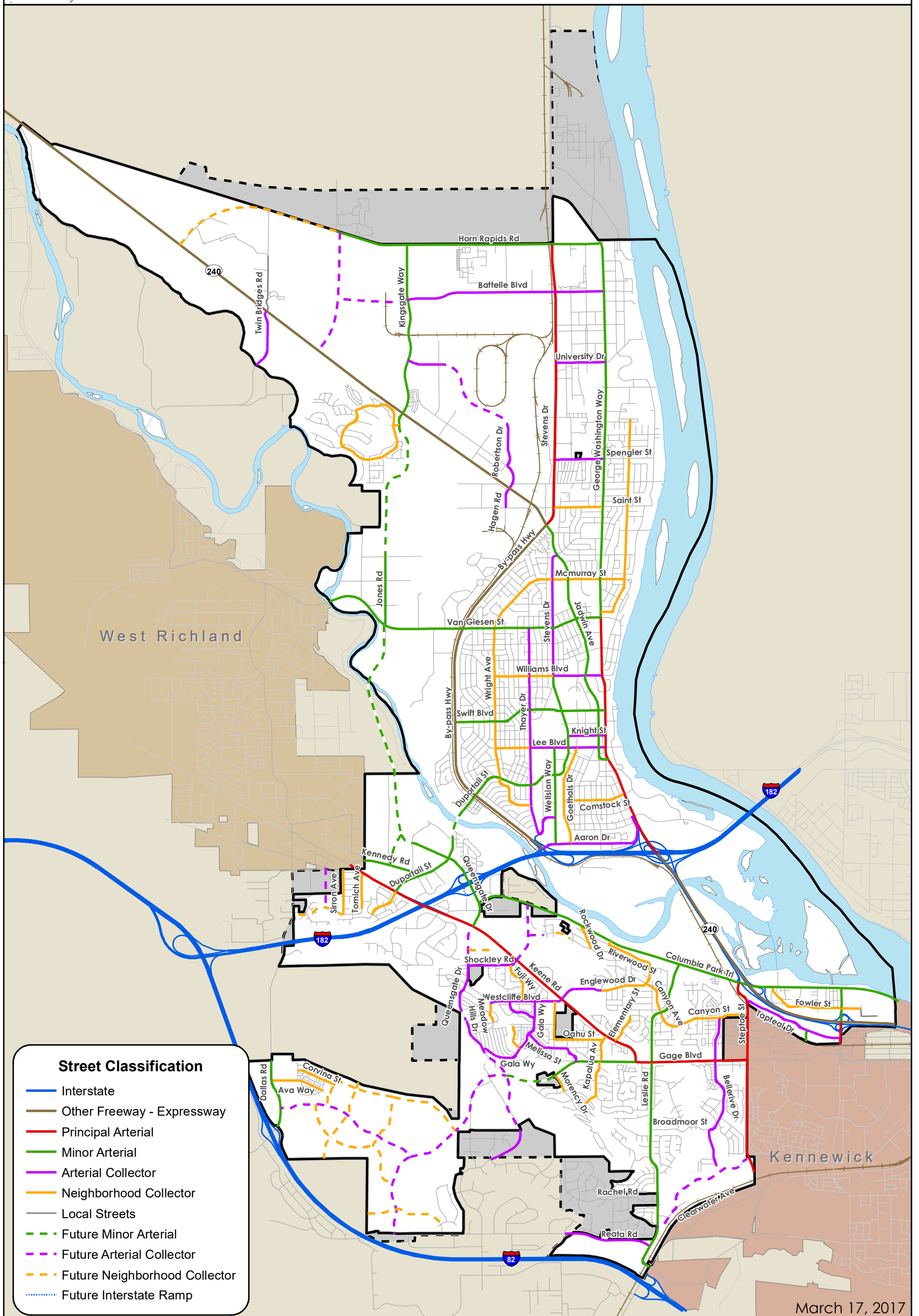
T-10 - Intersection Traffic Control Evaluations





City of Richland

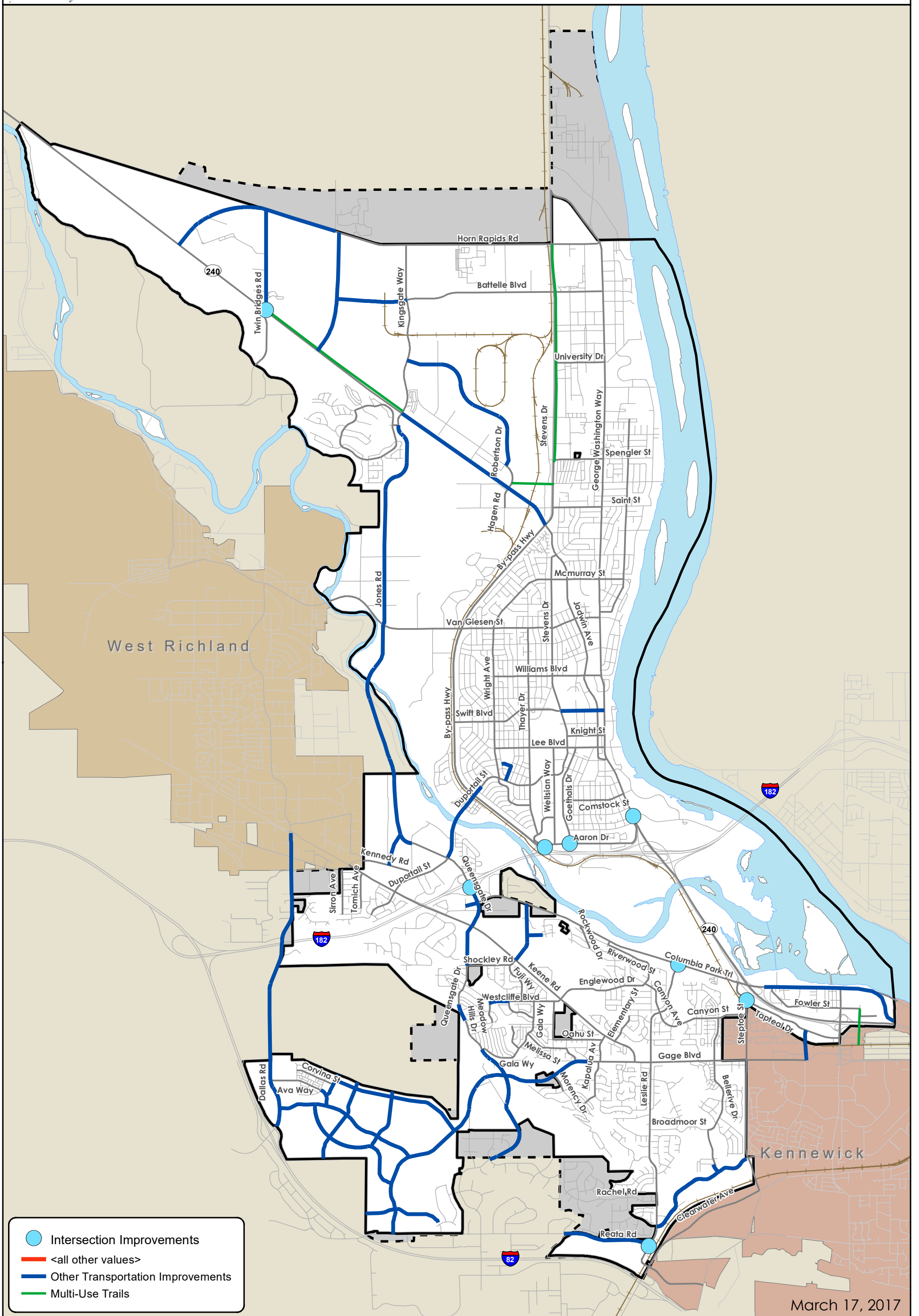
T-11 - Future Functionally Classified Street Network





City of Richland

T-12 -Transportation Improvements



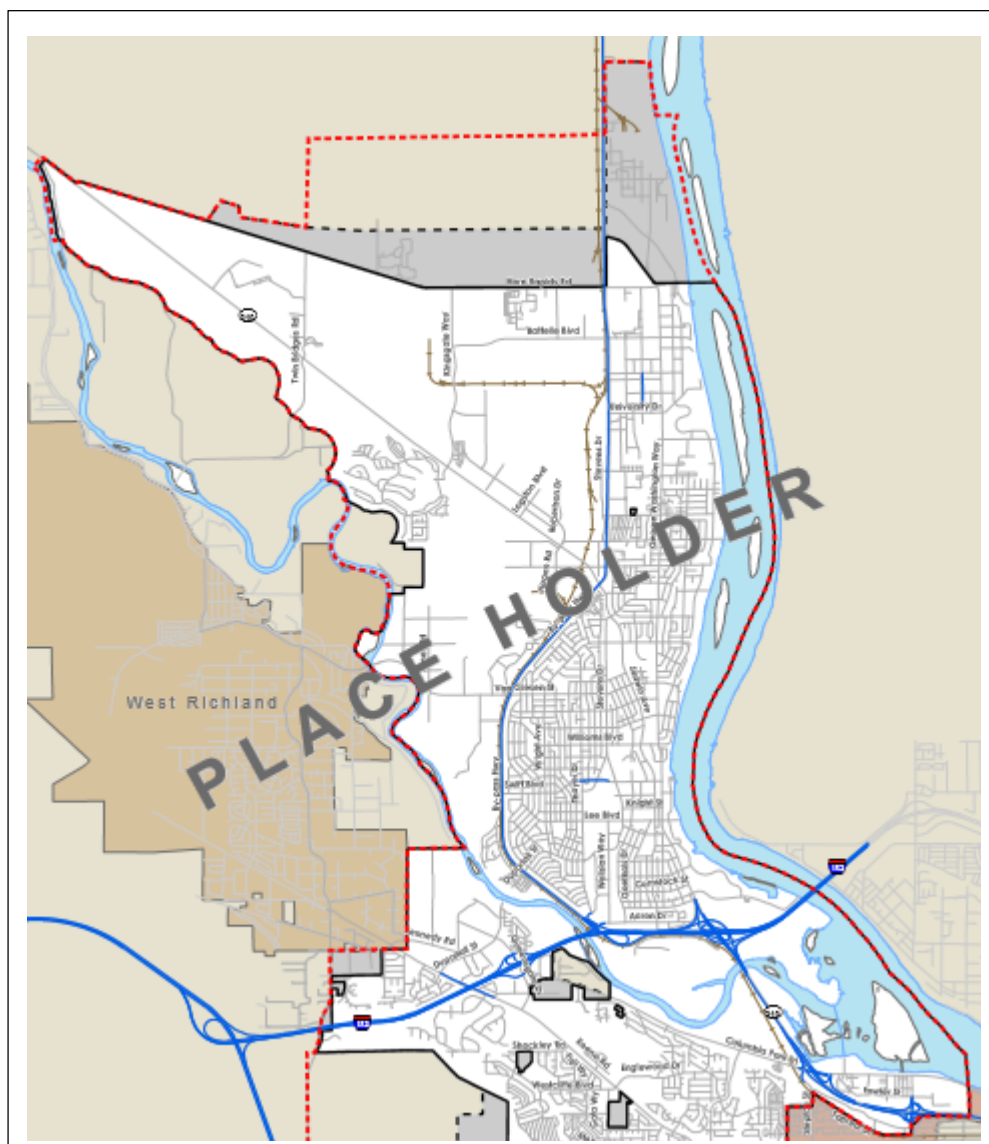
March 17, 2017

UTILITIES

SECTION ONE

This section was developed in accordance with RCW 36.70A070 to address utility service within the City of Richland over the next 20 years. It consists of the general location, proposed location, and capacity of all existing utilities in the UGA. General utility corridors are identified in utility and transportation elements as many utilities are placed in conjunction with the transportation corridors. Utilities include wastewater, water, storm water, solid waste, and energy services provided by the City. This section also discusses utilities served by other providers in Richland. These are natural gas supply, tele-communications, and irrigation.

Figure U-1: Utility Service Areas



SECTION TWO

WASTEWATER FACILITIES

EXISTING CONDITIONS

The Richland sanitary sewer system was originally developed to serve the area around the CBD and the surrounding residential areas, but has been extended to other areas as they have developed, including north Richland, the Badger Mountain area, and the Horn Rapids community. The City's wastewater collection system serves the majority of Richland residents, but some outlying areas are still served by onsite septic systems; there are currently 475 people served with onsite septic systems within the Richland City limits.

The sanitary sewer system includes a conveyance system, a wastewater treatment facility, and effluent disposal. Limited monitoring and analysis of the major trunks and interceptors were done in 1990s that showed that the system was in relatively good condition, with low levels of infiltration and inflow. However, the assessment data has become dated, and the City is planning on a more comprehensive assessment of the condition of the collection system in the next few years.

Sanitary Sewer Collection System

The existing Richland sanitary sewer collection system serves approximately 40 square miles of area, divided into seventeen drainage basins. The sewer service area boundary is shown in Figure U-2.

The collection system consists of over 262 miles of gravity collection pipes which range in size from six inches in diameter to 54 inches in diameter. Much of the Richland sewer service area is flat, making it difficult to construct sewers with the minimum slopes necessary for sewage flow. Pump stations receive sewage by gravity and augment the flow by pumping it to the treatment facility.

The City owns and operates 14 pump stations, ranging in size from 1.5 to 35 horsepower. Because of the cost of operation and maintenance, it is desirable to minimize the number of pump stations; many have already been eliminated by the interceptor improvements.

The 2015 General Sewer Plan Update included hydraulic modeling of all of the sanitary sewer pipes ten inches in diameter and larger. Overall, the collection system had adequate hydraulic capacity to convey current flows as well as future flows. Although the hydraulic analysis indicated relatively few capacity issues, the collection system is showing its age and a proactive renewal and replacement program has been developed to address this. A pipe replacement program was developed to prioritize sanitary sewer pipes with the greatest need for replacement each budget year. A significant element of this program includes an intensive survey of the existing pipes in order to determine condition ratings – this is scheduled to occur over the next three years.

The components of Richland's wastewater flow are sanitary flow, infiltration, and inflow. Sanitary flow includes wastewater discharged to the sewer from residential, commercial, and industrial sources. Infiltration refers to groundwater that enters the collection system through cracks in pipes and loose connections. The rate of infiltration is likely to be higher in older sections of the City because of older pipes and construction methods. New sewers are usually constructed with precast manholes and rubber-gasketed pipe, which effectively limit infiltration. Inflow is surface water that enters the system through downspouts, area drains, ponding over manhole covers, or cross connections with storm drains. Due to Richland's desert climate, storm-related inflow does not have a significant impact on the system.

Seasonal variations in wastewater flows are slight, with the total daily flow ranging from five to seven million gallons per day (MGD). The lowest flows occur during the winter months, the highest during the summer. Because Richland has a fairly permanent population and does not experience high tourist or vacation activity, the higher flows appear to be caused by elevated groundwater levels from irrigation, which results in higher infiltration. The wastewater flow characteristics are given in Table U-1.

Table U-1: Wastewater Flow Characteristics

Average Daily Flow	5.7 MGD
Peak Daily Flow	7.1 MGD
Residential Population	53,054 (2015)

Source: City of Richland General Sewer Plan, 2015

Wastewater Treatment Facilities

All flows collected by the Richland sanitary sewer collection system are transported to and treated at the Richland Wastewater Treatment Plant. Since its completion in 1985, the plant has consistently achieved the discharge requirements specified in its National Pollution Discharge Elimination System (NPDES) permit. The plant provides primary sedimentation, followed by secondary treatment using an activated sludge process. Plant effluent is disinfected with chlorine prior to discharge to the Columbia River. The design criteria and the current loadings for flow, organic loading, and suspended solids are summarized in Table U-2.

Table U-2: Richland Wastewater Treatment Plant Design Criteria

	Design Criteria	2015
Average daily flow for maximum month	11.4 MGD	6.25 MGD
BOD ₅ loading for maximum month	17,250 lbs/day	14,099 lbs/day
TSS loading for maximum month	21,200 lbs/day	18,146 lbs/day
NH ₃ -N loading for maximum month	2,750 lbs/day	2,063 lbs/day

a. BOD = biochemical oxygen demand

b. TSS = total suspended solids

Source: City of Richland General Sewer Plan, 2015

The NPDES permit requires the City to submit a plan and a schedule for maintaining capacity whenever the actual flow or load reaches 85% of any one of the design criteria for three consecutive months. This is projected to occur in 2020.

LEVEL OF SERVICE

The service area for the City of Richland sewer system matches the UGA, although not all areas have sewer service. The City's 2015 General Sewer Plan addresses proposed future system improvements based upon current land uses within the UGA.

Current LOS standards for elements of the wastewater facilities system, contained in the 2015 Plan, are listed in Table U-3. Improvements recommended in the City of Richland Comprehensive Plan Utilities Element are aimed at maintaining these guideline LOS standards.

Table U-3: Wastewater Guideline LOS Standards

Element	LOS Standard
Residential Unit Flows ^a	160 GPDU ^b
Commercial Unit Flows	625 GPAD ^c
Industrial Unit Flows	1,250 GPAD ^c
Manning pipe roughness coefficient	0.012
Min velocity	2 feet/second

a. Based on 2.42 people per dwelling unit

b. GPDU = gallons per dwelling unit

c. GPAD = gallons per acre per day

Source: City of Richland General Sewer Plan, 2015

FUTURE DEFICIENCIES

The 2015 General Sewer Plan includes a CIP through the year 2024. For the planning period of 2017-2022, planned costs amount to approximately \$18 million.

The 2015 General Sewer Plan also includes a financial plan that allows the wastewater utility to remain financially viable during the planning period. The analysis considers the historical financial condition of the utility, the financial impact of executing the CIP, the sufficiency of the utility reserves to meet future financial and policy obligation, and rate affordability.

RECOMMENDATIONS

The improvements described in the 2015 General Sewer Plan will address deficiencies resulting from growth for the planning period. The 2017 Capital Improvement Program identifies the priority projects and associated financing as follows.

Table U-4: Capital Improvement Project Costs

Facilities	Total Cost	Time-frame
City View Sewer Relocation	\$180,000	2017
Collection System Renewal & Replacement	\$12,244,000	2017 - 2022
WWTP Influent Upgrades	\$2,183,000	2017
WWTP Renewal & Replacement	\$3,343,000	2017 - 2022
Total	\$17,950,000	2017 - 2022

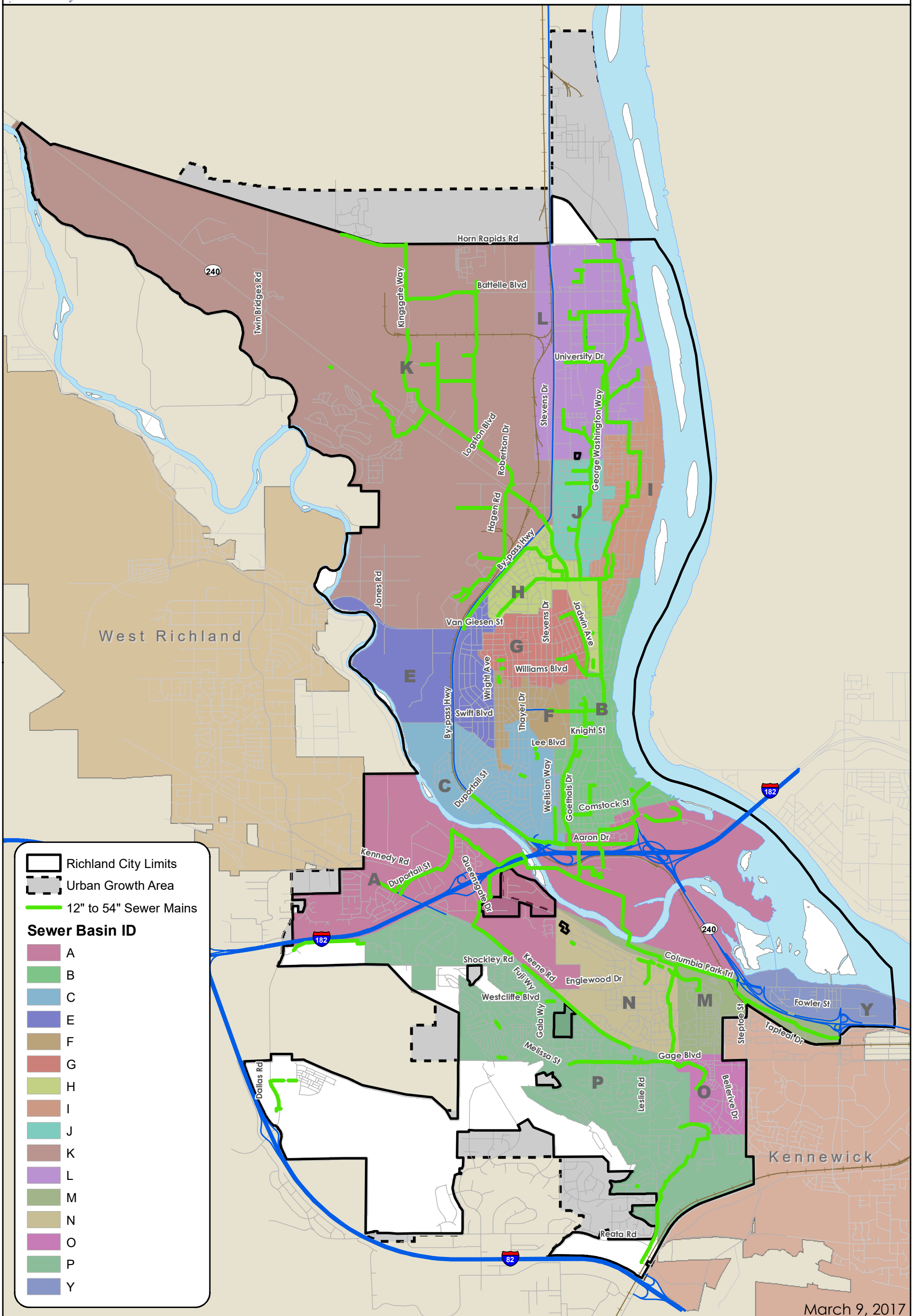
Table U-5: Capital Improvement Funding Sources

Funding Source	Total Fund	Time-frame
Bonds - Future Issue	\$2,183,000	2017
Rate Revenue	\$11,567,000	2017 - 2022
Wastewater Facility Fees	\$4,200,000	2017 - 2022
Total	\$17,950,000	2017 - 2022



City of Richland

U-2 - Sanitary Sewer Mains



SECTION THREE

WATER SUPPLY SYSTEM

EXISTING CONDITIONS

The majority of the population within the corporate limits of the City of Richland is served by the City of Richland Water Utility. The Utility serves approximately 18,689 connections (as of 2016), which includes residential, commercial, and industrial users. The Utility is managed by the City as part of the Public Works Department.

The Richland water system was constructed during the 1940s to support the wartime activities at the Hanford Site. This temporary system has developed into the modern permanent water system used in the City today.

The utility service area is bordered on the southwest by the City of West Richland utility service area, which has a wholesale water service intertie agreement with Richland. This intertie is located along Keene Road. The City of Kennewick's water and sewer utility area lies to the southeast and has an emergency intertie located at Gage Boulevard. The Badger Mountain Irrigation District has a potable water service utility area that lies to the south of the City with an emergency intertie located on Rachel Road. The 300 Area of the Hanford Site to the north has an emergency water intertie with the City so it can supply the City water if needed.

The City has one private water district within its corporate limits. Tri-City Estates, a residential housing development, maintains its own water supply system. It has an emergency water supply agreement whereby the City of Richland would supply water to that area if its system proves inadequate. Two private water districts exist beyond the City limits. The El Rancho Water Company lies beyond the southern boundary of Richland's service area (an area north of I-82) and has no emergency intertie agreement with the City. The Hills Mobile Home Park is within the utility service area and is connected to the City water system.

The City's water supply system consists of wells, a water treatment plant, pump stations and chlorinators, interties, water lines, and reservoirs.

Source of Supply

According to the 2016 Comprehensive Water System Plan (WSP), the City has a total available water right of 34,948 acre-feet per year and 43,786 gpm for instantaneous flow. This total available water right covers to a Maximum Day Demand (MDD) of 63.0 MGD. The 2015 population-based MDD is 38.4 MGD. The WSP projects that MDD will be 55 MGD in 2035. Therefore, the City appears to have adequate water rights for future growth.

The City's potable water sources include a wellfield and the Columbia River Water Treatment Plant (WTP). The wellfield has a total capacity of 15 MGD while the WTP has a capacity of 36 MGD. The City maintains the quality and quantity of groundwater used for public water supplies through Best Management Practices in the wellfield and the Water Treatment Plant. Water supplied to the City of Richland is of high quality, meeting federal and state drinking water standards.

The locations of the sources of supply as well as the distribution system are shown in Figure U-3.

Distribution System

The City has approximately 340 miles of pipeline in the water distribution system ranging in size from two inches in diameter to 36 inches in diameter. There are ten storage facility sites that

provide approximately 22 million gallons of storage and ten booster pumping stations that provide direct water storage to seven pressure zones within the City.

The water system characteristics are summarized in Table U-6.

Table U-6: Water System Characteristics

Average Annual Supply	6.2 billion gallons
Residential Population	54,466 (2016)

Source: City of Richland Water System Plan, 2016

LEVEL OF SERVICE

The service area for the City of Richland water system matches the UGA. The City's 2016 Water System Plan addresses proposed future system improvements based upon current land uses within the UGA.

Current LOS standards for elements of the water system facilities, contained in the 2016 Plan, are listed in Table U-7. Improvements recommended in the City of Richland Comprehensive Plan Utilities Element are aimed at maintaining these guideline LOS standards.

Table U-7: Water Guideline LOS Standards

Element	LOS Standard
Demand per ERU ^a	1,118 gallons per day
MDD ^b /ADD ^c Factor	2.33
PHD ^d /MDD Factor	1.32
Service Pressure	40 – 80 psi

a. ERU = equivalent residential unit

b. MDD = maximum daily demand

c. ADD = average daily demand

d. PHD = peak hour demand

Source: City of Richland Water System Plan, 2016

FUTURE DEFICIENCIES

The 2016 Water System Plan includes a CIP through the year 2024. For the planning period of 2017-2022, planned costs amount to approximately \$38 million.

The 2016 Water System Plan also includes a financial plan that allows the water utility to remain financially viable during the planning period. The analysis considers the historical financial condition of the utility, the financial impact of executing the CIP, the sufficiency of the utility reserves to meet future financial and policy obligation, and rate affordability.

RECOMMENDATIONS

The improvements described in the 2016 Water System Plan will address deficiencies resulting from growth for the planning period. The 2017 Capital Improvement Program identifies the priority projects and associated financing as follows.

Table U-8: Water System Capital Improvement Project Costs

Facilities	Total Cost	Time-frame
Automatic Meter Reading System	\$3,235,000	2017-2018
Broadmoor Street Conversion from Tap I to Tap II	\$107,000	2021
Chief Joseph Middle School Irrigation Well	\$150,000	2018
Columbia River Intake Screen Upgrade	\$4,630,000	2018 - 2020
Core Y Additional Plant Replacement Value (PRV)	\$406,000	2021
Distribution System Repairs & Replacement	\$1,950,000	2017 - 2022
Duportail Street Transmission Main	\$750,000	2017
Duportail Street Well	\$500,000	2017
High Meadows St. and Leslie Road PRV	\$102,000	2021
Irrigation Utility Capital Improvements	\$730,000	2017 - 2022
Orchard Way Conversion from Tap I to Tap II	\$35,000	2021
Tapteal I Pump Station Upgrade	\$500,000	2020-2021
Tapteal II Loop	\$114,000	2020
Tapteal VI Water Main	\$487,000	2021
Water Treatment Plant Renewals & Replacement	\$1,716,000	2017 - 2022
WTP Solids Handling Improvements	\$400,000	2021
Yakima River Crossing Pipeline Replacement	\$7,499,000	2017 - 2019
Total	\$23,311,000	2017 - 2022

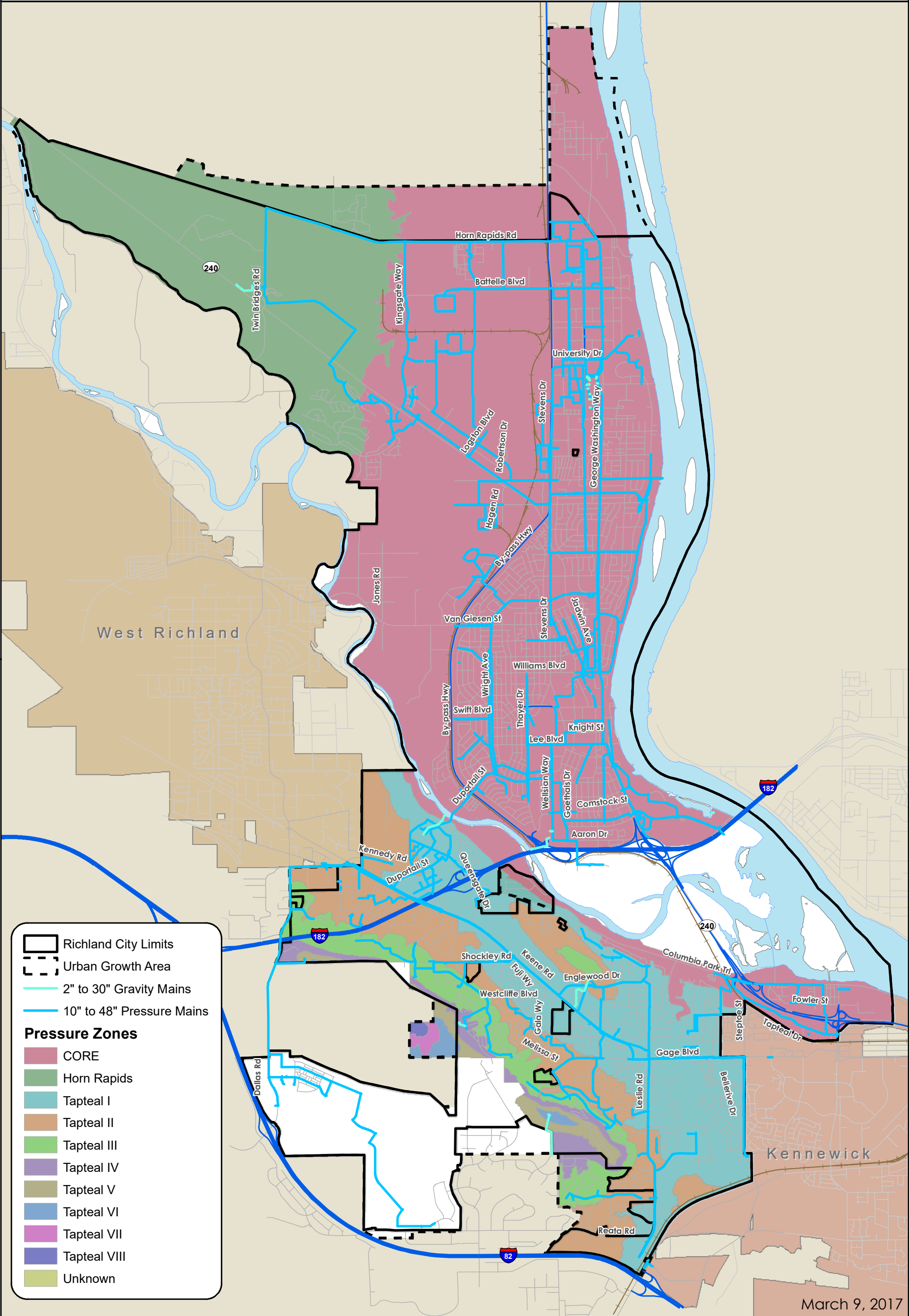
Table U-9: Water System Capital Improvement Funding Sources

Funding Source	Total Fund	Time-frame
Facility Fees	\$3,223,500	2017 - 2021
Federal Emergency Management Agency Grant	\$1,893,301	2017 - 2018
Irrigation Utility Rate Revenue	\$755,000	2017 - 2022
Private Development	\$601,000	2017 - 2022
Rate Revenue	\$6,202,500	2017 - 2022
Revenue Bond Issue	\$7,235,699	2017 - 2020
Richland School District	\$50,000	2017
Surplus Property Sale	\$400,000	2021
West Richland	\$250,000	2020 - 2021
Total	\$20,611,000	2017 - 2022



City of Richland

U-3 - Water Mains



SECTION FOUR

STORM WATER SYSTEM

EXISTING CONDITIONS

Storm water runoff is the largest remaining contributor of water quality pollution to the waterways of the nation. As a semi-arid climate, the streets in Richland still collect sediments from construction sites, fertilizers and pesticides from yards, bacteria from animal waste, gas, oil, and toxic metals from cars. Managing the storm water system includes illicit discharge detection and elimination, runoff control, operation and maintenance, and monitoring of the system.

The City continually updates its system through a combination of programs and facilities. Public involvement, education, and outreach is an important component of the program. The City's storm water and drainage system is comprised of the components indicated in Table U-10.

Table U-10: Storm Water System Components

Facility	Size/ Amount (Miles, Number)
Storm water Controls	
Public infiltration facilities (drywells)	314 each
Ponds	72 ponds, 171 swales
Storm water pump stations	4
Storm water control structures	4
Storm filtration systems	21
Oil/water separator	193
Total Storm Water Controls	780
Conveyance Pipe/ Channel	
Closed pipe	802,560 feet
Ditch	80,838 feet
Perforated pipe	7,750 feet
Total Conveyance Pipe	891,148 feet/ 169 miles
Collection/Conveyance Structures	
Catch Basins	5,272
Manholes	1,930

FUTURE DEFICIENCIES

As mentioned above, the City updates its system through a combination of programs and facilities. Public involvement, education, and outreach are important components of the program.

RECOMMENDATIONS

The 2017 CIP identifies the priority projects and associated financing in Tables U-11 and U-12. Improvements include citywide rehabilitation and replacement that address system deficiencies and make repairs in areas of street resurfacing. Water quality improvement features on the existing

storm drainage system are also planned to be constructed. As part of the system improvement, existing pipeline with reduced capacity will be replaced on Leslie Road.

Table U-11: Storm Water Management Facilities Financing 2017-2030

Facilities	Total Cost	Time-frame
Leslie Road Storm Drain Replacement	\$839,000	2018
Storm Water Rehabilitation & Replacement	\$2,616,090	2015-2022
Water Quality Retrofit Program	\$2,618,717	2015-2022
Total	\$6,073,807	2017-2022

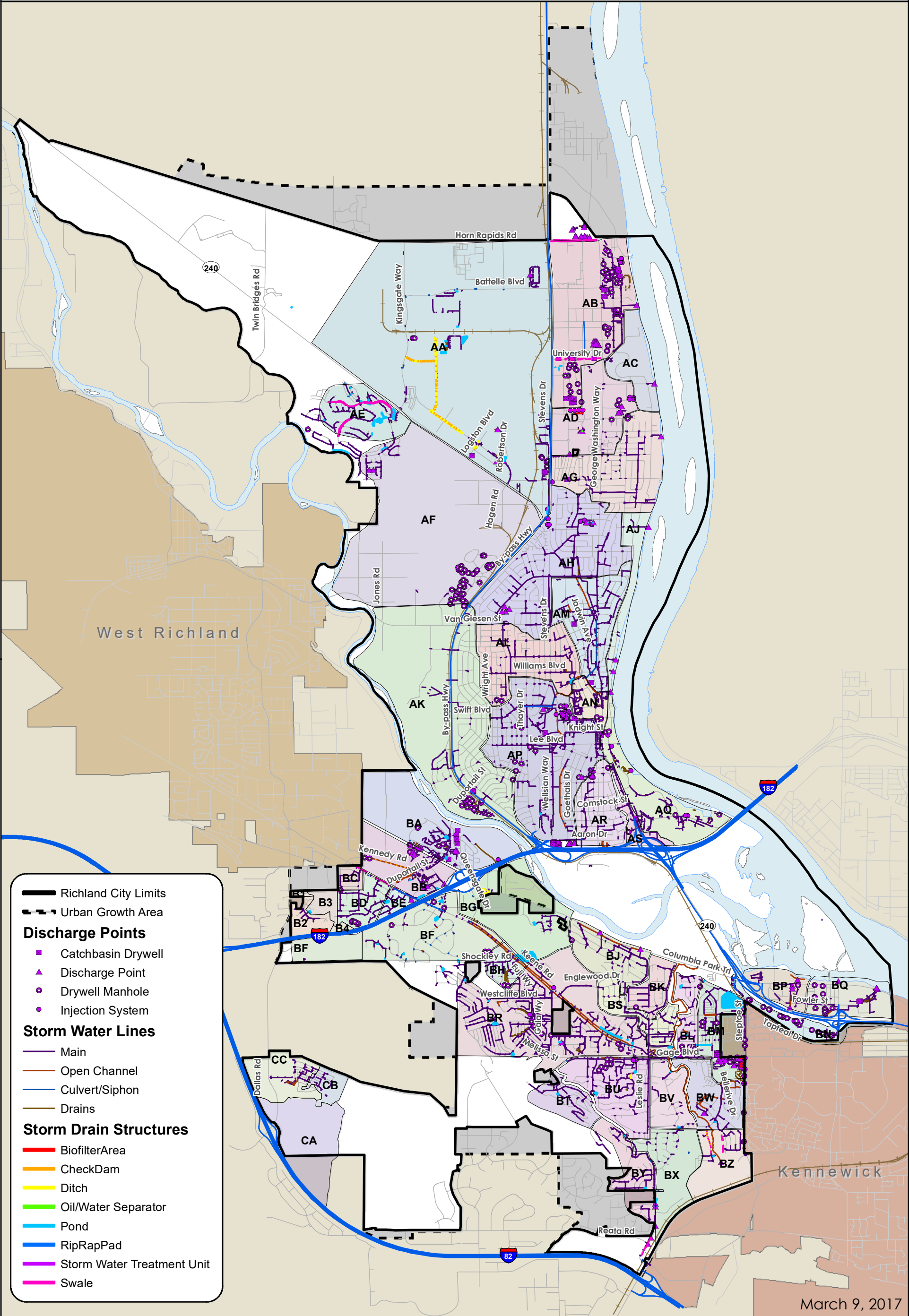
Table U-12: Storm Water Capital Improvement Funding Sources 2017-2030

Funding Source	Total Fund	Time-frame
Grant – WA State Department of Ecology	\$759,717	2015-2016
Grant Funds (Unsecured)	\$1,285,500	2017-2022
Rate Revenue	\$4,028,590	2015-2022
Total	\$6,073,807	2017-2022



City of Richland

U-4 - Storm Water System



SECTION FIVE

SOLID WASTE MANAGEMENT

GENERAL LOCATIONS AND CAPACITY

State RCW 70.95.030 defines solid waste or waste as “all putrescible and non-putrescible solid and semisolid wastes including, but not limited to, garbage, rubbish, ashes, industrial wastes, swill, sewage sludge, demolition and construction wastes, abandoned vehicles or parts thereof, and recyclable materials.” Each municipality may fulfill its solid waste management responsibilities in one of three ways:

1. Prepare its own solid waste management plan for integration into the county comprehensive solid waste plan;
2. Participate with the county in preparing a joint city-county plan for solid waste management; or
3. Authorize the county to prepare a plan for the City’s solid waste management for inclusion in the county comprehensive plan.

The City of Richland has chosen the first option. RCW 70.95.080(3)(a) defines that option as: “Prepare and deliver to the county auditor of the county in which it is located its plan for its own solid waste management for integration into the comprehensive county plan”.

In 2009, the City chose to develop their own solid waste management plan as a tool to guide the continued development of their collection system and landfill. The City’s Plan was updated in August 2011. This updated Plan was prepared in accordance with the Department of Ecology’s “Guidelines for Development of Local Comprehensive Solid Waste Management Plans and Plan Revision”, January 2010. The City’s Plan was submitted for inclusion in Benton County’s 2013 update of its Solid Waste and Moderate Risk Waste Plan. The County’s 2013 Plan was subsequently approved by the Washington State Department of Ecology. The Department of Ecology’s action formalized the completion of the City’s planning responsibilities under RCW 70.95.030.

The City’s Solid Waste Management includes these goal statements as guiding principles for its solid waste services:

- Goal 1: Manage solid waste in compliance with State and local regulations to promote and protect human and environmental health and safety.
- Goal 2: Optimize the solid waste management system to provide for long-term stability in a cost-effective manner.
- Goal 3: Provide solid waste programs with emphasis on customer service and satisfaction.
- Goal 4: Identify the types of recyclables and establish programs to efficiently and effectively recycle and market these materials.
- Goal 5: Promote programs and balance incentives and disincentives to encourage reduction, reuse, and recycling.
- Goal 6: Educate businesses and the public on opportunities available for waste reduction, reuse, and recycling.
- Goal 7: Encourage and support the research and development of new technologies for solid waste management and recycling.

Solid Waste Collection and Disposal

The City of Richland Solid Waste Division provides municipal solid waste collection and disposal services to residences and businesses within the City limits. Solid Waste Collection services for lands outside the City limits is provided by private waste haulers licensed through the Washington State Utilities and Transportation Commission. This City's landfill accepts waste from the surrounding areas on an individual load basis. The City has no disposal contracts with private haulers or other government agencies.

Solid waste collection services for the City of Richland are provided by the City's Public Works Department, except in newly annexed areas. The Department administers user-fee-funded refuse collection services, and bills its customers through the City Administrative Services Department. Solid waste collection in Richland is available five days a week. Industrial and commercial pickup is provided by the City of Richland. Commercial waste pickup can range from one to five times a week.

Collection services within newly annexed areas are provided by private solid waste hauling companies operating under contracts with the City. The contracts, which are required by State law, provide for a ten-year transition period during which the private solid waste haulers continue services in keeping with their State-authorized permits. The haulers do not align their services with the City's Solid Waste Management Plan. At the expiration of the contracts the City may choose to extend the contracts or assume service to the area customers. When the City elects to assume these service areas, it will provide services consistent with the Solid Waste Management Plan and its adopted rate structure.

About 26% of solid waste is recycled in Richland based on the 2015 data of generation, recycling, and disposal as shown in the table below:

Table U-12: Solid Waste Generation

	Tons	%
Generation	77,697	100
Recycling	22,216	26
Disposal	55,481	74

Petroleum-contaminated soils are accepted occasionally at the Richland landfill. They are treated in a separate area on the landfill property and ultimately disposed of in the landfill. Dewatered biosolids from the City's wastewater treatment plant are combined with yard waste in a composting process conducted at the Richland landfill. The finished compost material is tested to confirm compliance with U.S. Composting Council quality criteria and marketed to area contractors, nurseries, and local agencies.

Richland residents can dispose of self-hauled waste at the resident rate. Oil, antifreeze, and automotive batteries are accepted for recycling at the landfill. Benton County operates a household hazardous waste program that accepts many other categories of wastes that are not accepted at the Richland landfill.

Solid waste collected by service type is shown in table below.

Table U-13: Solid Waste Collection

Service Type	% of Total Tonnage Collected
Residential	40%
Commercial	40%
Dropbox	20%

Richland Landfill

The City of Richland owns and operates the Richland Landfill (also known as the Horn Rapids Landfill), located on 275 acres of designated landfill space approximately 3.5 miles northwest of the City center on Highway 240 (see Figure CF-3, Facilities Map). Approximately 46 acres are permitted for solid waste disposal. Also on the landfill property are a 14-acre composting facility, a residential and small commercial customer transfer station, scalehouse and administration building, and an operations and equipment maintenance building.

The current capacity of the permitted disposal area will be exhausted by the year 2020.

The Richland Landfill currently meets minimum functional standards (Chapter 173-351 WAC) and operates under a solid waste disposal permit issued and renewed annually by the Benton Franklin Health District. The site is designed and operated as an arid-climate landfill, and therefore, has no bottom liner or leachate collection system. Vadose zone moisture monitoring has been implemented within a portion of the current 46 acre fill area for data collection. In the late 1990's groundwater contamination with volatile organic compounds was detected in several of the landfill's monitoring wells. The City has implemented an independent remedial action program in compliance with Washington State Law (RCW 70.105D.040).

Recycling

The City of Richland offers curbside recycling to its residential and commercial customers. In addition, the City currently operates seven drop-box recycling collection centers throughout the City and delivers the collected recyclable items to Clayton-Ward Recycling in Richland, which prepares the recyclable material and transports it to material processing facilities in the Portland or Seattle areas.

The recycling centers currently accept scrap paper, plastic beverage containers, tin and aluminum cans, newspaper, telephone directories, magazines, catalogs and calendars, glass jars and bottles, cardboard, and brown paper bags. In 2015, the City collected 1,524 tons in the drop box collection centers and 1,099 tons through curbside collection.

Composting

The Horn Rapids Compost Facility is a treatment facility for bio-solids coming from the City's Wastewater Treatment Plant, the residential green waste program and green waste self-haul. The compost facility opened in 2010, and accepts residential green yard waste with no charge to the resident. It saves landfill space and provides finished compost material to the public through a number of wholesale customers.

Household Hazardous Waste

The Benton County Moderate-Risk Waste Facility is located at a facility on Ely Street in Kennewick and collects Household Hazardous Waste and Small Quantity Generator Waste from residents of

Benton County. The facility is jointly funded by the Washington Department of Ecology, Benton County, and the Cities of Kennewick, Richland, West Richland, Prosser, and Benton City.

Moderate-risk waste includes material such as waste oil, paints, flammable materials, and anti-freeze. The facility also collects hazardous waste from commercial businesses classified as small quantity generators (SQG). SQGs are conditionally exempt from federal and state regulation when they generate or accumulate hazardous waste in quantities below a 220 pound per month threshold.

LEVEL OF SERVICE

According to Richland's Solid Waste Management Plan, the following solid waste management facility areas will likely require no major capital improvements during the 20-year planning period:

- Domestic and Commercial Waste Collection Services - No current deficiencies are identified in the service provided by the City's Solid Waste Utility.
- The City's existing curbside and drop boxes recycling program is sufficient to meet customer demands. A minority of residents indicate through surveys that they favor universal curbside recycling. To date the costs of this service expansion and the compulsory nature of it have not been adopted by the City Council.

FUTURE DEFICIENCIES

Estimates of solid waste generation are based on population projections. Based on Richland's 2011 Solid Waste Management Plan (Appendix H), annual waste generation is forecast to increase to 80,000 tons in 2031. This forecast utilizes the per capita rate of 6 pounds per person per day and population projections.

The current capacity in the Landfill will be exhausted sometime in 2020. The City is planning for its future solid waste disposal capacity by exploring two options:

1. Expand landfill capacity on the current site by building a landfill that meets current state and federal design regulations; or
2. Building a transfer station and hauling waste to a large regional landfill.

A consultant is assisting City staff in preparing information to support this decision. It is expected that a decision will be made in calendar year 2017, after which preparations will be made to construct the necessary facilities. Regardless of the disposal alternative selected, the City anticipates maintaining its current customer service levels at the Richland landfill.

RECOMMENDATIONS

It is recommended that the City:

- Selects a preferred solid waste disposal approach that is cost effective, maintains service levels, and mitigates risk to the City; and
- Provides and maintains collection services to all City residents consistent with adopted service levels and Solid Waste Management Plan goals and objectives.

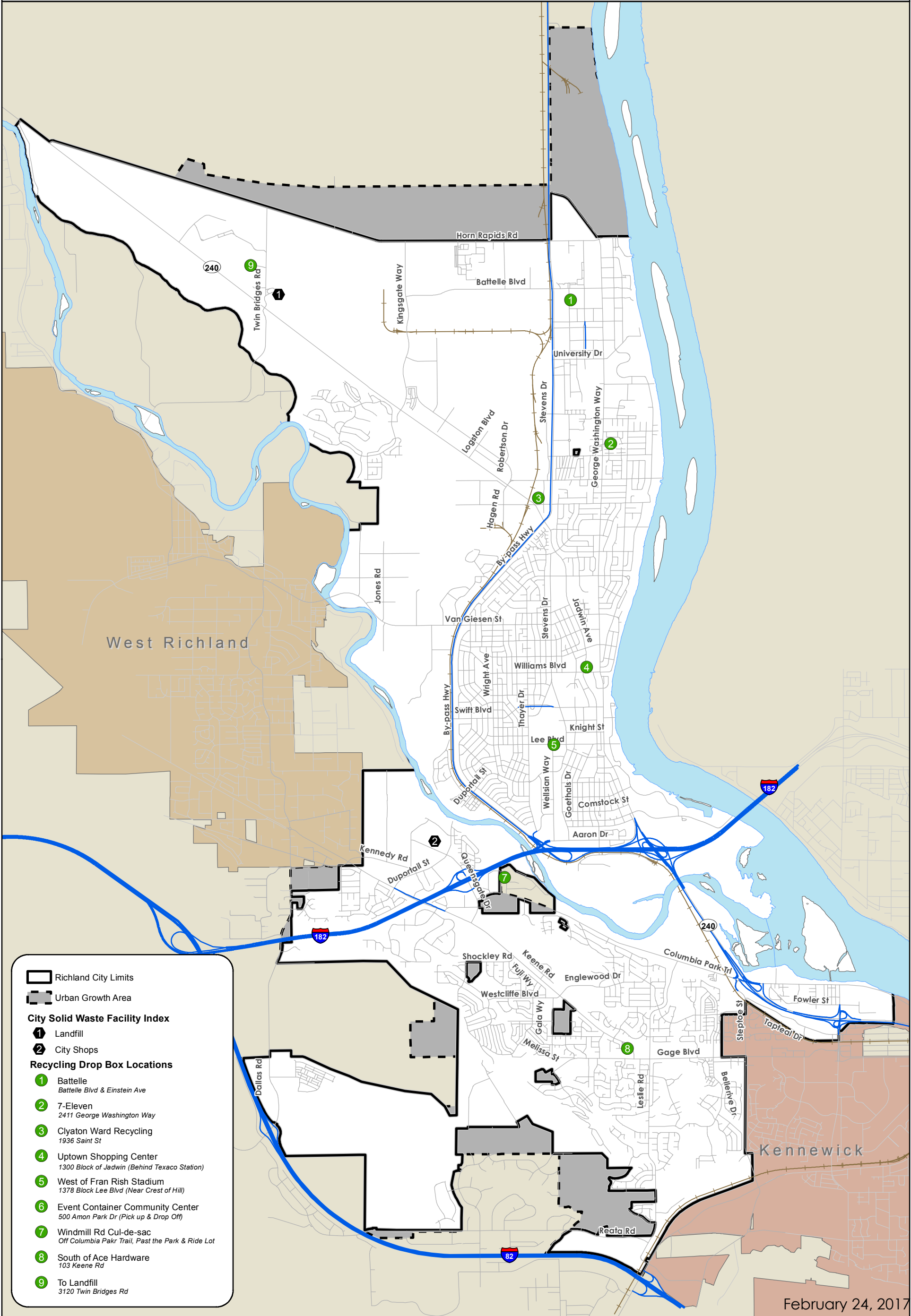
Table U-14: Solid Waste Management Facilities Financing 2014-2030

Facilities	Total Cost	Funding Sources	Time Frame
Container Maintenance Facility	\$165,000	Rate Revenue	2017-2018



City of Richland

U-5 - Solid Waste



SECTION SEVEN

ENERGY/ELECTRICAL POWER

EXISTING CONDITIONS

Richland's electrical service is provided primarily by Richland Energy Services (RES) Department. RES provides electric service to over 25,000 residential, commercial, industrial, and irrigation customers throughout the City's 50-square mile service territory, using 552 miles of primary line and eight substations. Ownership and operation of these facilities is shared by the City and the Bonneville Power Administration (BPA). Bulk transmission of electrical power supply to customers in the UGA has historically been provided from the BPA transmission grid, with the local utilities providing final pass-through services. BPA is contractually obligated to supply all of the City's power requirements through 2028.

Electric system planners design and build facilities to follow population and employment projections for the City and county. The electric load is determined from these plans and projections. An electric system plan is then developed to serve those loads at the reliability level prescribed by the individual utility, taking into account environmental, economic, financial, and operational factors. Utility construction is coordinated with the appropriate jurisdictions and agencies, and is typically phased in as actual growth occurs. Transmission lines and substations are installed based upon projections and early growth while electrical distribution lines are installed at customer request with the continued growth.

Future electrical service plans are designed not only to provide for future growth and accommodate new and increased loads, but also include changes to the existing systems to improve reliability, maintain power quality, and maintain redundancy backup service in the system.

The City has service area agreements with Benton County PUD (BPUD) and Benton Rural Electric Association (BREA). Approximately 102 customers within the City service area are being served by BPUD while no customers within the City service area are served by BREA. The City transfers remaining customers served by BPUD within the City service area based upon the terms within the service area agreement. All 102 are expected to be transferred by 2021.

Table U-15: City of Richland Electric Substations

Substation	Total Capacity	Used Capacity (2014)	Remaining Capacity (2014)
Sandhill Crane	45,000 KVA	31,000 KVA	14,000 KVA
First Street	45,000 KVA	32,000 KVA	13,000 KVA
Snyder	23,000 KVA	20,000 KVA	3,000 KVA
Stevens	46,000 KVA	41,000 KVA	5,000 KVA
Thayer	53,000 KVA	29,000 KVA	24,000 KVA
Richland Switch	23,000 KVA	10,000 KVA	13,000 KVA
Tapteal	45,000 KVA	37,000 KVA	8,000 KVA
City View	23,000 KVA	19,000 KVA	4,000 KVA
Total System	303,000 KVA	219,000 KVA	84,000 KVA

Source: City of Richland 2014 Long Range Plan – Richland Energy Services

Energy Efficiency Program

RES offers energy efficiency programs to its commercial and residential customers. Commercial and industrial customers are offered incentives for lighting and custom projects that reduce energy use. Custom projects include heating, ventilation, and air conditioning (HVAC), motor efficiency upgrades, etc. For residential customers, Richland offers rebates and low-interest loans to qualified customers for energy efficient HVAC equipment and weatherization measures including insulation, windows, and doors. Customers can select a rebate only or apply for a low-interest loan with a rebate. Richland also offers energy efficiency program specifically designed for low-income families for insulation, duct sealing, ductless heat pumps, windows, and doors for their home.

Renewable Option Program

Through the City's partnership with the Renewable Option Program offered by the Bonneville Environmental Foundation (BEF), Richland residents can affordably purchase the environmental benefits of wind power generated throughout the Pacific Northwest. BEF's Green-e Energy Certified Renewable Option Renewable Energy Credits (RECs) represent renewable energy sources from Pacific Northwest projects where clean zero-emission wind energy has been delivered to the North American power grid to replace fossil fuel based electricity.

Each block of Renewable Option RECs represents the environmental attributes of 100 kilowatt-hours of electricity generated from wind energy facilities throughout the Pacific Northwest.

Solar Power and Net Metering

The City offers low-interest loans to promote the use of solar power. The loan period is up to 10 years for up to \$5,000 per installed kilowatt (kW), not to exceed \$15,000. The customer must agree to maintain the system and allow the City to claim the environmental benefits.

LEVEL OF SERVICE (UTILITY SERVICE AREA)

The level of service set by the RES and BPA for their respective portions of the system is based on performance. The goal is an N-1 contingency, which means that one failure in system equipment will not cause the failure of other system components, and the failure can be picked up by other components within eight hours.

The City of Richland currently provides electrical service throughout most of the UGA. Under its Utility Service Area Policy, it is the City's goal to provide service throughout the City limits, UGA, and service area agreements with adjoining BPUD and BREA utilities. The greater of the City limits, UGA, and service area agreements constitutes its current utility service area and planned future service areas.

FUTURE DEFICIENCIES AND RECOMMENDATIONS

The City has identified power supply system capital improvement projects that will be needed to meet the demands of growth as detailed in the Energy Service Department's Capital Facilities Plan for 2016-2027. The list consists of electrical projects with an estimated cost of approximately \$60 million during this period. The \$60 million capital cost is derived from the latest long-range capital expenditure forecast and extrapolating the average annual expenditure through calendar year 2027.

Specific projects have been identified for the second planning period. Critical service deficiencies in this period could result unless needed capital improvements are identified and implemented.

The Energy Services Department has identified electric utility capital improvement projects that will be needed to meet the demands of growth through calendar year 2022. Cost of service and sources of funding are identified in Table U-16.

Table U-16: Electrical Power Facilities Improvement and Fund Resources

Facilities	Total Cost	Time-frame
Miscellaneous Electrical Projects	\$81,754,000	2017-2022
Funding Source	Total Fund	
Benton PUD Contributions	\$1,250,000	2016-2020
Bonds - Future Issue	\$21,955,000	2018-2022
Bonds - Prior Issue	\$21,254,000	2016-2018
Facility Fees	\$6,200,000	2016-2022
RAISE (LRF)	\$980,000	2017-2022
Rate Revenue	\$30,115,000	2016-2018
Total	\$81,754,000	

Long-range capital projects for the power supply system are identified and will be based on the need for improvements to serve growth in the second planning period and on the ability of the City to finance them. Implementation of improvements will be planned as part of an overall finance plan for all City-owned utilities and capital facilities. Projects and related costs identified through 2022 by the Energy Services Department include:

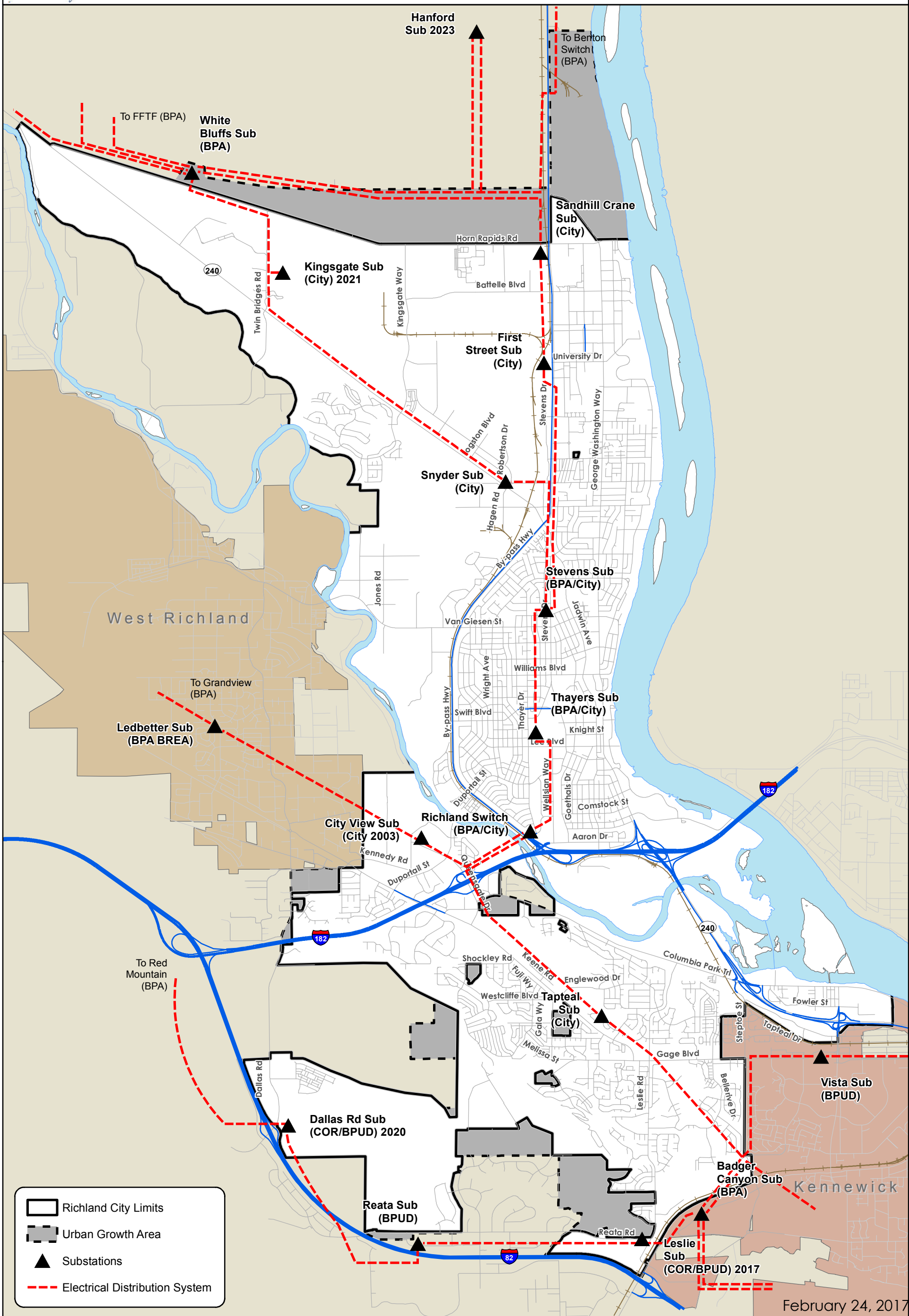
- Dallas Road Area Improvement - Plan, design, and construct a new electrical system substation and connect via new and existing transmission power lines into the electric system grid. Total Estimated Cost: \$9,222,000.
- Kingsgate Substation - New substation for the Horn Rapids Industrial Park. One 28,000 KVA capacity transformer and major materials purchased by City. Substation to be constructed and commissioned by the end of 2021. Total Estimated Cost: \$4,236,000.
- Leslie Rd Substation - Plan, design, and construct a new electrical system substation and connect into the electrical system grid operated by the BPA. Additionally, plan, design, and construct primary underground distribution feeders from new substation to the City's new and existing electrical system. Total Estimated Cost: \$10,081,000.
- Smart Grid – Advanced Metering Infrastructure - Complete a detailed design and implement an electrical utility smart grid program to cost-effectively improve utility operations and provide the utility customers with options to control their power consumption and usage patterns. Total Estimated Cost: \$10,600,000.
- Purchase Southwest Service Area Infrastructure - Per 2005 Electrical Service Area Agreement, purchase the depreciated value of BPUD infrastructure currently serving Hidden Hills Phase 1, Badger Mountain Irrigation District pumping station, and Reata Ridge in 2015 and other PUD facilities in 2020 serving any new City-annexed properties in the southwest service area. Total Estimated Cost: \$812,000.

The capital improvements identified by the City will address deficiencies resulting from growth during the second planning period. Mitigating system improvements will have to be identified by the City for the second planning period.



City of Richland

U-6 - Major Electrical Transmission Lines



UTILITIES BY OTHER PROVIDERS

SECTION ONE

NATURAL GAS SUPPLY

EXISTING CONDITIONS

Cascade Natural Gas Corporation builds, operates, and maintains natural gas distribution facilities serving the City of Richland. Cascade is an investor-owned utility serving customers in 68 communities in Washington and Oregon. Interstate pipelines transmit Cascade's natural gas from production areas in the Rocky Mountains and western Canada. The Cascade headquarters is located in Kennewick, WA (Cascade Natural Gas, 2017).

Cascade's service areas are concentrated in western, central, and southeast Washington; and central and eastern Oregon. Richland's natural gas supply system currently meets existing demand.

LEVEL OF SERVICE

Natural gas service and availability are currently sufficient to meet existing demand. Cascade Natural Gas works with its suppliers to ensure that local gas supply needs are met.

Future levels of availability and service will be maintainable through market demand. Cascade Natural Gas and its affiliates will need to coordinate with the City to ensure that future service extensions are consistent with local growth plans.

FUTURE DEFICIENCIES AND RECOMMENDATIONS

Natural gas will be made available concurrently with growth to the best of the purveyor's ability. No deficiencies in the natural gas supply have been identified. The City will promote locating utility distribution lines together and using existing utility easements wherever possible.

SECTION TWO

TELECOMMUNICATIONS

EXISTING CONDITIONS

Telecommunications is the transmission of information by wire, radio, optical cable, electromagnetic, or other similar means. In Richland, telecommunication utilities include telephone, cellular telephone, Internet, and cable television.

The telecommunications industry is undergoing tremendous advances in technology as cellular and optical fiber technologies transform the way service is delivered. Additionally, advances in computer technology, particularly the Internet, will have an impact on the type and quantity of services provided by the industry. As the distinctions that separate data, video, and voice technologies disappear, it becomes more difficult to assess the future configuration of telecommunications service.

Many telecommunication utilities are under the directive by their licensing agency and franchise agreements to provide a specific level of service to their service area. Most of these utilities are regulated at the state level by the Washington Utilities and Transportation Commission.

Nearly all land uses require one or more of the utilities involving telecommunications. As growth occurs within the residential, commercial, and industrial areas throughout the City and urban growth area, demand for reliable telecommunication services is placed on these utilities.

Many new providers have entered the market and provide options that create a very competitive environment in the telecommunications field; therefore, it is very difficult to accurately assess the way in which telecommunications will be provided throughout the City.

While the provision of advanced communications technology is important to the City's residents and businesses, and vital to the continued economic development of the City, the associated infrastructure can be aesthetically unattractive and present negative impacts to existing services. The City strives to encourage and facilitate the continued development of high quality communications infrastructure while minimizing any associated adverse impacts upon the community or upon the reliability of existing services that are often delivered via the public rights-of-way.

Cable TV

The City of Richland currently franchises Charter Communications Holding Company, LLC, to serve its population in compliance with Federal Communications Commission (FCC) regulations.

Charter Communications provides television services in the Tri-Cities area from a central facility to individual subscriber sets. An electronic control center ("head-end" site) processes reception and generation for distribution through the cable system. The signal can be received from a hard line (cable), a satellite dish, a microwave antenna, or a TV antenna.

Charter Communications' direct cable facilities in Richland include trunk lines and smaller distribution lines. Distribution lines run either along poles on space leased from an electrical or telephone utility, or underground, along the street right of way.

Phone and Internet

Basic and enhanced telecommunication services in Richland and much of the Northwest is provided by Frontier. For the cellular network, almost all nation-wide companies serve the City such as Verizon, Cellular One, U.S. Cellular, AT&T Wireless, T-Mobile, and Cingular Wireless.

Cell towers may be located on tall poles, lattice towers, or buildings. Each cellular site facility includes antennas, radios, air conditioners, and computerized switching equipment. Most sites also contain backup power equipment. Sites located on buildings typically house the associated equipment in self-contained shelters. Cell sites do not emit smoke or loud noise during normal operation. The location of cell sites is typically affected by terrain, other existing cell sites with which new sites must interact, and the cellular company's ability to reach agreement on leases with potential land owners.

The Federal Communications Commission (FCC) licenses cellular companies to operate within strict guidelines. The license allows the licensee the right to use a group of radio frequencies to provide telephone service.

LEVEL OF SERVICE

Federal and state regulations require that telecommunications purveyors provide adequate telecommunications services on demand.

FUTURE DEFICIENCIES & RECOMMENDATIONS

No deficiencies in the telecommunications system were identified under the Comprehensive Plan, therefore, no improvement recommendations were developed.

SECTION THREE

IRRIGATION DISTRICT FACILITIES

EXISTING CONDITIONS

Irrigation is not typically considered an urban service, nor is it a public service or utility provided by the City. However, irrigation water is used for lawns and landscaping by public facilities and grounds, schools, and residential subdivisions. Irrigation water lessens the demand on public drinking water supplies for these urban irrigation purposes.

Only portions of the City of Richland currently have irrigation services. The southern part of the City is served by the Columbia and Kennewick Irrigation Districts. Columbia Irrigation District operates an irrigation canal and a pump station in that area.

Within the unincorporated UGA, irrigation services are provided by the Columbia, Kennewick, and Badger Mountain Irrigation Districts. The Kennewick Irrigation District is composed of local improvement districts which collectively provide irrigation water for a large area in Richland. It serves an area along Keene Road and Gage Boulevard via Division 4 Canal and Amon Pump Lateral. The Badger Mountain Irrigation District serves irrigation water to 4,800 acres in the Badger Mountain vicinity. The service area in Richland City limits includes the Heritage Hills, Westcliffe, Crested Hills, and Country Ridge subdivisions; Badger Mountain School and Park; and Cherrywood and Sundance Badger Mountain School.

FUTURE RECOMMENDATIONS

No improvement recommendations are made as part of this Comprehensive Plan.

CAPITAL FACILITIES

SECTION ONE

INTRODUCTION

PURPOSE OF THE ELEMENT

The Capital Facilities Element, required under the Washington State GMA, addresses capital facilities needs in the City of Richland and UGA and represents the City's policy plan for the next 20 years.

This Capital Facilities Element was developed to be consistent with the Benton CWPP and integrated with all other plan elements to ensure consistency throughout the Comprehensive Plan. The Capital Facilities Element considers the public capital facilities necessary to support the other Comprehensive Plan elements.

The Capital Facilities Element promotes efficiency by prioritizing capital improvements for the first planning period, 2017 through 2022, and second planning period, 2023 through 2037. Long-range financial planning enables the City to schedule projects so that the steps in development logically follow one another based on relative urgency, economic desirability, and community benefit. The identification of adequate funding sources results in the prioritization of needs and allows tradeoffs between projects to be evaluated explicitly. The Capital Facilities Element will guide decision-making to achieve the community goals as defined in the Comprehensive Plan.

According to the GMA Procedural Criteria, Chapter 365-195 WAC, the Capital Facilities Element should contain at least the following features:

- An inventory of existing capital facilities;
- A forecast of the future needs for such capital facilities;
- Proposed locations and sizes of expanded or new capital facilities;
- A six-year plan to finance such capital facilities; and
- A requirement to reassess the Land Use Element if funding falls short of meeting capital facilities' needs, and to ensure consistency between the Land Use Element and the Capital Facilities Element and associated Finance Plan.

The Capital Facilities Element documents all capital projects needed to accommodate projected growth. The Finance Plan identifies the City-provided facilities and the sources and levels of financial commitment and revenues necessary to meet the concurrency requirements of the GMA. Concurrency means that needed capital facilities must be installed and available for use at the time of development, or within a reasonable time period following completion of the development.

Richland CIP uses many revenue sources to fund the capital investment projects identified in the plan, including sales tax, business and occupation tax, utility rates, state revenues, bonds, and grants. City also collects park impact fees to mitigate park impacts. Impact fees collected from specific park zones are used within that park district to address the impact by providing park and facilities according to the standards set in the Parks, recreation and Open Space Plan.

The capital facilities covered in this element are as follows:

- Parks, Recreation and Open Space Facilities
- Municipal Facilities
- Fire and Emergency Service Facilities
- Police Service Facilities
- Library Facilities
- Schools

SECTION TWO

PARKS, RECREATION, AND OPEN SPACE

EXISTING CONDITIONS

Existing Parks and Recreation Sites

The City of Richland has a total of 2,286 acres of city-owned park land within its corporate limits. Richland's park land inventory includes neighborhood, community, regional, linear, natural open space, and special use parks. Richland's open space is discussed under the Land Use Element.

Table CF-1: Park Area Total

Park type	Acres	Number of Parks
Neighborhood Parks	78.6	25
Community Parks	220	4
Regional Parks	170	2
Special Use Areas	702	11
Linear Parks	240	9
Natural Open Space	873.98	7
Total Parks and Recreation Areas	2,285.6	58

Each park's classification, acreage, and development status is shown in Table CF-2. The location of all parks is shown in the parks and open space map in the Comprehensive Plan.

Table CF-2: Inventory of Existing City Parks

Park	Acreage	Type1
Barth Park	0.35	Neighborhood park, developed
Beverly Heights Park	2.6	Neighborhood park, developed
Brookshire Park	2.5	Neighborhood park, developed
Chaparral Park	3	Neighborhood park, developed
Craighill Park	3.41	Neighborhood park, developed
Crested Hills Park	5.8	Neighborhood park, developed
Desert Rim Park	2.84	Neighborhood park, developed
Drollinger Park	1.5	Neighborhood park, developed
Frankfort Park	2.86	Neighborhood park, developed
Gala Park	3	Neighborhood park, developed
Goethals Park	2	Neighborhood park, developed
Heritage Hills Park	1.59	Neighborhood park, developed
Hills West Park	2.06	Neighborhood park, developed
Jadwin/Stevens Triangle	1.41	Neighborhood park, developed
Jason Lee Park	4.1	Neighborhood park, developed
Jefferson Park	8.71	Neighborhood park, developed
Lynnwood Loop Park	10.9	Neighborhood park, developed
McMurray park	3.04	Neighborhood park, developed
Meadows East Park	3.04	Neighborhood park, developed
Oak Park	3.1	Neighborhood park, developed
Overlook Park	0.91	Neighborhood park, developed
Paul Liddell Park	2.75	Neighborhood park, developed
Rodney Block Park	3.1	Neighborhood park, developed

Park	Acreage	Type1
Stevens Park	1.41	Neighborhood park, developed
McMurray Park	3.04	Neighborhood park, undeveloped
Westwood Park	0.89	Neighborhood park, developed
Wye Neighborhood Park	3.15	Neighborhood park, developed
Unnamed Park in Badger Mountain South	6.0	Neighborhood park, undeveloped
Badger Mountain Community Park	80	Partially Developed
Claybell Park	46	Community park, partially developed, includes natural open space
Hanford Legacy Park	117	Community park, partially developed
Trailhead park	40	Community park, partially developed
Unnamed Park in Badger Mountain South	30	Community park, undeveloped and undedicated
Howard Amon Park	45.91	Regional park, developed
Leslie Groves Park	149.2	Regional park, developed
Abbott Shelterbelt	4.1	Linear park, developed
Bypass Shelterbelt	55.74	Linear park, developed
Gillespie Parkway	2.9	Developed
Goethals Shelterbelt	15	Linear park, developed
Haines Levee	19	Linear park, developed
James Lawless Park	34	Linear park, undeveloped
Keene Road Trail Corridor	78.7	Linear park, undeveloped
Marjorie Sutch Greenway	14.6	Linear park, partially developed
Stevens Islands	16.27	Linear park, developed
Amon Basin Natural Preserve	75	Natural open space, undeveloped
Badger Mountain Park	80	Community park, partially developed, includes natural open space
Bateman Island ¹	160	Natural open space, undeveloped
Chamna Natural Preserve ¹	293	Natural open space, undeveloped
Columbia Point South	116	Natural open space, undeveloped
W.E. Johnson Park	236	Natural open space, partially developed
Wye Levee	21	Developed
Bradley Boulevard Park	0.2	Special use areas, developed
Carol Woodruff Plaza	0.1	Special use areas, developed

Park	Acreage	Type ¹
Columbia Park West ²	65	Special use areas, partially developed
Columbia Playfield (includes George Prout Pool)	28.89	Special use areas, developed
Columbia Point Golf Course	170	Special use areas, developed
Columbia Point Marina Park	13.2	Special use areas, developed
Horn Rapids Athletic Complex	24	Special use areas, developed
Horn Rapids ORV Park	300	Special use areas, developed
Jeanette Taylor Park	2.02	Developed
John Dam Plaza	3.9	Developed
South Columbia Point	116	Special use areas, partially developed
¹ "Developed" is used for parks using irrigation and landscape at a minimum; "partially developed" describes parks that include both developed and natural open space		
² US Army Corps of Engineers owned, leased to the City of Richland		

Trails and Bicycle Paths

The City has a system of trails, consisting of Class 1 trails, secondary trails, and soft trails as identified in Table CF-3 below. See Figure T-6 for bike and route maps within the City.

Table CF-3: Inventory of Existing Trails

Park Type	Acres
Existing Class 1 Trails	
Richland Riverfront Trail (Horn Rapids Road to I-182 Bridge)	7.22 mi
Leslie Groves Bike Trail	1.6 mi
Bypass Shelterbelt (Wellsian Way to Jadwin Ave)	4.36 mi
Sacagawea Heritage Trail	3.67 mi
Chamna/Coulee Street Trail	0.96 mi
Keene Road/ Gage Boulevard Trail	4.5 mi
Stevens Drive Trail	0.82 mi
Existing Secondary Trails	
Aaron Drive Trail	0.54 mi
Badger Mountain Community Park	0.71 mi
Crested Hills Park	0.34 mi
Desert Rim Park	0.25 mi
Urban Greenbelt Trail	2.68 mi
Lynwood Loop Park	.25 mi
McMurray Park	0.35 mi
Paul Liddell Park	0.14 mi

Park Type	Acres
Sagewood Meadows Open Area	0.56 mi
Claybell Park	0.56 mi
Existing Soft Trails	
W.E. Johnson Park	>5 mi
Badger Mountain Centennial Preserve ¹	6 mi
Trailhead Park canyon trail 0.26/Badger Flats Trail 0.4	0.3
Claybell Park	>2 mi
Tapteal Greenway Trail	2 mi
Badger Mountain Overlook	>1 mi
Riverview Management Unit ²	2 mi
Chamna Natural Preserve ²	> 11 mi
Bateman Island ²	> 2 mi
James Lawless Park	>1 mi
Amon Basin	>2 mi
South Columbia Point	>2 mi
Rivers to Ridges Trail (Falconcrest)	0.36 mi
¹ Owned and maintained by Benton County; portion of the park is in the City's UGA	
² US Army Corps of Engineers owned, leased to the City of Richland	

In addition to facilities mentioned above, the Barker Ranch trail exists as an easement on City property also encumbered by an irrigation main easement. The City is in the process of relocating this trail to City property adjacent to the irrigation main.

Other Recreational Activities

In addition to City-owned park land and indoor recreational facilities, other facilities include the 647-acre Badger Mountain Centennial Preserve owned by Benton County, 1,112 acres of USACE-owned open space, and various Richland School District facilities. The USACE manages two open space preserves in the Yakima River delta area, the Yakima Delta Habitat Management Unit totaling 1,112 acres. Other private entities such as private schools, neighborhood clubs, private health clubs, and employers provide many indoor and outdoor sports, recreational, and health facilities.

Community Center

The Richland Community Center is available to all citizens of Richland. The Center serves as the venue for a wide variety of programs and activities designed for individuals and groups of all ages. The Center is used for City sponsored and administered recreational activities and programs, and for rental. A number of the facility's rooms are designed and used as multi-purpose spaces for a variety of activities.

Hanford Reach Interpretive Center

The Hanford Reach Interpretive Center is located in Columbia Park West. It opened to the public in 2014. This is a center exhibiting local culture and history and it promotes education and tourism. The structure is owned by the Richland Public Facilities District (PFD) on USACE property leased by the City of Richland and subleased to the PFD.

Motor Cross

The Off Road Vehicle Park (ORV Park) has a public motor cross (MX) course, an All-Terrain Vehicle (ATV) course, open trails, mini/pee-wee MX track, and RV camping. Portions of the park are leased for remote controlled airplanes and go-karts.

The Horn Rapids Athletic Complex provides a public Bicycle Motor Cross (BMX) course and four men's softball fields.

Aquatic Facilities

The George Prout Aquatic Complex provides public swimming and swim classes. The facility has a 25-meter pool with dive tank and a 1,100-square foot wading pool. The Howard Amon Park has a 1,962-square foot wading pool, and Badger Mountain Park has a 6,000-square foot splash and spray park. Both Leslie Groves and Howard Amon Parks have roped off areas for swimming in the Columbia River.

Water-Oriented Facilities on the River

Boat launches and moorage are provided at Leslie Groves Park, Howard Amon Park, Columbia Point Marina Park, and Columbia Park West. A dock for large watercraft is provided at the end of Lee Boulevard in Howard Amon Park. Primitive launch sites are provided at Wye Park, the north end of Snively Road, Hyde Road, and Duportail Street. Transient moorage is provided at Columbia Point Marina Park and Columbia Park West. Private moorage is available at Columbia Park West.

Sports Facilities

Columbia Playfield provides five game-ready lit softball fields. Badger Mountain Community Park and Jefferson Park provide five additional game-ready little league fields. Many City Parks and School District facilities contain backstops for informal ballfield practice.

Jeannette Taylor Park contains a 22,000-square foot concrete skate park for skateboards and BMX bicycles. Many of the City parks provide shared areas or dedicated practice fields for soccer, baseball, and basketball. Football fields are mostly provided within the school facilities. Columbia Point provides a golf course; James Lawless Park includes one 18-hole disc golf course. Table CF-4 indicates current facilities within the City.

Private Recreational Facilities

Several neighborhoods, apartment complexes, private businesses, and churches throughout Richland have built private facilities, such as swimming pools, tennis courts, gymnasiums, golf courses, and playgrounds for their residents, members, and employees. While these amenities are not considered in the inventory of available public facilities, private facilities reduce the demand on public facilities.

LEVEL OF SERVICE

Parks

City of Richland level of service standards have been established for the location of neighborhood and community Parks. Neighborhood parks should be available within a one-mile radius from any dwelling unit. The level of service for community parks is a two-mile radius from any dwelling unit. For the purpose of establishing level of service standards, community and regional parks are considered to provide Neighborhood Park service. Park area level of service standards have not

been established for the other park types, as they are developed based upon specific activity needs of the City.

Trails

There are no established national standards for trails. The City of Richland has chosen not to identify a level of service standard for trails. Currently, Richland has 30 miles of paved Class 1 trails, or 0.49 miles per 1,000 population.

Natural Open Space

There are no established national standards for open space. The City of Richland has chosen not to identify a level of service standard for natural open space. As discussed in Table CF-1, the City has 874 acres of natural open space in seven parks. With additional acres managed by other government agencies within, or adjacent to the City limits, the total natural open space area in the City limits and UGA is 2,476 acres (Table LU-1). This equates to approximately 40 acres per 1,000 population or 1,730 square foot per resident.

Aquatics

The National Recreation and Park Association's (NRPA) Recreation, Park, and Open Space Standards and Guidelines recommend that the City of Richland should provide one swimming pool per 20,000 residents and the pools should be able to accommodate 3-5 percent of the total population or 1,964 people at a time. The City has no adopted standards for aquatic facilities. Several private, neighborhood pools exist in the City and are not included in this evaluation.

Recreation Programing

The City of Richland Recreation Department provides recreational opportunities on a continuous, year-round basis, with up-to-date event/activity guides and calendars available online for the public. These facilities and programs are intended to enhance residents' health and provide comfortable access to their local government and other community amenities. Listed below is a brief sample of activity categories with categories changing based on demand.

- Aquatics-swim lessons, lap swim, open swim pre-school educational activities
- Arts & Crafts, General Education-chess, juggling, hunter education, first aid and more
- Dog training, park ranger programs, geocaching, hikes and classes
- Home and garden, language, computer and technologies
- Fitness
- Yoga, martial arts, dance, wellness-check-ups
- Sports: team and individual sports
- Adventure camps-for youth
- Cards, socials trips

FUTURE DEFICIENCIES

Parks

The City is not in need of any additional neighborhood park land. The development of Horn Rapids and Badger Mountain South neighborhood parks will provide adequate park service. New areas near City View re-designated with this Comprehensive Plan update will require one additional community park to serve the area.

The four community parks (Badger Mountain, Claybell, Hanford Legacy, and Trailhead) provide adequate land for development of needed park amenities. There is a need to complete the park amenities at Badger Mountain Park and Hanford Legacy Park. Master plans have been completed for each community park with the exception of Trailhead Park.

Natural Open Space

An analysis on park land in low density cities indicates only eight cities in US have more than 40 acres per 1000 population of park land, which Richland has (The Trust for Public Land, 2015). With the park and natural open space combined, Richland has 79 acres per 1000 people. With the projected 20 years' population, this ratio will be 55 acres per 1000 people. The land use changes indicated in Tables LU-6 and LU-7 will increase the Natural Open Space and the Developed Open Space will decrease. With this change, Richland will have about 78 acres of open space per 1000 people. For the next 20 years' population, this ratio will remain about 55 acres of open space per 1000 people. The proposed land use changes will result in 50 acres on increase in Natural Open Space and 67 acres of decrease in Development Open Space with a net reduction of 17 acres.

Although Richland includes more open space than communities around the nation, there is a community interest in preserving and expanding open space. Approximately 34 acres of Urban Reserve land along the Yakima River is re-designated to Natural Open Space (Table LU-6). The need of open space should be further assessed through stakeholder and public involvement.

Recreation

Table CF-4: Recreational Facilities Inventory and Deficiency

Facility Type	Existing Inventory	Build-out Demand	Additional Need
Youth Baseball Game Fields	10 Fields	10 Fields	0
Youth Baseball Practice Fields	12 Fields	18 Fields	6 Fields
Youth Softball Game Fields	5 Fields	6 Fields	2 Fields
Youth Softball Practice Fields	10 Fields	16 Fields	6 Fields
Adult Softball Fields	4 Fields	6 Fields	2 Fields
Indoor Basketball Practice Courts	7 Courts	16 Courts	9 Courts
Indoor Basketball Game Courts	5 Courts	7 Courts	2 Courts
Indoor Volleyball Courts	21 Courts	14 Courts	4 Courts
Youth Soccer Practice Fields	27 Fields	38 Fields	15 Fields
Youth Lacrosse Game Fields	0 Fields	8 Fields	4 Fields
Youth Lacrosse Practice Fields	0 Fields	2 Fields	2 Fields
Youth Football Game Fields	1 Field	3 Fields	2 Fields
Youth Football Practice Fields	0 Field	0 Fields	0 Fields
Golf Driving Ranges	1 Range	2 Ranges	1 Range
Golf, 18-Hole Courses	1 Course	2 Courses	1 Course
Archery Ranges	1 Course	2 Courses	1 Course
Skateboard Park	22,700 sf	30,000 sf	7,300 sf
Outdoor Tennis Courts	28 Courts	45 Courts	17 Courts

Facility Type	Existing Inventory	Build-out Demand	Additional Need
Indoor Swimming Pools	1 Pool	4 Pools	3 Pool

(Based on a 2030 Population 70,000; Source: 2014-2019 Parks, Trails, Open Space and Facilities Master Plan)

RECOMMENDATIONS

Table CF-5: Parks, Trail, Recreation, and Open Space Financing

Facilities	Total Cost ¹ (\$)	Funding Sources	Time Frame
Badger Mountain Park	1,950,000	Park Reserve Fund Park Districts 5 RCO Grant General Fund	2019 - 2020
Columbia Playfield Improvement	1,096,109	Right-of-way Sale Lodging tax Grant Re Excise tax 1st ¼%	2018
Gateway Entrance Improvement	361,000	Re Excise tax 1st ¼%	2012 - 2017
Hanford Legacy Park	7,600,000	Lodging tax Fund RCO Grant Re Excise tax 1st ¼%	2013 - 2030
John Dam Plaza Improvements	2,000,000	Business License reserve Fund Private Donations Re Excise tax 1st ¼%	2018
Park, Facilities and Trail Signage	1,70,000	Undesignated Park Reserve Fund Re Excise tax 1st ¼%	2017 - 2030
Park, Facilities Deferred Maintenance	2,140,725	Park Districts 3 Undesignated Park Reserve Fund RCO Tier 1 Big Grant Donation	2013 - 2030
Shoreline Deferred Maintenance	280,000	Undesignated Park Reserve Fund Re Excise tax 1st ¼%	2014 - 2030
Tree Replacement and Deferred Maintenance	120,000	Re Excise tax 1st ¼% WCIA Insurance Settlement Payment	2014 - 2030
West Village Park at Badger Mountain South	250,000	Park District 4	2017

¹*Includes amount that has already been spent in previous years starting in 2012; projects with budget already spent before 2017 is not included in this table.*

Park and recreational facility improvements will be met through proactive long-term planning. Programs and planning shall be done in accordance with the Parks, Trails, Open Space and Facilities

Plan. The 2014 – 2019 Parks, Trails, and Open Space Facilities Master Plan indicates major facilities proposed for parks and recreation and their funding sources for a timeframe between 2017 and 2030.

The 2017 Capital Improvement Plan provides a detailed project list for 2017 through 2022. Additional projects in the CIP include:

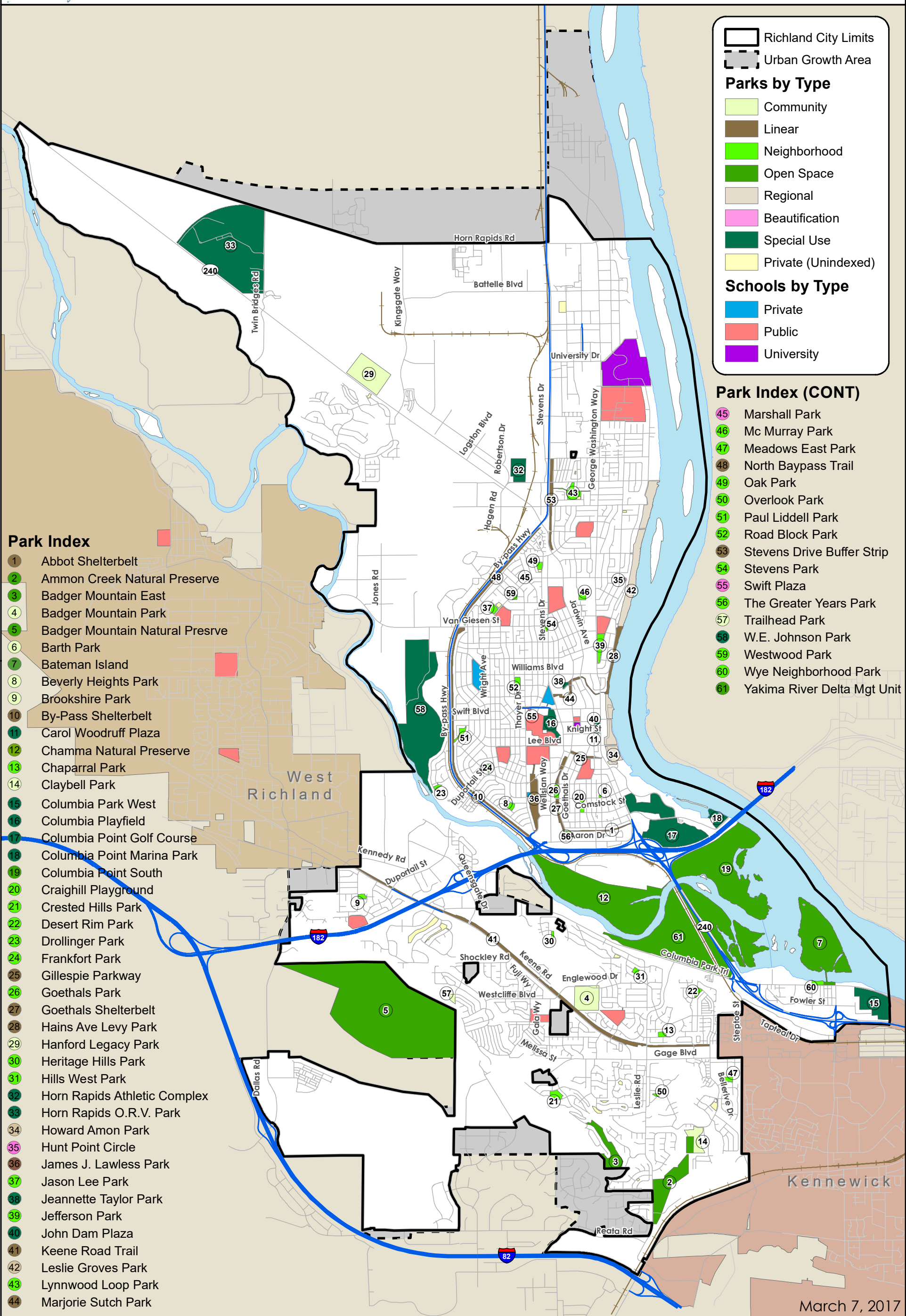
- Bypass Shelterbelt, budgeted for \$1,206,458 in 2020 through 2022
- Conversion of State Funded Recreation Land Mitigation, budgeted for \$60,000 in 2017
- Craighill Park, budgeted and spent \$50,000 in 2016
- Drollinger Park, budgeted for \$120,000; remains \$60,000 for 2018
- Gata Park, budgeted for \$398,386; remains \$70,000 for 2019
- Horn Rapids Athletic Complex, budgeted for \$650,000 for 2017 through 2021
- Parks Facilities ongoing maintenance, budgeted for \$4,192,000 for 2017 through 2022

Land use change indicated in Tables LU-6 and 7 will result in 50 acres on increase in Natural Open Space and 67 acres of decrease in Development Open Space with a net reduction of 17 acres of Open Space. However, this will increase Commercial Recreational land that will offer water-oriented recreational opportunities.



City of Richland

CF-1 - Parks, Schools and Open Space



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- 1 Abbot Shelterbelt
- 2 Ammon Creek Natural Preserve
- 3 Badger Mountain East
- 4 Badger Mountain Park
- 5 Badger Mountain Natural Presrve
- 6 Barth Park
- 7 Bateman Island
- 8 Beverly Heights Park
- 9 Brookshire Park
- 10 By-Pass Shelterbelt
- 11 Carol Woodruff Plaza
- 12 Chamma Natural Preserve
- 13 Chaparral Park
- 14 Claybell Park
- 15 Columbia Park West
- 16 Columbia Playfield
- 17 Columbia Point Golf Course
- 18 Columbia Point Marina Park
- 19 Columbia Point South
- 20 Craighill Playground
- 21 Crested Hills Park
- 22 Desert Rim Park
- 23 Drollinger Park
- 24 Frankfort Park
- 25 Gillespie Parkway
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- 27 Goethals Shelterbelt
- 28 Hains Ave Levy Park
- 29 Hanford Legacy Park
- 30 Heritage Hills Park
- 31 Hills West Park
- 32 Horn Rapids Athletic Complex
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- 34 Howard Amon Park
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- 36 James J. Lawless Park
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- 38 Jeannette Taylor Park
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- 41 Keene Road Trail
- 42 Leslie Groves Park
- 43 Lynnwood Loop Park
- 44 Marjorie Sutch Park

Richland City Limits

Urban Growth Area

Parks by Type

Community

Linear

Neighborhood

Open Space

Regional

Beautification

Special Use

Private (Unindexed)

Schools by Type

Private

Public

University

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- 47 Meadows East Park
- 48 North Bypass Trail
- 49 Oak Park
- 50 Overlook Park
- 51 Paul Liddell Park
- 52 Road Block Park
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- 54 Stevens Park
- 55 Swift Plaza
- 56 The Greater Years Park
- 57 Trailhead Park
- 58 W.E. Johnson Park
- 59 Westwood Park
- 60 Wye Neighborhood Park
- 61 Yakima River Delta Mgt Unit

SECTION THREE

MUNICIPAL FACILITIES

EXISTING CONDITIONS

The City of Richland provides many services at municipal facilities throughout the City. Many of these services are discussed in detail in other sections of this Capital Facilities Element and in the Utilities Element. This section describes the City of Richland's administrative buildings and civic center municipal facilities, including City Hall, City Hall Annex, Community Center, Development Services Center, and the City Shops and Warehouse Facility.

City Hall in downtown Richland houses the Council Chambers, Finance Division, and Administrative Services. It also houses the Cable Communications and the Public Information Officer. The City Hall Annex, adjacent to City Hall, houses the City Manager's office, Assistant City Manager and City Clerk, City Attorney, and Hanford Communities.

The Community Center, a 13,000-square foot facility built in 2002, serves a dual role as a new senior center and a recreation and meeting facility. The facility has a dividable multi-purpose assembly room, game room, commercial kitchen, meeting rooms, and fitness facility. It also houses the administrative offices of the Parks Department.

The Development Services Center houses the Building and Permit Services Division, the Housing Resource Division, Electrical Administration and Engineering, and Public Works Administration and Engineering groups. The building was acquired from the Federal government as surplus property and renovated to become a one-stop planning and development facility during the City's construction expansion period. The renovated area provides increased space and improved working conditions for existing staff. With these services becoming centralized, productivity and efficiency improvements are being recognized.

Staffing for these operations includes 217 employees. The location of major municipal facilities is shown in Figure CF-3, Facilities Map. No municipal facilities are located in the unincorporated areas of the UGA.

In 1994 the City purchased a 160-acre parcel near the Kennedy Road/I-182 interchange, of which 33 acres are dedicated to the construction of a new city shops complex. This campus-style complex completed in 1999 houses the Information Technology and Human Resource Divisions and the construction and maintenance divisions of the electric, water, and solid waste utilities, parks and facilities, fleet services, as well as purchasing and warehousing. In 2010 the City constructed an addition that houses the Information Technology Data Center. The complex consists of three separate buildings and outdoor storage.

LEVEL OF SERVICE

Planning for municipal facilities is based on employment trends, current occupancy, life cycle of the building, efficiency of use, and expansion requirements. Space plans are also determined based on the program objectives of individual departments. Studies prepared by ALSC Architects in April 1992 and 2003, evaluated municipal buildings and recognized that some municipal facilities within the City of Richland were operating at a substandard level.

Assessment of Facilities

City Hall is a 27,914-square foot two-story building. Apart from a minor cosmetic remodeling of the Council Chambers and addition of technology, minimal improvements have been made since it was

constructed in 1959. A facilities analysis, completed by ALSC Architects in April 1992 and again in 2003, evaluated each building for the adequacy of architectural, structural, mechanical, electrical, and safety qualities. The study identified facility needs for City divisions to remain at the site after relocation of the Service Functions and Senior Center. The study concluded that the City Hall Complex is inadequate in size and flexibility and is not in compliance with basic accessibility and energy code requirements. The HVAC system is well beyond its intended life cycle and consists of an electric steam boiler original to the building and a cooling tower. Currently, the City is undertaking a review of its various administrative facilities.

The 5,600-square foot Administrative Building was built in 1977 and has only had minor cosmetic improvements. The ALSC study concluded that the building is basically sound and, is in compliance with building codes. Minor additional aesthetic improvements to the interior finish and carpeting in part of the building were recommended. The HVAC system is running at half of its design capability and cannot be repaired without significant investment.

FUTURE DEFICIENCIES

Municipal facility needs that are affected by growth include equipment and space needs as well as additional staff time to process building permits, conduct development plan reviews, and perform City administrative functions. Future growth and development will place increased demand on the City's municipal facilities and services. However, many factors that influence the need for municipal facilities space do not correlate directly with population growth. With technological advances that affect space demands and the trend toward the "right-sizing" of government, it cannot be assumed that municipal facility needs will increase proportionally with growth.

RECOMMENDATIONS

Currently a plan is underway for the construction of a new City Hall that will combine the City Hall, the City Hall Annex, and the Development Services Building into one facility, therefore eliminating three aging buildings. Construction of a 46,000-square foot facility will begin in 2017 and be complete in 2018.

The Facilities Matrix below in Table CF-6 evaluates major facilities' lifecycles. The lifecycle of a facility can be measured based on the age of a building and cost of operation and maintenance over time. Efficiency in the building design can reduce the maintenance cost. Maintenance and operation cost rises as the building gets older until it reaches a point when maintenance is no longer cost-effective. The average age of an office building can range from 30 to 50 years. However, a building can reach its lifecycle sooner if it does not meet current code and safety requirements, and the cost of retrofitting outweighs the benefit. Future municipal facilities planning should assess the lifecycle of facilities and plan in advance to maintain desired level of service.

Table CF-6: Municipal Facilities Matrix and Lifecycle Assessment

Facilities	Year Built	Status of the Facility	% of the Lifecycle Remaining	Improvement/ Replacement Allocation in CIP (\$)
City Hall	1959	Inadequate in size and flexibility; not in compliance with energy code or ADA requirements; major MEP components are failing and the cost of maintenance is increasing every year	The facility has passed its effective lifecycle. The building is in year 59 of a 50 year lifecycle and will be replaced within 2 years.	18,500,000 for new facility to be completed in 2018
City Shops 100, 200, 300	1998	The facility is still functioning very well for its intended purpose. The MEP systems have been well maintained and are performing as expected. The roof material has failed and will need to be replaced in 2018	The facility is on a 50-year lifecycle. If a proactive maintenance program continues, the building should meet its intended lifecycle. The current remaining lifecycle is 60%	
Development Services Building	1944	Major MEP failure throughout the building	The facility has passed its effective lifecycle and will be replaced within 2 years as part of the new City Hall	18,500,000 for new facility to be completed in 2018
Fire Station 71	1953	Even though the facility was remodeled in 1992, it is not performing well. The MEP systems are failing	The facility is currently on year 64 of a 50 year lifecycle. The facility is well past its effective lifecycle and is requiring significant maintenance to keep it functioning properly	<u>\$5,000,000</u> Verify
Fire Station 72	1991	The facility has sustained water damage over the years based on a poor roof and parapet design. The facility will require a significant remodel in 2017 to address the	The facility was intended for a 50 year lifecycle. Based on the current status, its actual lifecycle has been reduced based on	Ask Tom for dates/amounts

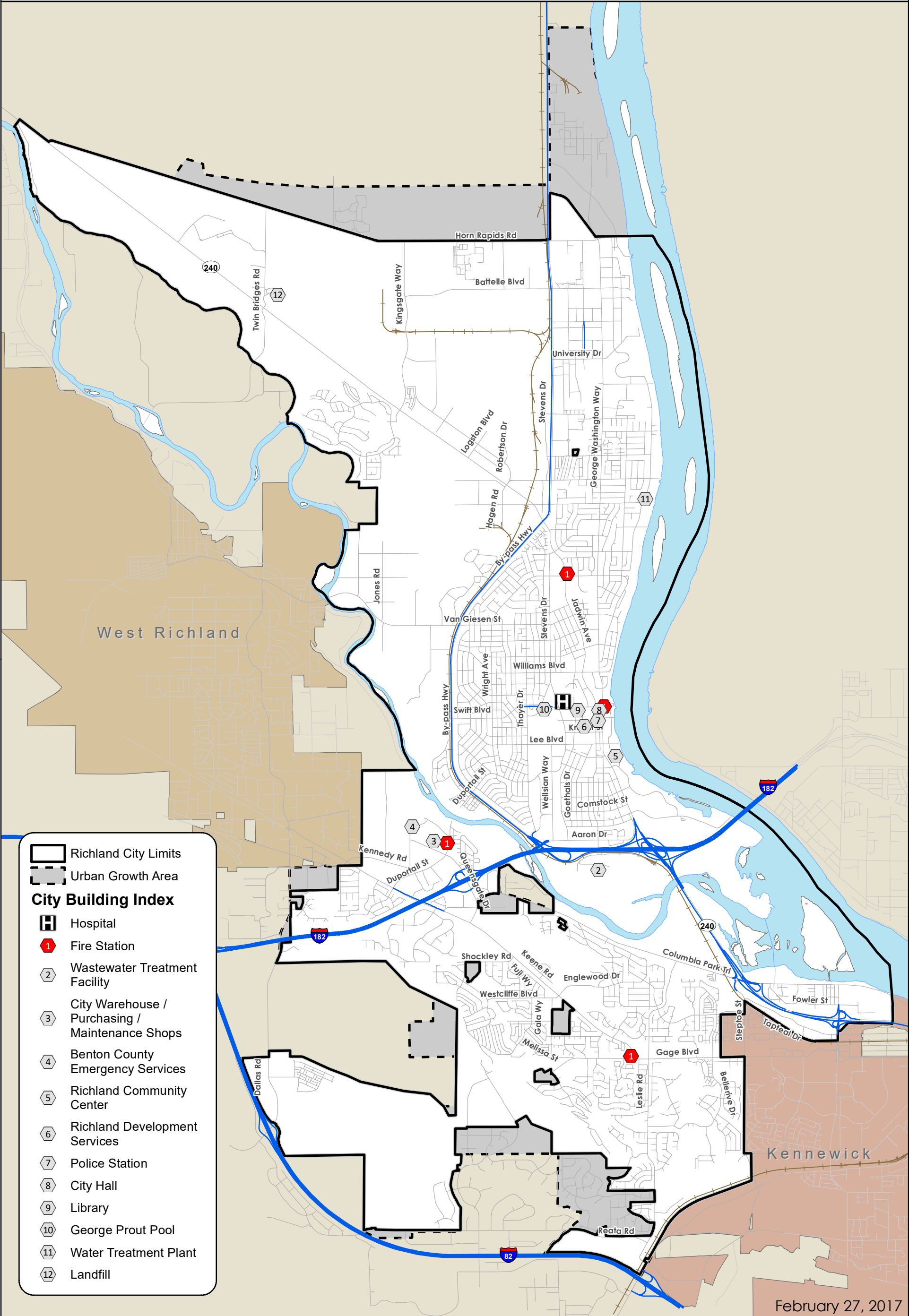
Facilities	Year Built	Status of the Facility	% of the Lifecycle Remaining	Improvement/Replacement Allocation in CIP (\$)
		water damage. Overall, the major MEP components are functioning properly	water damage. The remaining lifecycle is approximately 40%	
Fire Station 73	1958	The facility is not performing well and requires significant maintenance to sustain operations. The MEP systems are at the end of their life	The facility is currently on year 59 of a 50-year lifecycle. It is well past its effective lifecycle	Ask Tom for dates/amounts
Fire Station 74	2015	The facility is performing extremely well	98% lifecycle remaining	
Landfill	1977, additions and updates 2001, 2003, 2008	Customer areas such as transfer station and administrative offices scheduled for update or relocation as part of capacity improvements 2018-2019	5% - 10%	\$8,003,512
Police Station	2001	The facility has performed well other than normal MEP and building maintenance	70% lifecycle remaining	
Richland Community Center	2001	The facility has performed well other than normal MEP and building maintenance. The roof is an area of concern and will require significant maintenance	70% lifecycle remaining	
Richland Library	2009	The facility has performed well other than normal MEP and building maintenance. The roof has been a concern and will require replacement well before its intended lifecycle	80% lifecycle remaining	Money is being held in the library reserve fund to replace the roof
Water Treatment Plant	2005	Renewal/Replacement projects scheduled for 2017-2021		\$4,382,770

Facilities	Year Built	Status of the Facility	% of the Lifecycle Remaining	Improvement/ Replacement Allocation in CIP (\$)
Waste Water Treatment Plant	1985/1986	Repair/Replacement of influent building and treatment facility are scheduled for update in 2017-2018		\$2,283,000 – Influent Upgrades \$6,611,369 – Treatment Facility



City of Richland

CF-2 - Municipal Facilities



SECTION FOUR

FIRE AND EMERGENCY SERVICES AND FACILITIES

EXISTING CONDITIONS

Fire and emergency medical services are a key part of public safety services for the citizens of Richland and the thousands of visitors and workers who pass through the City. The City of Richland has a professional fire department, which provides fire and life safety protection, emergency medical services (EMS), technical rescue, and hazardous materials response to citizens, visitors and the business community.

The Richland Fire & Emergency Services Department also provides Advanced Life Support EMS through Interlocal Agreements to segments of unincorporated areas of Benton County.

Existing Fire Stations are located as follows:

- Fire Station 71 at 1000 George Washington Way.
- Fire Station 72 at 710 Gage Blvd.
- Fire Station 73 at 1900 Jadwin Avenue.
- Fire Station 74 at 2710 Duportail Street.

The map indicates existing and future Fire Stations serving the City.

LEVEL OF SERVICE

Emergency Response Standard

Richland Fire & Emergency Service historic LOS dates back prior to 2000. Minimum level of service goal is a response time of 5 minutes to 90% of all emergency calls within the City of Richland. The 5-minute response time is defined from time of dispatch to arrival on scene.

Professional Industry Standard

Richland Fire & Emergency Services was given an Insurance Service Office (ISO) rating of 3 following an evaluation conducted in 1994 and again in 2016. ISO ratings range from 1 to 10, with lower numbers being better.

FUTURE DEFICIENCIES

- Inability to meet the City's historic minimum level of service in the northern and southern perimeters of the City as outlined in CFPS Goal 1 policies 1, 2 & 3.
- Enhanced difficulties maintaining WAC training compliance without having access to a training complex.

RECOMMENDATIONS

The following facility recommendations are based on the Comprehensive Plan goals and desire to maintain a level of service standard for the time period of 2017 to 2037.

Short Term 2017-2021 Capital Cost Estimate \$12.9 to \$14.1 million

1. Relocation of the north station (Jadwin & McMurray) further north near the intersection of SR 240 and Stevens Drive (Capital cost estimate: \$4.1 million). Optimal timing for relocation of north station is simultaneous with the completion of the Duportail Bridge. Historic note:

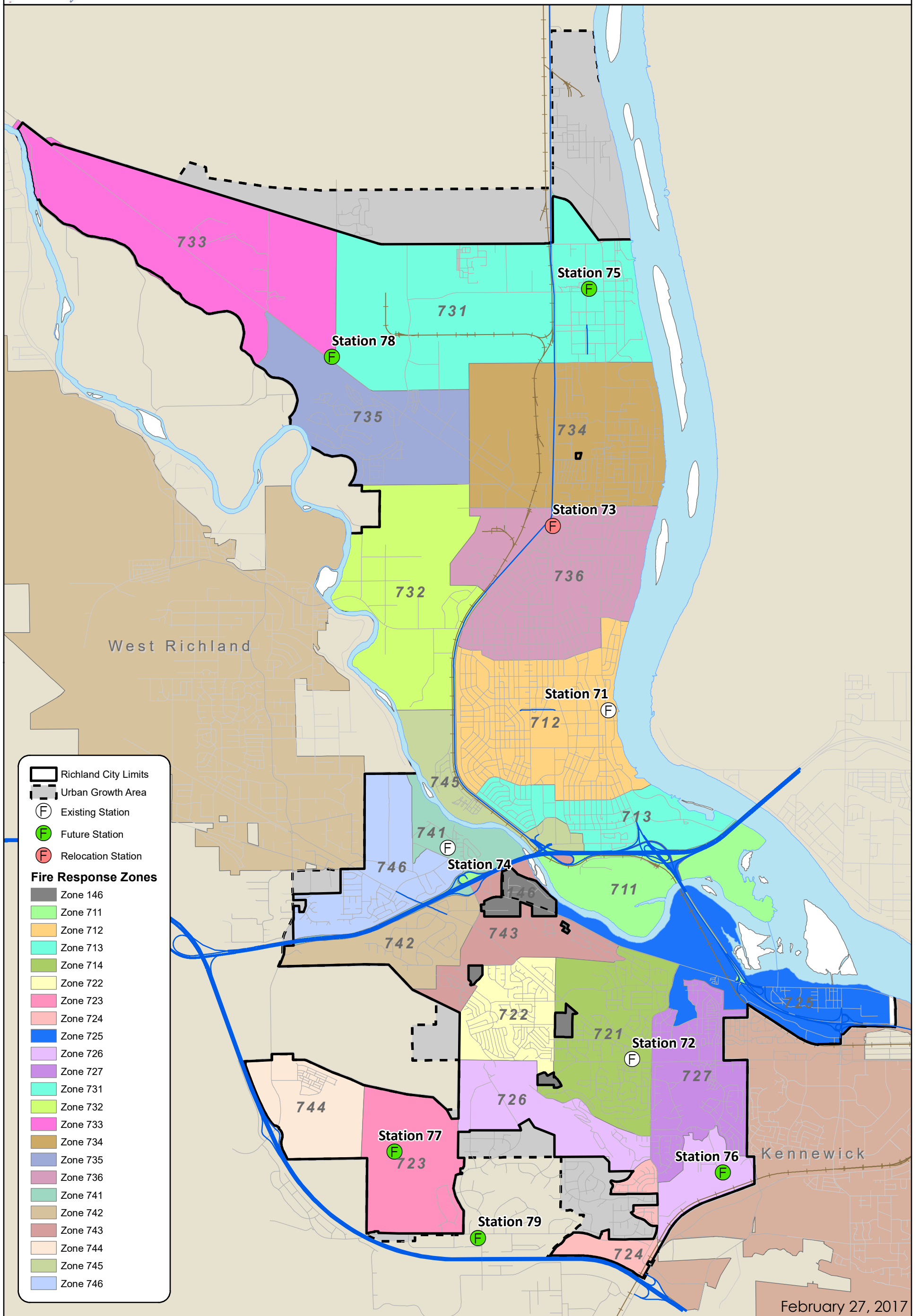
earlier comprehensive plans from the 1990s identified the replacement of station 73 (Jadwin & McMurray) in 2004.

- a. Secure property and change zone and land use designation.
 - b. Construct emergency response facility
2. Construct a satellite/decentralized fire and emergency services facility in north Richland (Capital cost estimate: for facility \$1.8 to \$3 million based on existing or new construction plus \$1 million for apparatus).
 - a. Secure property in appropriate geographic area in North Richland for future facility (Science/tech Park)
 - b. Construct emergency response facility
 - c. Include cost of apparatus: Fire Engine and Ambulance
3. Secure property in appropriate geographic area in northwest Richland for future facility (Horn Rapids Golf Community). City currently owns land in targeted area. Need to confirm zoning and land use change (Capital cost estimate: \$00.00).
4. Relocation of Central Fire Station #71 located at George Washington Way & Swift to an area near the Richland Police Station (Capital cost estimate: \$5 million).
5. Construct a decentralized fire and emergency services facility in southeast Richland.
 - a. Secure property in appropriate geographic area in southeast Richland for future facility (Capital/property cost estimate: \$500,000).
6. Construct a satellite/decentralized fire and emergency services facility in Badger South area of Richland.
 - a. Secure properties in appropriate geographic areas in South Badger for future facilities (Capital/property cost estimate: \$500,000).



City of Richland

CF-3 - Emergency Service Zones



SECTION FIVE

POLICE SERVICE FACILITIES

EXISTING CONDITIONS

The City of Richland has its own Police Department to provide law enforcement services within the City limits. Law enforcement within the unincorporated UGA is currently provided by the Benton County Sheriff's office. The Police Department is located at 871 George Washington Way. The Department employed commissioned officers and civilian employees.

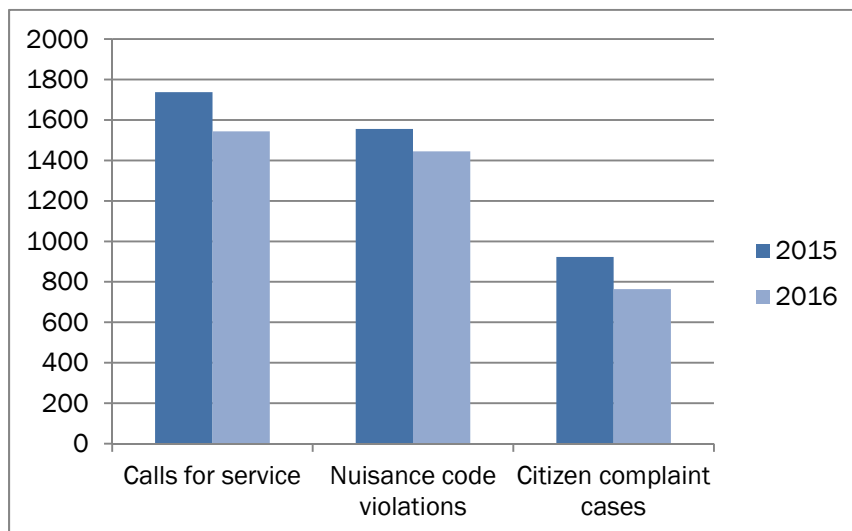
The Richland Police Department established a partnership with the Washington State Department of Corrections (DOC) in 2002 to better monitor criminals who are under active DOC supervision and living in Richland. At present, Richland Police is also leading the Benton County Emergency Management Agency's activities.

Crime rates are decreasing in some categories, while increasing in other categories, based on 2015 and 2016 National Incident-Based Reporting System (NIBRS) data for Richland. Robbery, motor vehicle theft, and stolen property offences have increased slightly, but kidnapping and burglary have decreased. For code enforcement cases, calls for service, code violations, and citizen complaints have decreased as shown in the Table CR-7 below.

Table CF-7: NIBRS Crime Statistics for Richland

Crime Categories	Total Crimes 2015	Total Crimes 2016
Robbery	6	11
Aggravated Assault	53	69
Simple assault	337	313
Kidnapping	15	5
Burglary	217	178
Arson	6	6
Larceny	1111	1100
Motor vehicle theft	48	80
Fraud	190	179
Stolen property offences	29	42
Destruction/ vandalism	461	444
Drug/ Narcotic offences	175	201

Figure CF-4: Code Enforcement Incidents



Current average response times to high priority calls range from one to seven minutes, depending on the type of call and location. The priority categories of police response to calls for service are as follows:

1. Priority I calls are where the safety of people is involved and in progress calls, officers will respond with all urgency, using emergency response equipment when justified.
2. Priority II calls are calls that just occurred. These calls do receive a high-priority response, again using emergency equipment when justified.
3. Priority III calls do not require an emergency response. These calls will be handled as soon as practical but will have lower priority than Category I or II calls. Officers answer Priority III calls when time allows.

Law enforcement within Richland's unincorporated UGA is provided by the Benton County Sheriff's Office. The City of Richland and Benton County have signed a Consent Agreement for Mutual Aid Peace Officers Powers in accordance with the Washington Mutual Aid Peace Officers Powers Act (Chapter 10.93 RCW). By signing this agreement, the jurisdictions agree to provide cooperative enforcement of the law beyond their territorial boundaries as requested by the jurisdiction in need of assistance.

The Police Services Division occupies a police station constructed in 2001.

LEVEL OF SERVICE

Richland Police provides a value-based service. Instead of measuring levels of service by officers per population, Richland measures its levels of service for public safety based on the committed and uncommitted time of the officers and support staff. A balance of committed vs. uncommitted time allows for an efficient response to citizen's calls for service while allocating uncommitted time to allow for proactive police work throughout the community. This balance generally needs to stay at 60% committed time and 40% uncommitted time.

FUTURE DEFICIENCIES

Future growth will increase demand for police protection services and police department community programs. This may result in a need for additional police officers, equipment, and support staff in the long term.

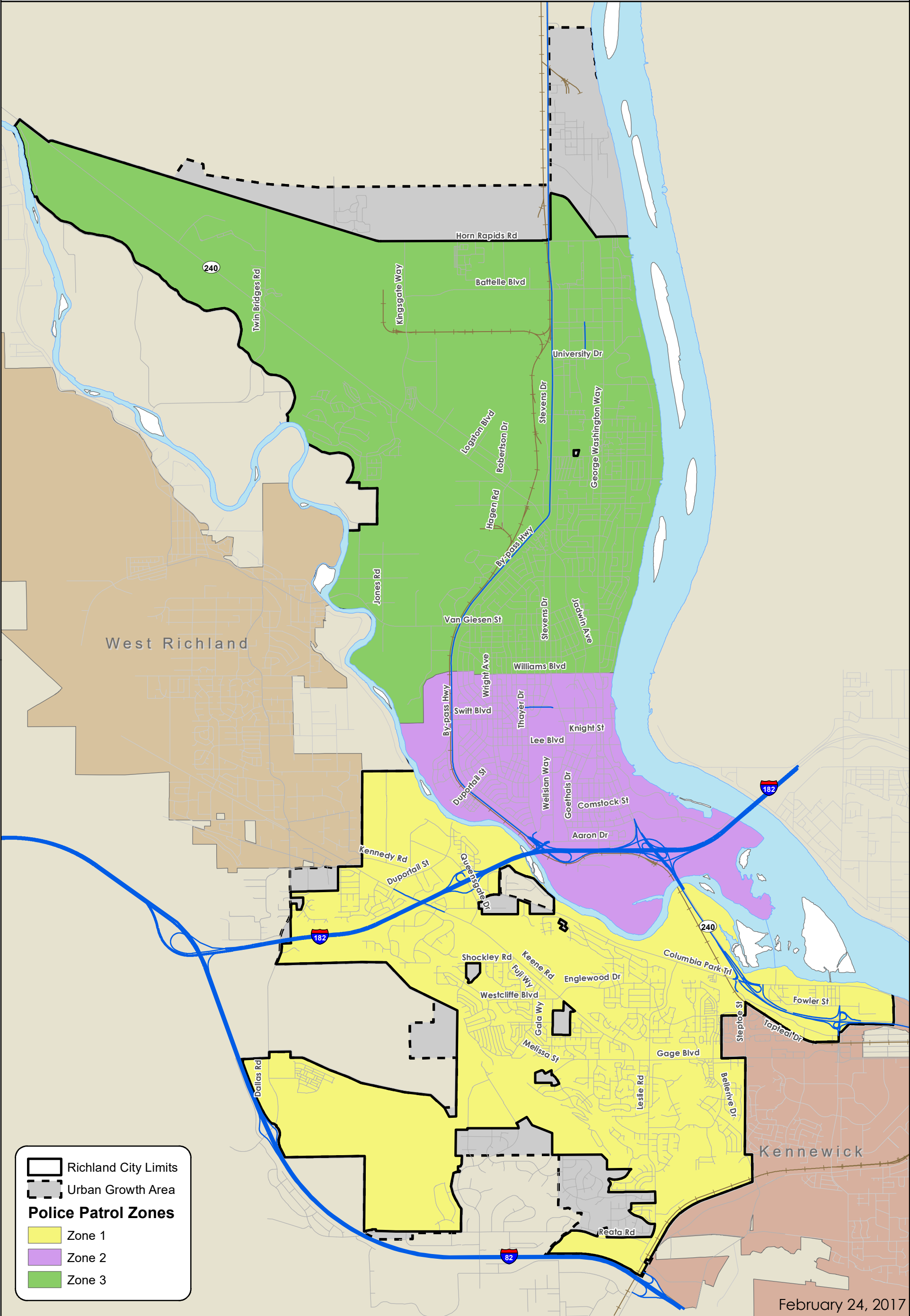
RECOMMENDATIONS

The Police Department is currently not seeking an increase in the number of police officers as it aims to meet its demand through an efficient allocation of committed time. It continues its current programs of community services and crime prevention programs.



City of Richland

CF-5 - Police Patrol Zones



SECTION SIX

LIBRARY FACILITIES

EXISTING CONDITIONS

Library services for Richland residents are provided primarily by the Richland Public Library, operated by the City of Richland Parks and Public Facilities Department. Additional library services are available at the Washington State University (WSU) Consolidated Information Center (CIC), Columbia Basin College in Pasco, and the Mid-Columbia Library System in the adjacent jurisdictions. The Kadlec Neurological Resource Center has a specialized library on neurological disorders that is open to public. The PNNL campus master plan also indicates an on-campus library that is available only to PNNL staff and visiting officials. The Richland Public Library and the WSU CIC are both located within Richland City limits. In addition to those listed above, other library facilities in Richland include school libraries at each school in the Richland School District except Rivers Edge High School.

The Richland Public Library, a **xx** square foot facility located at 955 Northgate Drive, is a single facility with no bookmobile or branch outlets. The library serves all of Richland's population and the population in the region. The current library facility was expanded and remodeled in 2009 with state of the art facilities, such as two 19 feet x 24 feet meeting rooms with adjustable lighting and dividers. Each room can accommodate 32 people and the rooms can be combined into a single 38 feet x 24 feet room accommodating 64 people. A 62 feet x 32 feet room seating 132 people was also added. This room features a projector, retractable movie screen, retractable black-out shades as well as conventional shades, a sound system, and DVD player.

The remodel also included the addition of a second floor, which allowed for the expansion of the library's collection as well as the addition of multiple study tables, a fire place, and upholstered seating.

The remodeled lobby features exhibit space that is highly sought after for the display of paintings and sculptures. Glass display cases, a vendor kiosk, and a bookstore were also a part of the building's expansion. During an average week, the library is open 69 hours. Hours of operation vary from winter to summer months. During winter months the library is open from 9:30 a.m. to 9:00 p.m. on Monday through Thursday, 9:30 a.m. to 5:00 p.m. on Friday and Saturday, and 1:00 p.m. to 5:00 p.m. on Sunday. During summer months, the library is closed on Sundays.

LEVEL OF SERVICE

The library facilities are currently operating to serve the population within the City and the UGA. Its service and capacity level is adequate to serve its existing population.

FUTURE DEFICIENCIES

With the future growth of the City, there may be a need for additional library facilities on the south side of the City.

RECOMMENDATIONS

Based on the current Urban Growth Boundary and population growth projections, the City of Richland should look forward to one or more branches or explore other ways to expand service.

SECTION SEVEN

SCHOOLS

EXISTING CONDITIONS

Richland is mostly served by the Richland School District. Table CF-8 describes all facilities that serve residents within the UGA although some schools are located outside the UGA. Table CF-9 lists the special purpose facilities, such as gymnasiums and libraries, in those schools.

Table CF-8: School Buildings

	Building Area (square feet)	Grounds (acres)	Main Buildings	Classrooms
Richland School District				
Elementary Schools				
Badger Mountain	48,371	15	1	25
Jason Lee	78,905	17	1	28
Jefferson	50,882	12	2	24
Lewis and Clark	43,412	15	1	20
Marcus Whitman	43,312	13	1	20
Orchard	72,000	12.33	1	27
Sacajawea	44,100	16	1	21
Tapteal	48,371	15	1	25
White Bluffs	72,626	15	1	
William Wiley	49,138	13.5	1	25
Middle Schools				
Carmichael	107,066	26	1	31
Chief Joseph	116,837	22	1	31
Enterprise	91,300	40	1	36
High Schools				
Richland High	271,536	35	6	69
Hanford High	243,031	72	8	75
Rivers Edge	8,811	1	1	6
Kennewick School District				
Elementary School				
Vista	38,026	11.5	1	20
Middle School				
Desert Hills	88,362	20	4	37
High School				
Kamiakin	192,841	30	5	67
Special Schools Outside Richland				

	Building Area (square feet)	Grounds (acres)	Main Buildings	Classrooms
Delta High School (Science, Technology, Engineering, Math) ²	44,013	6	1	20
Tri-Tech Skills Center ¹				
¹ Serves the region and operated by multiple school districts.				
² Located in Pasco. Serves the region and operated by multiple school districts. Students are selected by lottery. Richland has a lottery allocation of 133 students accepted per year.				

Table CF-9: Special Purpose Facilities

School	Gymnasiums	Auditoriums	Cafeterias	Libraries
Badger Mountain	1	0	0	1
Jason Lee	1	1	1	1
Jefferson	1	0	0	1
Lewis and Clark	1	0	0	1
Marcus Whitman	1	0	0	1
Orchard	1	0	1	1
Sacajawea	1	0	0	1
Tapteal	1	0	0	1
White Bluffs	1	0	1	1
William Wiley	1	0	0	1
Carmichael	2	1	1	1
Chief Joseph	2	1	1	1
Richland High	3	1	1	1
Hanford High	3	1	1	1
Rivers Edge (Alternative)	0	0	0	0
<i>Source: Richland School District, 2017.</i>				

LEVEL OF SERVICE

Schools will be designed to accommodate the following:

- Elementary: 500 to 600 students per school;
- Middle: 650 to 800 students per school; and
- High: 1,500 to 1,750 students per school.

DEFICIENCIES AND RECOMMENDATIONS

The Richland School District is required by the State of Washington to provide annual enrollment projections. The District uses the Cohort Survival Method, with consideration of other factors, as the basis for these projections. The Cohort Survival Method uses a five-year average of the percent of students progressing from grade to grade. The average over the most recently completed five-year period is used to project enrollment for the next five years.

A long range planning study, done for the school district by E.D. Hovee & Company in 2011, developed projections and long range enrollment trends in four areas of the school district: north

Richland, central Richland, south Richland, and West Richland. These planning projections, summarized below, were used to develop the bond issue in 2013.

The planned growth of the Badger Mountain South area (BMS) is creating the need for future schools in that area of the city. The school district owns approximately 54 acres in BMS for schools. Improved transportation to meet the access needs of the new schools will also need to be planned. Currently, there is one direct access route on Dallas Road. Dallas Road is essentially maintained by three governmental entities and is a typical county road built to county standards. Adequate Police, Fire and City Services such as roads and utilities are needed in this area to serve the school site built in BMS.

Construction of a middle school (Libby Middle School) is undergoing and is expected to open in 2017 in West Richland near Belmont Boulevard and Keene Road. The Richland School District purchased 72 acres for a potential high school near the Libby Middle School site. An elementary school is also being planned in this area.

Additionally, with the growth of the City, the school district is facing difficulties in identifying adequate land for future school sites. New land uses on the southwest side of the city will designate land for school and public facilities' use. Future land planning will be further coordinated to address the school district's need..



City of Richland

CF-6 - Schools



Richland City Limits

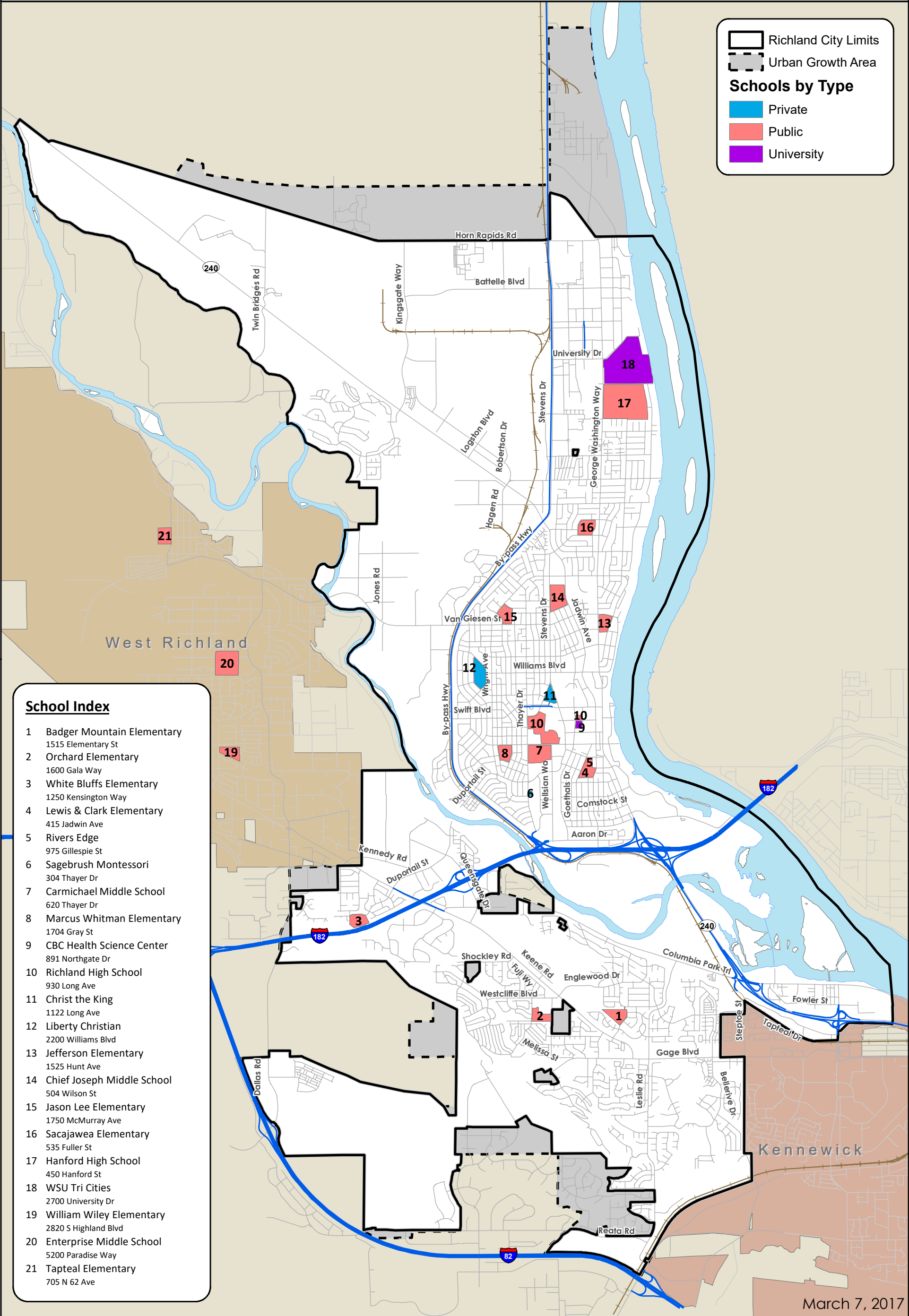
Urban Growth Area

Schools by Type

Private

Public

University



School Index

- 1 Badger Mountain Elementary
1515 Elementary St
- 2 Orchard Elementary
1600 Gala Way
- 3 White Bluffs Elementary
1250 Kensington Way
- 4 Lewis & Clark Elementary
415 Jadwin Ave
- 5 Rivers Edge
975 Gillespie St
- 6 Sagebrush Montessori
304 Thayer Dr
- 7 Carmichael Middle School
620 Thayer Dr
- 8 Marcus Whitman Elementary
1704 Gray St
- 9 CBC Health Science Center
891 Northgate Dr
- 10 Richland High School
930 Long Ave
- 11 Christ the King
1122 Long Ave
- 12 Liberty Christian
2200 Williams Blvd
- 13 Jefferson Elementary
1525 Hunt Ave
- 14 Chief Joseph Middle School
504 Wilson St
- 15 Jason Lee Elementary
1750 McMurray Ave
- 16 Sacajawea Elementary
535 Fuller St
- 17 Hanford High School
450 Hanford St
- 18 WSU Tri Cities
2700 University Dr
- 19 William Wiley Elementary
2820 S Highland Blvd
- 20 Enterprise Middle School
5200 Paradise Way
- 21 Tapteal Elementary
705 N 62 Ave

SECTION EIGHT

ESSENTIAL PUBLIC FACILITIES

According to the GMA, Essential Public Facilities (EPF) include those facilities that are typically difficult to site, such as airports, state education facilities, state or regional transportation facilities as defined in RCW 47.06.140; regional transit authority facilities as defined in RCW 81.112.020; state and local correctional facilities, solid waste handling facilities, and inpatient facilities including substance abuse facilities, mental health facilities, group homes, and secure community transition facilities as defined in RCW 71.09.020.

EXISTING FACILITIES

The City provided essential public facilities are already identified under the Utility Elements. This includes Richland's landfill in the Horn Rapids area. Other facilities within the City but operated by the state or other public agency include the existing airport, Interstate Highway I-182, interregional State principal arterials of SR 240 and SR 224, and the freight railroad system (BNSF, Union Pacific, Port of Benton). The Columbia-Snake River System is also identified as an EPF as it provides an important inter-modal commercial transportation network for the state extending to the Pacific Ocean. Other EPF provided by institutions in Richland include mental health facilities associated with Kadlec and the Lourdes Counseling Center.

SITING

The siting process should be consistent with the Benton CWPP. Policy 11 of the CWPP indicates that the County and Cities, along with public participation, shall develop a cooperative regional process to site essential public facilities of regional and statewide importance. The objective of the process shall be to ensure that such facilities are located so as to protect environmental quality, optimize access and usefulness to all jurisdictions, and equitably distribute economic benefits/burdens throughout the region or county.

At the Countywide and multi-county level, the following action should be accomplished:

- a. Develop a uniform siting procedure which enables selection of optimum project sites and appropriate size and scale relative to intended benefit area.

Richland's Capital Facilities Goal 2 Policy 3 states to locate capital facilities identified as essential public facilities so as to provide the necessary service to the intended users with the least impact on surrounding land uses.

The City establishes the siting criteria with the understanding that some EPF may not pose any siting difficulties beyond those associated with commercial or public developments. Richland reviews the siting of essential public facilities with a process established in the Richland Municipal Code (RMC 23.42.060, Essential Public Facilities). This process first identifies criteria for determining if the facility is to be reviewed as an EPF. The process reviews and addresses mitigation of potential impacts.

REFERENCES

TRIDEC 2016. Tri-Cities Washington 2016 Factsheet. Available from: <https://www.tridec.org/wp-content/uploads/2016-Fact-Sheet-Updated-April-2016-for-TRIDEC-Website.pdf>. Accessed on February 16, 2017

Anchor QEA, 2014. City of Richland Shoreline Inventory, Analysis and Characterization Report. 2014.

Cascade Natural Gas, 2017. Cascade Natural Gas Corporation. Available from: <https://www.cngc.com/utility-navigation/about-us>. Accessed on March 17, 2017

The Trust for Public Land, 2015. 2015 City Park Facts. April 2015.



City of Richland

Comprehensive Plan 2017



CITY OF RICHLAND

DRAFT COMPREHENSIVE

PLAN

2017 – 2037

April 13, 2017

Prepared for

City of Richland



Prepared by

Oneza & Associates



Prepared with assistance from

Anchor QEA

J-U-B Engineers Inc.

ECONorthwest

ACKNOWLEDGEMENTS

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INTRODUCTION

In this chapter, you will find:

- Planning Background: why we plan
 - Growth Management Act (GMA)
 - Benton County Countywide Planning Policies
- Richland Community Profile
- Public Participation Plan
- Comprehensive Plan Framework

BACKGROUND

The Comprehensive Plan is a basic foundation for local government planning. Richland's Comprehensive Plan acts as a guide for the community's physical development (land use) over the long term that reflects the community's values, activities, and future growth. It guides the City's decisions on land use, transportation, infrastructure, housing, economic development, and the environment.

Cities and other government jurisdictions adopt comprehensive plans to serve as guides for future activities. A comprehensive plan does not carry the weight of law. Rather, it is a policy statement that points the way to a future in which the City of Richland thrives and maintains all the qualities its citizens

value. The vision, goals, and policies included in this plan are developed through extensive communication with a wide range of groups and individuals.

The City uses the policies in a comprehensive plan as a guide for its future activities, particularly the crafting of ordinances that relate to zoning, land use, and development. The plan provides a consistent framework for legislative and administrative action, always steering the City towards the desired future

GMA Planning Goals:

- Urban Growth
- Reduce Sprawl
- Transportation
- Housing
- Economic Development
- Protection of Property Rights
- Predictable Permits
- Natural Resource Industries
- Open Space and Recreation
- Environmental Protection
- Citizen Participation and Coordination
- Public Facilities and Services
- Historic Preservation
- Shoreline Management

and away from a patchwork of laws and rules that conflict with the vision or with one another.

Growth Management Act

In 1990, the Washington State Legislature adopted the Growth Management Act (GMA), mandating growth to occur within Urban Growth Areas (UGA). Its goals include concentrating development in urban areas to prevent sprawl, encouraging affordable housing, efficient transportation systems and economic development, providing adequate public facilities, and protecting historic and natural resources. It contains additional goals for citizen participation, permit processing, private property rights etc.

Richland developed its first Comprehensive Plan under the GMA guidelines in 1998. The population in Richland has grown at an average rate of two percent each year in the last 20 years. With the plan in place, the City has accomplished many of its planning goals to accommodate growth. This updated Comprehensive Plan will serve as a guideline for the next 10 years under the Growth Management Act. As the City continues to experience steady population and economic growth, delivering public services is key to maintaining this continued growth pattern.

Benton County Countywide Planning Policies

Managing growth can be ineffective if it is carried out in a patchwork fashion. Therefore, the GMA provides a framework for regional coordination. Counties planning under the GMA should prepare Countywide Planning Policies (CWPP) and establish urban growth areas (UGAs). Cities and the county are required to be consistent with the Countywide Planning Policies in their comprehensive planning.

The Benton County Board of Commissioners adopted the “Benton Countywide Planning Policies” in 2016 (Appendix B). This

document establishes policies that the City’s Comprehensive Plan follows in addressing everything from transportation to the provision of municipal services to economic development to fiscal considerations.

COMMUNITY PROFILE

The City of Richland lies at the confluence of the Yakima and Columbia Rivers, in the geographic region known as the Mid-Columbia Basin. Richland and the nearby communities of Pasco and Kennewick are commonly called the Tri-Cities. This Comprehensive Plan looks at the area in Richland from the Hanford Nuclear Reservation on the north, to Kennewick on the south, and from the Columbia River on the east, to the Yakima River and the City of West Richland on the west. The Yakima River delta has shaped the City’s growth into two areas, the north and south sides of the City.

Richland enjoys abundant water and natural resources. The Columbia and Yakima Rivers provide water for irrigation of nearby farmland as well as for domestic use. They offer a variety of opportunities for the City, such as open spaces, recreation systems, parks, and waterfront developments.

History

Native Americans once lived at the mouth of the Yakima River, which they called the Tapteal, in an area that is known as Richland today.

In 1943, Richland was a small farming town of about 300 residents. In that year, the federal Atomic Energy Commission purchased most of the area for a massive project to produce plutonium. The federal government planned and built a complete community to serve this project, including schools, housing, and parks. Two years later, Richland residents working at the new Hanford Nuclear Reservation produced the plutonium fuel for America’s first nuclear

detonation and for the second nuclear bomb used in World War II. By the end of World War II, the population in Richland swelled to 21,000 persons.

For 15 years, only employees of the Hanford Reservation could live in the town that the federal government built. Then, in 1958, Richland citizens chose to incorporate as a first-class Washington city. The federal government began to sell the prefabricated



housing erected for Hanford workers known as alphabet homes, which had been intended to be temporary. Much of that housing remains in use today.

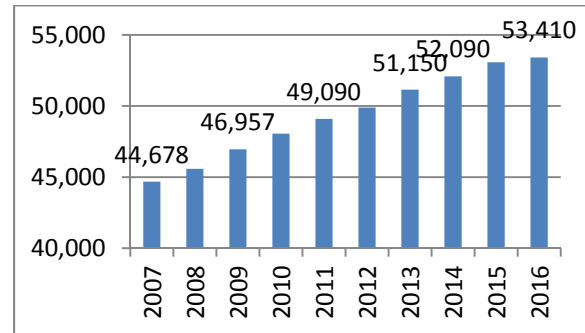
Current Trends

Richland has experienced rapid growth in the last decade. The Tri-Cities Metro area is one of the fastest growing areas in Washington State. In addition to its 2016 population of 53,410 in the City limits, and 54,732 including the UGA boundary, the City is expected to add 23,699 persons in the next 20 years.

Much of the development within the City can be linked with the Department of Energy's activities at Hanford. Most of the highly skilled Hanford workforce, such as researchers, and scientists, live in Richland. The top three employers in the Tri-Cities metro area, Battelle/Pacific Northwest National Laboratory (PNNL), Kadlec Regional Medical Center (KPMC), and Bechtel National, are all located in Richland. The economy of

the City, however, is becoming more diverse with the rise of the healthcare sector (Kadlec), education (WSU Tri-Cities and Columbia Basin College (CBC)), and the agricultural industry in the region.

Figure INT-1: Population Growth in the Last 10 Years in Richland



Source: Office of Financial Management, 2016 estimate

PUBLIC PARTICIPATION

The City of Richland updated its Public Participation Plan in 2016. Cities and counties planning under the GMA must establish "...procedures providing for early and continuous public participation in the development and amendment of comprehensive land use plans and development regulations implementing such plans."

In 2016 and 2017, the City conducted multiple opportunities for public involvement in the form of public workshops, topic group discussions, open houses, citizen surveys, etc. The City established a Comprehensive Plan webpage to disseminate information to, and gather input from, the public. The City reached out to stakeholders such as Pacific Northwest National Lab (PNNL), Richland School District, Columbia Basin College, and Benton Franklin Council of Government (BFCG). The City also held Planning Commission and Council workshops. Planning Commission and City Council hearings were held on xx, 2017 with

published notices. The Plan's goals and policies directly reflect the input received from the public.

PLANNING FRAMEWORK

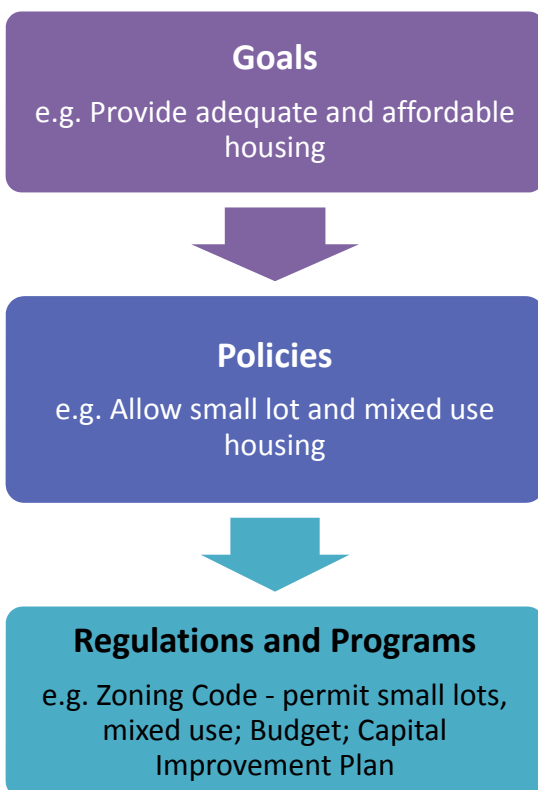
Richland's Comprehensive Plan includes major planning components, visions, goals, policies, and analyses.

A vision is a collective value and target of a community, it is what a community wants to become.

Goals are individual values aimed at achieving the vision.

Policies define how we accomplish the goals.

Regulations, codes and ordinances implement policies.



There are six key elements in the Comprehensive Plan: economic development, land use, housing, transportation, utilities,

Plan Elements:

- Economic Development
- Land Use
- Housing
- Transportation
- Utilities
- Capital Facilities

and capital facilities. Goals and policies are included in relevant elements in order to ensure they carry out the vision of the community. There are sub-elements under some of these elements with specific goals and policies.

This Core Comprehensive Plan is designed to be user-friendly. A supporting analysis document includes additional detailed information. The supporting analysis document also includes inventory data and analysis. In order to eliminate redundancy, goals and policies are only included in the Core Comprehensive Plan.

Integrated EIS

An integrated Environmental Impact Statement (EIS) is prepared to review the significant impacts the updated Plan is likely to have. An integrated EIS is a combined GMA/State Environmental Policy Act (SEPA) document prepared in accordance with Washington Administrative Code (WAC) 197-11-235. It discusses how environmental values are considered in the plan such as goals, policies, and land use designations.

This integrated document analyzes alternatives in an environmental summary (Appendix C).

COMMUNITY VISION

In this chapter, you will find:

The City of Richland's vision and values for the following,

- Community and Neighborhood Character
- Economic Development
- Land Use and Growth
- Housing and Neighborhood
- Transportation
- Open Space and Natural Areas
- Public Engagement
- Urban Design and Culture
- Sustainability
- Parks and Recreation
- Public Facilities
- Utilities
- Public Safety
- School

VISION AND VALUES

Visions are ideas of what Richland will be like at the end of the 20 years planning period. In 2016, the City conducted several visioning workshops with the public, Planning Commission, and City Council. An online survey was also conducted with more than 850 respondents participating, offering input on multiple issues. Vision ideas were gathered from a range of people living or doing business in Richland.

Vision

Richland is a progressive, safe, and family-friendly community that welcomes diversity. It is noted for excellence in technology, medicine, education, recreation, tourism, and citizen participation. This dynamic city, situated on two rivers, actively supports opportunities for economic development that are in harmony with the area's unique natural resources.

Key components of the community's land use vision are categorized into several values discussed in the subsections below. Detailed vision information is available in the Public Involvement Summary document (Appendix D).

Community and Neighborhood Character

Richland is a vibrant, progressive, safe, diverse, and family-friendly community with opportunities for jobs, housing, and recreation.

Public Engagement



Public visioning meeting

Richland communicates with the public in a variety of ways to engage, understand, and address the community preferences, values, and concerns.

Economic Development

Richland uses sound economic development practice to create a diverse and sustainable economy. It is a leader in technology, medical services, and research. Both small and large businesses are vibrant and growing. The City Center is walkable with mixed-uses. The mixed-use waterfront areas offer views, amenities, and recreational opportunities while protecting certain unique natural resources.

Land Use and Growth

Richland manages growth within its urban growth area while revitalizing existing neighborhoods and the City Center. Richland's bustling Central Business District is developed as a mixed-use village with pedestrian amenities, transit access, and bike paths.

Housing and Neighborhood

Housing is available in Richland for all income and age groups. It offers multiple housing choices such as single-family, multi-family, mixed-use, and assisted living facilities.

Transportation

The City's transportation system is efficient and multi-modal. Richland's neighborhoods are well connected for car and transit, and safe for bike and pedestrian traffic. It maintains efficient connectivity with neighboring jurisdictions.



Streets and crosswalks

Open Space and Natural Areas

The community recognizes that natural resources add value to the quality of life. Richland preserves and protects existing natural resources, and critical areas. Uses along the riverfront protect natural resources.

Urban Design and Culture

Richland is a physically appealing community with a diverse cultural heritage. It is a hub of arts, culture, and education.



Farmers' market

The community values high quality design in shaping its natural and physical character in building, landscape, and streetscape design. Its urban areas are revitalized with public spaces and pedestrian-friendly features.

Sustainability

Sustainable growth in Richland brings opportunities for mass transit, and bike and pedestrian trails. The community practices water conservation, recycling, and natural resource protection.

Parks and Recreation

Richland protects and maintains its highly valued parks and recreation system. Richland's park system serves a variety of users in its developed and undeveloped



Howard Amon Park and the Community Center

parks, including sports and other recreational activities.

Public Facilities

Richland provides quality public facilities for all age and income groups. This includes education, library, medical, municipal, and community facilities.

Utilities

Richland is forward thinking in providing utilities with systems that are sustainable and support the planned growth.

Public Safety



Richland Fire Station 74

Richland highly values public safety and a safe lifestyle. As such the City maintains public safety for all ages and neighborhoods.

Schools

Schools that provide quality education are important for the community. Richland coordinates with school districts to ensure schools are located appropriately to serve its community.

GENERAL COMMUNITY GOALS

Community Goal 1: Ensure and enhance the continuing sense of a livable and sustainable community in Richland.

Community Goal 2: Create a vibrant, progressive, and physically, socially, economically, and culturally diverse community providing choices of jobs, housing, and recreational opportunities to its residents of all ages.

Community Goal 3: Encourage continued interaction with other city, county, regional, tribal, state, and federal governments in order to coordinate regional efforts.

Community Goal 4: Encourage the identification, preservation, and enhancement of historic elements to give the future of the City continuity with the past.

Community Goal 5: Encourage the identification, preservation, and restoration of the City's open space and natural areas that will meet educational, health, and outdoor recreational needs with associated economic opportunities to the community.

Community Goal 6: Implement programs for the improvement of the built environment and its aesthetic quality to maintain a clean, safe, and attractive community.

Community Goal 7: Develop a vibrant Central Business District planned on a high density land use.

Community Goal 8: Provide infrastructure and public facilities that serve the best interest of the community.

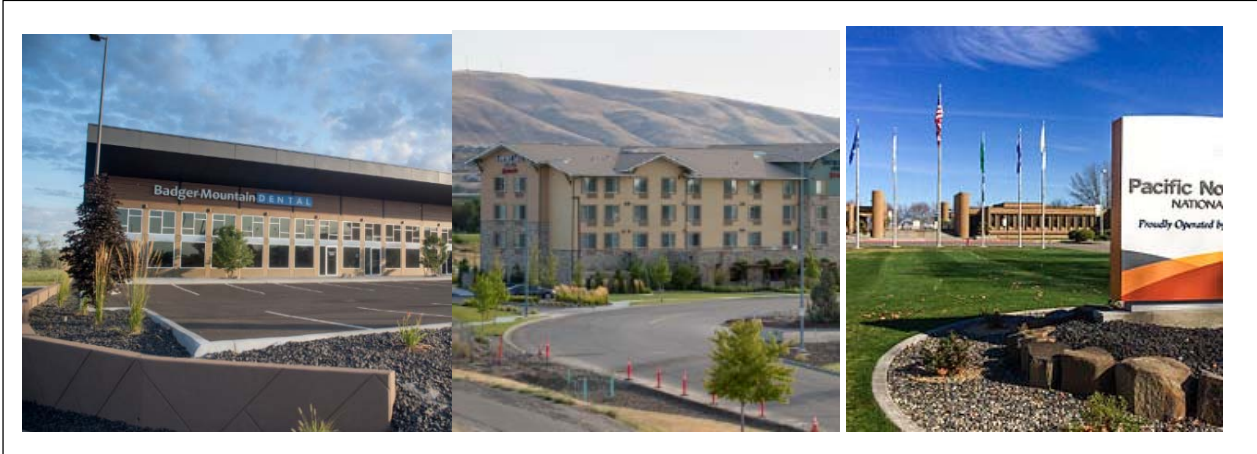
Community Goal 9: Provide and support an efficient, varied, and well-maintained transportation network.

Community Goal 10: Achieve a diversified mix of private industry and commerce capable of supporting a strong and growing economy.

Community Goal 11: Work to implement the City's Strategic Keys.

Community Goal 12: Continue active citizen involvement and outreach education in development decisions and planning for Richland's future.

ECONOMIC DEVELOPMENT ELEMENT



In this chapter, you will find:

- Goals and policies guiding economic development in Richland
- Challenges and opportunities
- Trends and forecasts
- Key recommendations

INTRODUCTION

The economic development element of the comprehensive plan is intended to guide investments through a framework of strategies and policies with the overall goal of growing economic opportunities in the City. The intent is to identify sound economic development practices to build a strong economy where local businesses are welcomed and encouraged by the City, and ensure the economy is resilient, dynamic, and sustainable for current and future generations.

The City's ability to understand its competitive advantages and proactively work to attract a wide range of employers will in turn create more high-wage jobs, which will in turn produce municipal revenues for maintaining and enhancing quality service levels, infrastructure, and facilities.

GOALS AND POLICIES

ED Goal 1: Build the diversity, resiliency, and equity of the City's economy to ensure opportunities for growth and shared prosperity.

Policy 1: Support the growth of a balanced mix of companies in the following sectors: high technology, professional service, personal service, retail trade, agricultural processing, energy industries, manufacturing, and tourism.

Policy 2: Support expansion and improvement of business recruitment, retention and expansion programs to provide outreach and assistance to startup and existing businesses.

Policy 3: Encourage educational institutions and non-profits to train a skilled future workforce.

ED Goal 2: Make Richland a center of entrepreneurial business, and Research and Development opportunities.

Policy 1: Develop a detailed strategy to help grow technology businesses in the City of Richland.

Policy 2: Leverage scientific and technology research at PNNL and WSU-Tri-Cities for spin-off local businesses.

Policy 3: Enhance Richland's physical and business environment for technology-based companies.

Policy 4: Remove unnecessary barriers for start-ups and entrepreneurs.

ED Goal 3: Support businesses of all sizes.

Policy 1: Ensure that small and medium businesses receive similar advantages as large businesses in terms of assistance from the City and other agencies.

Policy 2: Streamline and administer regulations to ensure predictability, efficiency, and transparency.

ED Goal 4: Work closely with healthcare, education, and other regional institutional partners to strengthen collaboration.

Policy 1: Enhance the connection between sectors – medical, educational, research, and technology to encourage collaboration and skilled job placement.



Policy 2: Engage local and regional partners in discussions about land use, transportation, and facilities to complement business development.

Policy 3: Support growth and expansion of Kadlec Regional Medical Center and diverse medical companies, WSU-Tri-Cities, Columbia Basin College, and PNNL within the City.

ED Goal 5: Ensure that Richland's economic development goals are aligned with regional economic development and marketing efforts.

Policy 1: Coordinate with local, regional, and state economic development organizations in activities to attract new businesses and industries to the community.

Policy 2: Facilitate collaboration with Tri-City Development Council (TRIDEC) and the Tri-Cities Visitor and Convention Bureau to develop and implement seamless, collaborative, low-cost, and effective marketing efforts designed to recruit new businesses, expand existing businesses, and build a positive national image.

Policy 3: Accommodate the continued use of the Port of Benton barging facilities in north Richland, consistent with the City's Shoreline Master Program (SMP).

ED Goal 6: Encourage vibrant mixed-use areas to establish Richland as the premier Tri-Cities destination to live, work, and visit by offering options for housing, services, entertainment, and retail.

Policy 1: Stimulate the development of quality retail and entertainment venues through incentives and infrastructure investments.

Policy 2: Assist small business owners to enhance their skills and profit opportunities.

Policy 3: Work with public and private groups to expand the range of tourist attractions within the city.

Policy 4: Facilitate retail development and encourage infill in the Central Business District, Uptown, and nearby commercial areas.

Policy 5: Promote performing arts venues and activities through partnerships with regional economic development agencies.

Policy 6: Expand the range of options for housing in areas planned for higher density development.

Policy 7: Support development of higher density housing.

Policy 8: Attract young professionals by promoting their preferred types of job, housing, and entertainment options.

ED Goal 7: Recognize parks and natural areas for the value they offer as major attractions.

Policy 1: Preserve open space areas and associated functions and values.

Policy 2: Work with public and private groups to support these areas.

Policy 3: Provide opportunities for active and passive recreation in parks and open spaces.

CHALLENGES AND OPPORTUNITIES

Richland includes major employers of the Tri-Cities area. The work performed at the Hanford site in tandem with the research at PNNL have driven economic development in the region and City for decades. This is currently the region's largest economic strength and a source of its greatest economic opportunity.

The region has shown strong growth in economic output over the past several decades leading to sustained employment growth. From a regional economic perspective, the agricultural sector is one of the most competitive in the region, which is not surprising given the region's agricultural advantages. The region has a strong industrial/manufacturing base that has sustained itself over time yet the largest portion of the economy is service-based (both professional/business and personal) that continues to drive economic growth in the recent decade. However, growth in most other sectors have mirrored the nation as a whole; fueling economic conversations that the region needs to find new growth in

sectors that can produce and sustain both comparative and competitive advantages.

The City of Richland contains a large concentration of the region's professional service sector. The City is home to the two of the largest non-governmental employers in the region, PNNL and Kadlec, that account for nearly 8,000 employees in the City. From a land use perspective, Richland has more than half of the region's commercial office space and industrial space, respectively; and is second only to Kennewick in the amount of retail space.

Additionally, Richland has strong demographics for future economic growth. Employees and households are on average better educated and better paid, with a larger



segment of the population in its prime working age. From this perspective, the City should be well positioned to capitalize its past performance and existing assets to extend its economic growth.

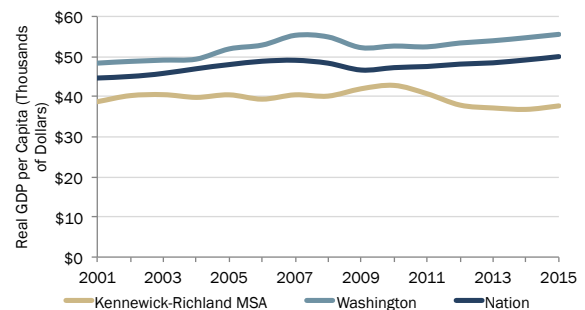
TRENDS AND FORECAST

The economy of the Tri-Cities region is primarily service-based. Goods-producing industries (such as manufacturing) make up for less than 25 percent of the total economic output. The Tri-Cities economy was less impacted by the recession in 2008, due to the

increase in employment at Hanford as part of the American Recovery and Reinvestment Act (ARRA) of 2009. The total output declined from \$10.3 billion in 2010 to \$8.6 billion in 2014 partly due to the end of ARRA and partly reflecting the national recession trends. However, most recent data has indicated that economic conditions have continued to improve over the past two years.

On a Gross Domestic Product (GDP) per capita basis, the Tri-Cities region is not as productive when compared to Washington State and to the nation. On this measure, the region has been slower to recover than the state as a whole. GDP per capita is the most common indicator of economic performance of regions. GDP per capita is calculated by measuring Gross Domestic Product in a year, and dividing it by the population. The reasons for the lower GDP per capita in the region are complex but are due to the large presence of government-supported activities.

Figure ED-1: GDP per Capita, 2001-2015



Source: Bureau of Economic Analysis, 2016

The Tri-Cities area is unique in that its employment base is dominated by a select number of large employers. Roughly one in five of an estimated 116,000 jobs in the Benton-Franklin area are from one of the 10 largest firms/agencies listed below. Eight of the 10 top employers in the Tri-Cities are located in Richland, a legacy largely due to significant federal investments in the Hanford Nuclear Reservation.

Table ED-1: Top Ten Tri-Cities Employers

	Company	Industry	Employees
1	Battelle/ Pacific Northwest National Laboratory	Research & Development	4,365
2	Kadlec Regional Medical Center	Health Services	3,304
3	Bechtel National	Engineering & Construction	2,898
4	ConAgra Foods	Food Processing	2,727
5	Kennewick School District	Education	2,130
6	Washington River Protection Solutions	Environmental Remediation Services	2,077
7	Pasco School District	Education	2,015
8	Mission Support Alliance, LLC	Support Services, Hanford/Dept. of Energy Site	1,928
9	Richland School District	Education	1,500
10	CH2M Hill	Environmental Remediation Services	1,400

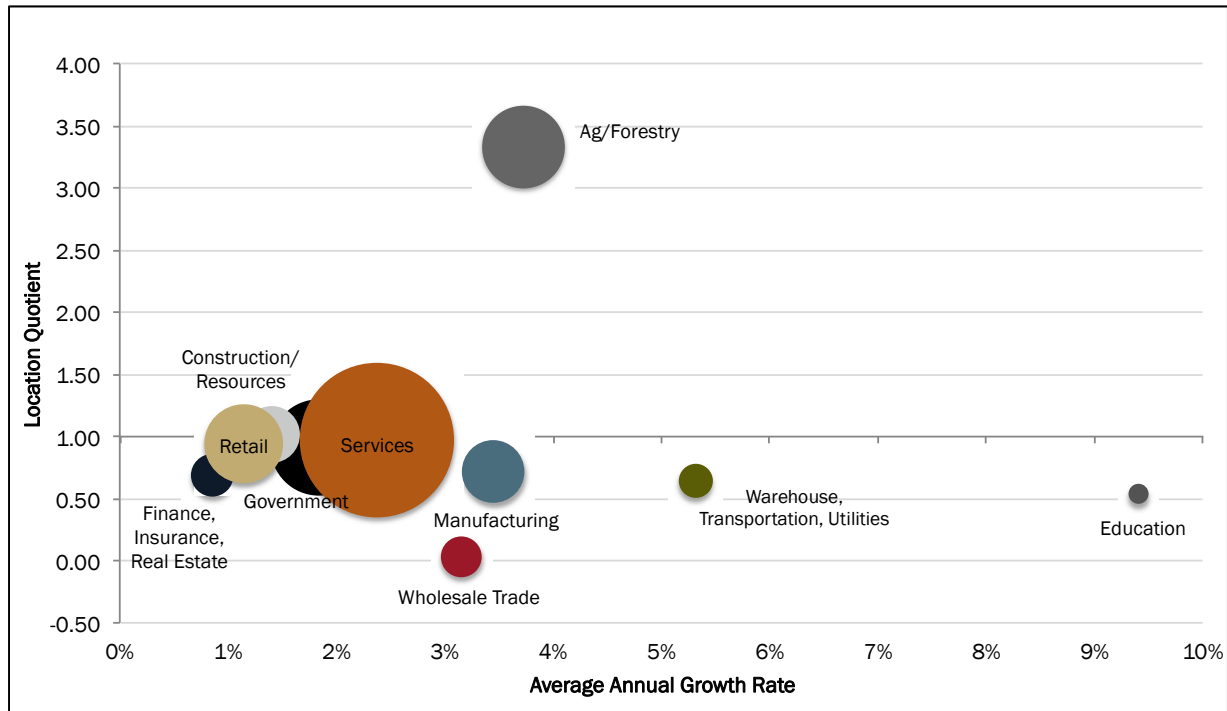
Source: Tri-City Development Council (TRIDEC), [link](#).
 Accessed February 14, 2017

The chart below shows the local concentration of jobs by sector (location quotient) along with measures of industry size and average annual employment change in the Tri-Cities region. Location quotients measure the concentration of jobs in a sector compared to the statewide average. A value of

1.0 signifies that the sector possesses the same level of employment concentration as the state. Values above 1.0 are more concentrated than the state average. The size of the bubble represents the number of jobs within that sector. Sectors with sizable employment and higher than average concentration represent strengths for the region. Fast growing sectors, even if they are not very large, represent potential opportunity areas.

In the Tri-Cities region, the largest sectors—services and government—have a similar concentration as the state, and are growing at a rate of one to three percent a year, indicating they are the base of the regional economy. The agriculture sector is a strength in the Tri-Cities; it is much more concentrated relative to the state and is growing at a rate of 3.7 percent per year. Education, manufacturing, wholesale trade, warehousing, transportation, and utilities are also growing at a rate of more than three percent a year, but are smaller and less prevalent in the Tri-Cities compared to the state. Much of the growth in food manufacturing, wholesale trade, warehousing, transportation, and utilities may be related to the growth and prevalence of the agriculture sector in the Tri-Cities.

Figure ED-2: Benton & Franklin Counties Employment Concentration and Change by Sector, 2006-2015

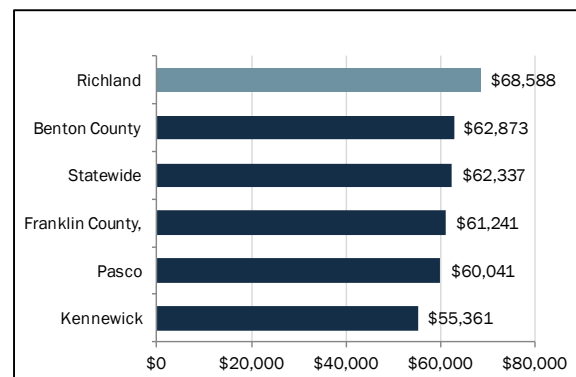


Source: Washington State Employment Security Department

Federal funding for Hanford has been a significant economic catalyst for the Tri-Cities Region generally with Richland at the forefront. Even with significant downsizing at Hanford in the 1990s, household incomes in Franklin and Benton Counties continued to grow steadily.

Today, household incomes for Richland residents are nearly ten percent higher than the County average and more than twenty percent higher when compared to those of Kennewick residents. Richland enjoys economic prosperity not just compared to their Tri-Cities neighbors, but compared to state averages as well, as illustrated in Figure ED-3. Higher incomes are the result of technical and professional positions that require higher levels of education.

Figure ED-3: Median Household Income



Source: US Census Bureau, American Community Survey, 2015 5-year, Table B19013A

Relative to Kennewick and Pasco, Richland is home to a highly educated workforce. The demands for engineers and scientists generated by Hanford and its subsidiary research and development activities have been a central employment and demographic characteristic for the Tri-Cities Region, in particular for Richland.

KEY OPPORTUNITIES

Area 1. Create a resilient economy

The single greatest threat to the Richland and Tri-Cities economy is the winding down of business and employment and the Hanford Nuclear Reservation without suitable economic opportunities in place that would provide for a comparable standard of living. A reduction in work at Hanford will mean less direct employment in Richland and large negative impacts on the businesses that support them directly as well as the resulting households whose wages they support. However, Hanford is also an asset to the community and has been effective at attracting a highly educated workforce in science and technology. These fields produce professional-wage jobs and have produced spinoff businesses coming from PNNL.

To ensure the stability and resiliency of the economy, the City should leverage existing assets but adapt them to a changing economy. These efforts should focus on increasing primary sector, non-Hanford science and tech employment by creating a business environment that encourages and welcomes local business. Additionally, the City should develop partnerships with TRIDEC, PNNL, Kadlec, and other major employers to plan for expansion and delivery of adequate infrastructure and services.

Area 2. Build and attract a more entrepreneurial and dynamic economy

Richland is the regional hub for highly educated science and technology professionals. Labor force participation is high, particularly for the most productive segment of the population – 30 to 54 year olds. With access to innovation partners and relatively low land costs when compared to bigger cities like Seattle, the climate for entrepreneurial startup companies is present. However, attracting innovation and investment is a goal of many municipalities.

The City can advance this environment through infrastructure investment, streamlined regulation, and “second paycheck” benefits such as livability and access to recreation. Working with its regional education and economic development partners, the City can play its role by creating and supporting a rich “entrepreneurial ecosystem” in the area.

Area 3. Leverage the natural landscape as an asset for economic development

Richland’s location along the Columbia River offers exceptional opportunities to easily access attractive natural recreational spaces, as well as close proximity to the region’s vibrant agri-tourism and wine industries. In addition to this, professional service employees living in Richland enjoy lifestyle amenities, also called the “second paycheck.” These include access to parks, walkable business districts, good schools, diverse housing options, quality restaurants, and arts and cultural activities. Richland’s ability to leverage its natural environment to directly spur economic activities and provide an attractive setting for professionals will further enhance its competitive advantage. However, residents must be cognizant of maintaining a healthy balance between environmental preservation and economic development activities.

Area 4. Closely monitor zoning and land use in the city

The City has the dual challenge of planning for urban infill development as well as planning to accommodate development on many large and relatively undeveloped sites within the City. To ensure zoning is responsive to market conditions, it should be monitored periodically to evaluate potential hindrances. Working to concentrate development in areas with existing infrastructure and near job centers will be instrumental to optimize the City’s funding.

LAND USE ELEMENT



In this chapter, you will find:

- Goals and policies guiding land use in Richland
- Existing land uses and future projections
 - Overall capacity
- Land use alternatives prepared for selected areas
- Sub-elements:
 - Sensitive areas
 - Mineral resources
 - Open space
 - Historic and cultural resources
 - Urban design

INTRODUCTION

The Land Use Element guides and accommodates future growth of the City while maintaining the community's high quality of life and unique characteristics. It determines the community's need for and distribution of residential, business, governmental, recreational, open space, and other types of land uses. The accompanying land use map (Fig. LU-1) identifies land use categories within the City limits and the UGA. A key component of the GMA and the Comprehensive Plan is to allow growth within the urban growth area.

Richland implements its various land uses through zoning designations as shown in Table LU-1 below.

The City must assess its financial ability to provide services at its urban density level and provide an appropriate supply of land uses for new developments. The desired result is to provide a greater market choice in lands for development while allowing for the maximum accountability for public funds

needed to provide for existing and planned urban areas. The City's Capital Improvement Plan is a six-year plan that reassesses priority areas for funding should the funding falls short of meeting the existing needs. To that effect, the City also adjusts its long term land use goals to align them with the funding availability.

Table LU-1: Land Use Implementation by Zoning

Land Use Designation	Zoning Categories
Residential	
Low Density Residential	R-1-12, R-1-10, SAG
Medium Density Residential	R-2, R-2S
High Density Residential	R-3, C-LB
Badger Mountain South	Badger Mountain Master Plan
Commercial	
Business Commerce	B-C
Central Business District	CBD
Commercial	C-1, C-2, C-3, C-LB, CW
General Commercial	C-3
Regional Retail	C-2
Waterfront	WF
Public Lands/Open Space	
Developed Open Space	PPF
Natural Open Space	NOS
Public Facility	PPF
Commercial Recreation	CR
Industrial	
Business Research Park	B-RP
Industrial	I-M, M-2
Mixed Use Designations	
Agricultural	FP, AG
Residential Office	C-LB
Urban Reserve	AG

GOALS AND POLICIES

LU Goal 1: Plan for growth within the urban growth area and promote compatible land use.

Policy 1: Revitalize areas that are already within the City, especially areas within the Central Business District, such as the Parkway and Uptown, and the Island View areas.

Policy 2: Facilitate planned growth and infill developments within the City.

LU Goal 2: Establish land uses that are sustainable and create a livable and vibrant community.

Policy 1: Maintain a variety of land use designations to accommodate appropriate residential, commercial, industrial, healthcare, educational, and recreational uses that will take advantage of the existing infrastructure network.

Policy 2: Ensure that adequate public services are provided in a reasonable time frame for new developments.

Policy 3: Ensure that the intent of the land use and districts are maintained.

LU Goal 3: Maintain a broad range of residential land use designations to accommodate a variety of lifestyles and housing opportunities.

Policy 1: Distribute residential uses and densities throughout the urban growth area consistent with the City's vision.

Policy 2: Encourage higher residential densities especially in and near the Central Business District area.

Policy 3: Innovative and non-traditional residential developments can occur through the use of planned unit developments, density bonuses, new types of housing, and multi-use or mixed-use developments.

LU Goal 4: Promote commercial and industrial growth that supports the City's economic development goals.

Policy 1: Accommodate a variety of commercial land uses including retail and wholesale sales and services, and research and professional services.

Policy 2: Promote developments such as business and research parks, office parks, technology centers, manufacturing and processing facilities, and other types for high-tech uses.

Policy 3: Locate neighborhood-oriented commercial land uses in Neighborhood Retail Business areas.

Policy 4: Encourage the use of buffers or transition zones between non-compatible land uses.

Policy 5: In areas where residential uses are in close proximity to industrial or commercial lands, adequate development standards should be used in industrial or commercial developments to mitigate the impacts on residential uses.

Policy 6: Support industrial developments on lands previously owned by the Department of Energy and transferred to the City and the Port of Benton.

LU Goal 5: Ensure connectivity that enhances community access and promotes physical, social, and overall well-being so residents can live healthier and more active lives.

Policy 1: Locate commercial uses so that they conveniently serve the needs of residential neighborhoods, workplaces, and are easily accessible via non-motorized modes of transport.

Policy 2: Promote pedestrian and bicycle circulation throughout the community by connecting with the infrastructure and the City's network of parks and trail system.

Central Business District

LU Goal 6: Develop an attractive and vibrant Central Business District that displays the unique character of Richland.

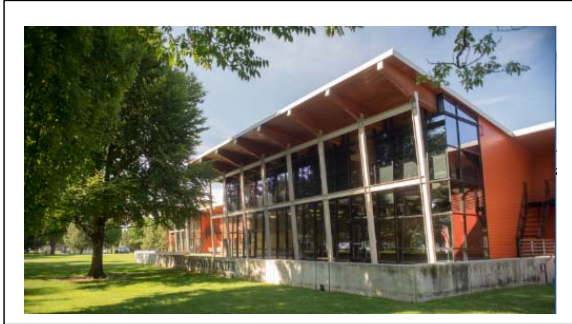


Policy 1: Revitalize declining commercial areas by promoting clean, safe, and pedestrian-friendly environments.

Policy 2: Designate land use and zoning for higher-density residential uses, mixed-use, and business uses within and adjacent to the Central Business District.

Policy 3: Encourage infill development and redevelopment in the Central Business District.

Public Facilities



LU Goal 7: Encourage efficient use and location of public facilities such as transit centers, utility facilities, schools, parks, and other public uses.

- Policy 1: Locate municipal facilities within their service areas and ensure the grouping of facilities within neighborhoods, whenever feasible.
- Policy 2: Ensure that the scale, and location of public facilities are compatible with or buffered from existing and planned surrounding areas.
- Policy 3: Wherever possible, the City will locate park and school facilities together for efficient use of public facilities.
- Policy 4: Encourage the development of private and public regional sports and recreational facilities of a size and quality to attract significant numbers of users and spectators.

Land Use in Specific Areas

LU Goal 8: Address unique land use situations in the urban area with policies specific to those situations that ensure compatibility between land uses without infringing on private property rights.

- Policy 1: Ensure that lands designated Urban Reserve remain in this holding category to serve future demand for land.

- Policy 2: Apply the Agricultural designation in the Yakima River floodplain.
- Policy 3: At designated Waterfront land use locations, encourage an active mix of commercial, residential, and marine uses as allowed in the SMP.
- Policy 4: Identify and encourage the preservation of lands, sites, and structures that have historical or archaeological significance.
- Policy 5: Define and identify mineral resource lands located within its boundaries that are not already compromised by on-site, immediate, or adjacent urban growth and that have long-term significance for the extraction of minerals on a commercially-viable basis.
- Policy 6: Property and/or mineral rights owners should work with the City and appropriate agencies for protection of these sites. Designate mineral resource lands located in the City of Richland that meet the Criteria for Classification of Mineral Resources (WAC 365-190-070).
- Policy 7: Ensure that land uses surrounding the Richland Airport are compatible with existing and future airport operations and do not restrict the airport's ability to maintain or expand its existing and future aviation demands. Restrict land uses in airport areas that would create conflict or negatively impact the safe and effective airport operations.

LU Goal 9: Within Island View, the City will implement a Single Family Overlay land use designation for clusters of property that are currently used as single family residences which have high probability of being redeveloped with non-residential land uses.

Policy 1: The city will use the Single Family Overlay concept only in those instances where the majority of property owners have expressed a preference for its use.

Policy 2: Areas designated as Single Family Overlay will be zoned for single-family residential uses, as identified in the city's R-2 Medium Density Residential zoning district.

Policy 3: Areas designated as Single Family Overlay will remain as such until property owner(s) bring forward a request to remove the overlay and change the zoning to the designation contained in the Island View Subarea Plan. In such cases, an amendment to the comprehensive plan is not necessary.

Policy 4: Applicants bringing forward a request to change the zoning of property designated Single Family Overlay should demonstrate that the land proposed for amendment is:

a) large enough to support redevelopment for non-single family residential land uses; and

b) will have sufficient access to City streets and utility systems to support redevelopment.

Policy 5: Whenever properties designated with the Single Family Overlay are rezoned for non-single family residential uses in accordance with Policy 4 above, the Single Family

Overlay designation should be removed from the subject property.

Private Property Rights

LU Goal 10: Follow controlling law and constitutional requirements, both state and federal, to ensure the appropriate protection of private property rights.

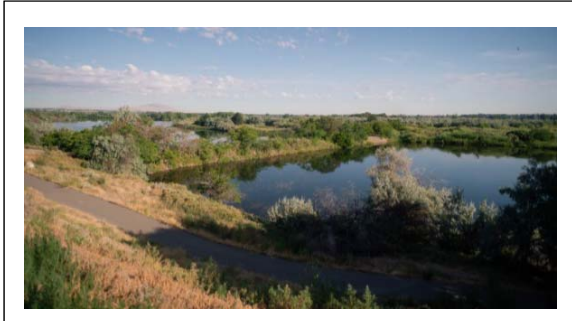
Policy 1: Monitor evolving state and federal statutory amendments and judicial precedent so that timely amendments or changes can be made in the process of implementing the comprehensive plan policies and development regulations.

Policy 2: Process comprehensive plan amendments and development regulations using a fair and open hearing process, with adequate public notice and opportunities to participate to ensure the protection of all due process rights.

Policy 3: Process timely, fair, and predictable processing and review of land use permit applications in conformance with applicable federal and state legal and regulatory requirements.

Natural Environment

NE Goal 1: Encourage the protection, conservation, and restoration of natural areas, shorelines, and critical areas as unique assets to the community, and provide public access for enjoyment of such facilities based on the ability of the resource to support the use without degradation.



Policy 1: Use the critical areas ordinance, SMP, the state environmental policy act (SEPA), and other ordinances, as applicable, to designate and protect the critical areas and natural environment.

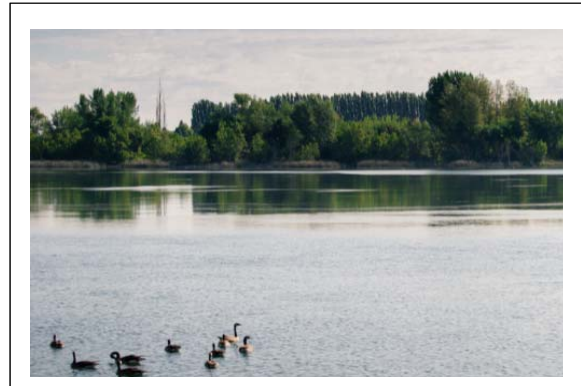


Policy 2: Consider the goals and policies of the SMP as part of this Comprehensive Plan. Encourage development of water-oriented recreational, cultural, and commercial facilities in certain Columbia River locations, consistent with the SMP and its criteria of no net loss of ecological functions, to enhance and diversify Richland's

community recreational resources and its attractiveness to tourists.

Policy 3: Ensure public access to shorelines on public land, subject to regulations protecting public safety, sensitive habitat areas, and wildlife.

Policy 4: Manage the City's shorelines as identified in the SMP.



Policy 5: Encourage the public and/or private acquisition of the prominent ridges in the south Richland area to preserve views, protect shrub-steppe habitat, and to provide public access. Consider the preservation of the ridges and hillside areas through various standards.

Policy 6: Develop an integrated pedestrian trail system to provide access through the City's important natural features, such as prominent ridges and rivershore areas and provide necessary trail linkages between these natural features.

Historic and Cultural Resources

HP Goal 1: Preserve significant historic structures, districts, and cultural resources that are unique to Richland.

Policy 1: Encourage preservation and promotion of adaptive reuse of

historic “Alphabet Homes” of Richland.

Policy 2: Coordinate with local tribes to protect historic and cultural resources.



Urban Design

UD Goal 1: Create a physically attractive and culturally vibrant, pedestrian-friendly environment in the City.

Policy 1: Establish and enhance the positive attributes of residential, commercial, central business, and other districts with appropriate transition between them.

Policy 2: Encourage redevelopment and upgrade of suitable commercial areas.



Policy 3: Improve streetscape and connectivity for safe and pedestrian-friendly environments.

Policy 4: Promote public arts, museums, and interpretive centers in coordination with public plazas and community

spaces that reflect the unique history and culture of Richland.

UD Goal 2: Revitalize commercial areas, such as areas in the Central Business District including the Uptown retail area and the Island View area.

Policy 1: Enhance the appearance, image, and design character of the Central Business District.

Policy 2: Ensure adequate parking, landscaping, and public transit, bicycle, and pedestrian access in the commercial centers.

Policy 3: Enhance the welcoming experience into the community through well-designed gateway features in prominent locations.

Policy 4: Design the public realm, including streetscapes, parks, plazas, and civic amenities for the community to gather and interact.

Policy 5: Provide continuity among adjacent uses by using cohesive landscaping, decorative paving, street furniture, public art, and integrated infrastructure elements.

UD Goal 3: Development through appropriate design, should protect natural features such as rivers, shorelines, ridgelines, steep slopes, and archaeological and historical resources.

Policy 1: Development should be sensitive to existing topography and landscape.

Policy 2: Hillside development should, as much as practical, blend with the natural shape and texture of the land.

Policy 3: Lighting should be designed so as to promote public safety as well as promote "Dark Sky" principals.

UD Goal 4: Promote community beautification by enhancing public spaces and thoroughfares and encouraging private property beautification.



- Policy 1: Improve the appearance of all city-owned space and major thoroughfares.
- Policy 2: Promote programs to improve landscaping. Encourage xeriscaping and use of native plants.
- Policy 3: Promote more attractive signage throughout the City, especially in commercial districts.

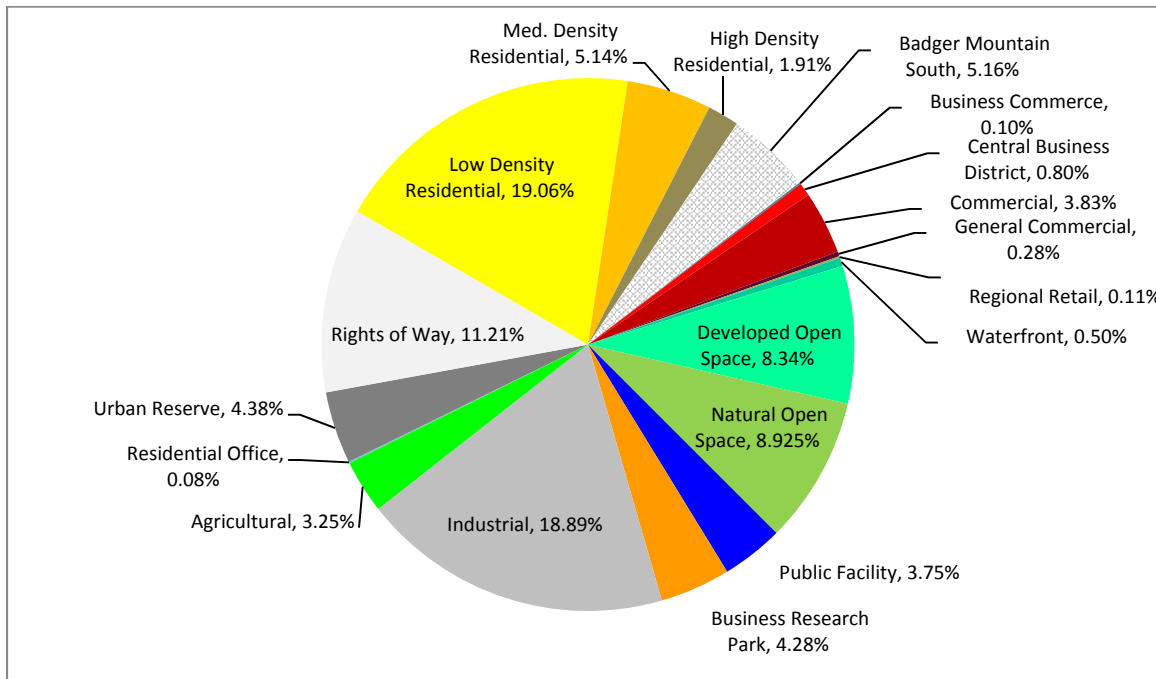
EXISTING LAND USE

Richland includes a variety of land uses as follows:

- Agriculture (AG)
- Low Density Residential (LDR)
- Medium Density Residential (MDR)
- High Density Residential (HDR)
- Badger Mountain South (BMS)
- Multifamily Residential Office (RO)
- Central Business District (CBD)
- Commercial (C)
- Retail Business (RB)
- General Commercial (GC)
- Business Commerce (BC)
- Single Family Overlay (SFO)
- Commercial Recreation (CR)
- Waterfront (WF)
- Industrial (I)
- Business/Research Park (BRP)
- Public Facility (PF)
- Developed Open Space (DOS)
- Natural Open Space (NOS)
- Urban Reserve (UR)

Richland's land area consists of a total of 27,743 acres (24,895 acres in the City limits and 2,848 acres in the UGA). Richland's land use is dominated by residential land use consisting of over 31 percent of the total land use (low, medium, and high density land use combined), followed by 23 percent industrial and 17 percent open space land use. Single-family residential use in LDR and MDR land uses are predominant in Richland neighborhoods (to be updated to add DOE transfer land).

Figure LU-1: Existing Land Use Distribution in City Limits and UGA (to be updated)



Land Use Pattern and Compatibility

Due to the linear geographic pattern of the City along the Columbia River running north and south, Richland's land is also distributed primarily from north to south covering approximately 25,000 acres in the current incorporated limits and additional over 2,800 acres in the UGA. Residential lands are concentrated in three major areas, the central area between the Columbia River and SR 240, areas south of the Yakima River, and the Horn Rapids area. The Yakima River delta and associated natural open space land run almost through the middle of the City. Although commercial lands are distributed throughout the City, the major concentrations are found in the Central Business District, Queensgate, and the Island View areas. Much of the industrial and research uses are located on the northern part of the City starting from

Richland Airport on the south side to the north City limits.

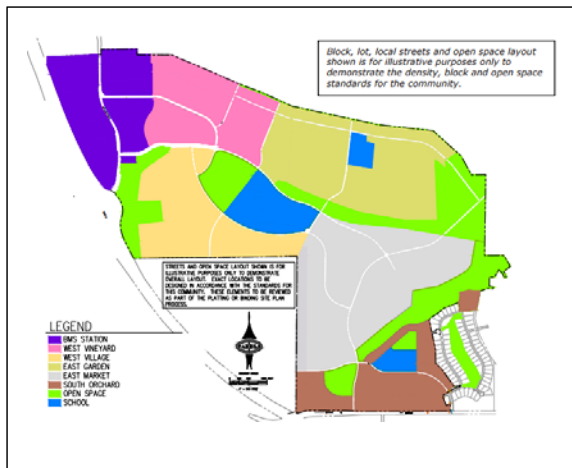
Richland's land use distribution focuses on placing compatible land uses next to each other. Compatibility is based on the intensity of land uses. Generally speaking, industrial is the most intense use due to the impacts of its operations (noise, light, dust, etc.), need of supporting facilities, and overall impact on the land. Natural areas are considered the least intense as there are no developments or improvements on such areas. Therefore, a low density residential next to a heavy industrial land use would be considered incompatible because of the impacts industrial use may have on the residences. Appropriately designed buffers, landscaping, and transition areas between uses should be considered between incompatible land uses.



Mixed uses are encouraged in Richland where they are allowed. Such uses are generally mutually supportive of each other. Locating residences, offices, neighborhood shops, cafes, etc. in the same building or same site promotes walkability and reduces the vehicle miles traveled.

Badger Mountain South

Badger Mountain South is a master-planned community of 1,480 acres located in the southwest side of the City. The area is intended to be developed with 5,000 homes, businesses, and other community activities. The sub-area plan sets forth various uses in the area and was adopted by Richland City Council in 2010.

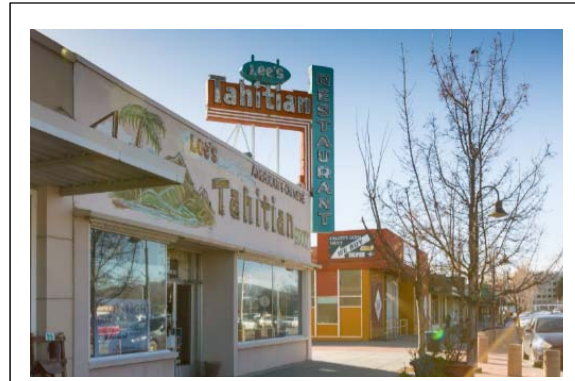


The purpose of this area is to establish neighborhoods with a range of housing types and to accommodate a population of diverse ages and incomes. The plan promotes pedestrian-friendly and mixed-use neighborhoods with areas for parks, trails, and open space in a connected network.

Central Business District

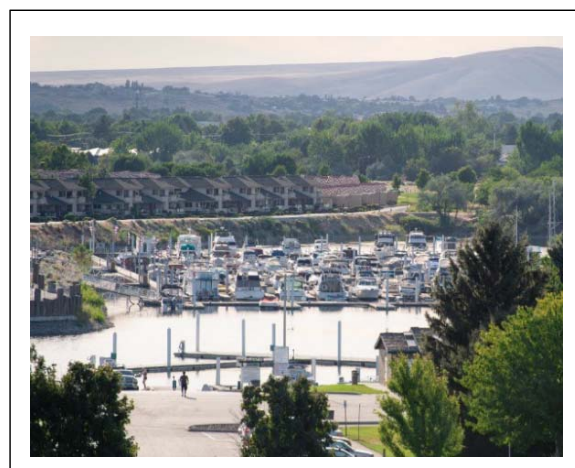
Richland CBD is planned to encourage the transformation of the area from principally a strip commercial auto-oriented neighborhood to a more compact development pattern. The area is characterized by its close proximity to the Columbia River and Howard Amon Park,

concentration of pedestrian-oriented businesses, and the presence of medical, educational, and public institutions. Multiple planning studies and efforts have been conducted in the past decades, many of which have been or are being implemented in this area including public investments on infrastructure and streetscape improvements, and code revisions to attract private investment.



The Parkway has been a center of pedestrian-oriented retail and restaurants. Kadlec Regional Medical Center's campus and Columbia Basin College's Health Science Center both are located in the CBD. The Swift Corridor improvement will connect the CBD with the waterfront parks and recreation areas.

Columbia Point



The Columbia Point area is located between I-82 to the south and George Washington Way to the west. The area is developed with a mix of shops, hotels, restaurants, offices, condominiums, and recreational amenities. Recreational amenities include a golf course, park, marina, and waterfront trail. The area is close to buildout.

Horn Rapids

The Horn Rapids area is located on the north side of the City. This constitutes two planning areas: a) the Horn Rapids Industrial Park area, a triangular area bounded by Horn Rapids Road to the north and SR 240 to the south; and b) the 1,341 acres Horn Rapids Industrial Area north of Horn Rapids Road.

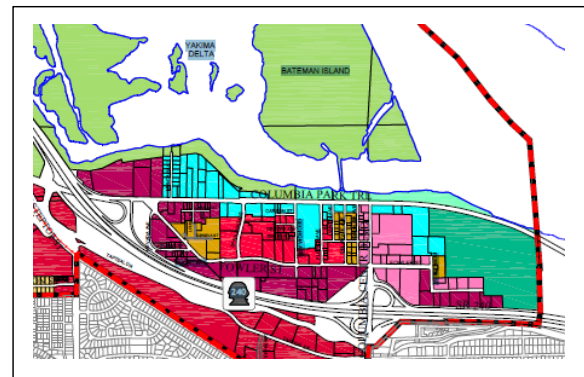
A master plan for Horn Rapids Industrial Park was originally adopted in 1995 and updated in 2011 and 2016. This area has been envisioned as an employment and economic center in the region. The master plan identifies the necessary infrastructure



required to serve the area and associated cost for infrastructure improvements. The Horn Rapids planned residential community is located south of this area.

The 1,341-acre industrial area has recently been transferred from the Department of Energy to the City, the Port of Benton, and Energy Northwest by an act of Congress. This 1,341-acre Horn Rapids Industrial Area is specifically set aside for industrial development. The City and the Port plan to market the property to industrial developers as “mega-sites” of 200 acres or larger. The proximity of this land to highways, rail, and utility services together with the large acreages available provide development opportunities for industries that exist in very few places throughout the Pacific Northwest.

Island View



The Island View area, also known as Richland Wye, is located on the southeast side of the City between the Columbia River to the north and SR 240 to the south. It is north of the regional Columbia Center Mall in Kennewick. Columbia Park West is located to the east and Bateman Island to the north of the area.

The Richland Wye Master Plan was prepared in 1998 to revitalize the area and provide a general guideline for the planning and future development of the area. The objective of the master plan includes stimulating mixed use development, providing flexibility in the changing market condition, and ensuring high quality developments with increased opportunities for waterfront recreation. Implementation strategies were developed to address infrastructure, land use, and economic development issues. The area

consists of a mix of General Commercial and Regional Retail on the south side, Business Commerce and Multi-family Residential Office in the middle, with Waterfront land use designation on the north side fronting the Columbia River. The entire length of the Columbia River waterfront has public access. The area is now being revitalized with uses such as, residential, commercial, business park, marina, etc.

POPULATION TRENDS AND PROJECTIONS

The Tri-Cities Metro area is one of the fastest growing areas in Washington. The City has grown rapidly in the last decade with a 24 percent growth from 2000 to 2010, and an 11 percent growth from 2010 to 2016.

Based on the 2016 estimate of the Office of Financial Management (OFM), the City of Richland's current population is 53,410. The population including the UGA boundary is 54,732.

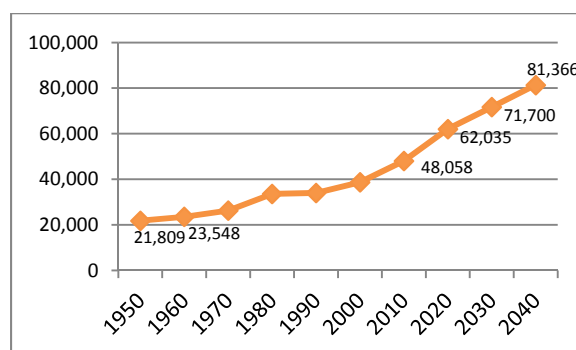
Benton County's county-wide allocation and projected population numbers for Richland are 76,533 for the year 2035 and 81,366 for the year 2040. The end of the 20-year planning horizon is 2037. Based on current trends, Richland's projected population in the year 2037 will be 78,431 persons. This means over the next 20 years, the City and its UGA will add 23,699 (78,431-54,732) persons in addition to its existing population. Identifying land for growth and delivering public services will be important to maintaining the high quality of life for its residents.

Figure LU-2: Population and Employment Projections for 2037

Year	Population	Jobs
2016	53,410	32,230
2037 Projection	78,431	41,192

Source: Benton-Franklin Council of Governments, 2011-13 Regional Transportation Plan for employment estimates.

Figure LU-3: Projected Population Growth



Future Land Capacity

In order to identify land necessary to meet the future demand, an analysis of available land was performed. Details of the analysis are available in the Comprehensive Plan Supporting Analysis (Appendix A). This analysis used the City's existing land use density and land inventory in order to identify vacant and undeveloped land within the City and UGA. The results of this analysis indicated that the City has sufficient land within its UGA to accommodate the land needs for the projected residential and commercial growth. In 2016, the City and the Port of Benton received land from the Department of Energy that is specifically targeted for future industrial use. This land, together with the vacant industrial land that is within the City, provides an adequate industrial land supply for future employment growth.

A significant portion of future residential growth will occur in the Badger Mountain South and Horn Rapids areas. Additional growth will take place in the existing vacant residential lands throughout the City. It is also anticipated that commercial and waterfront areas will accommodate some high-density and mixed-use growth.

Some lands designated as "Urban Reserve" in the land use plan will need to be re-designated for residential land uses to ensure

that an adequate land supply is provided to serve future growth.

Lands for Public Purposes

According to the GMA, the City is required to identify the needs for public facilities, including lands for public purposes. Current City-owned public facilities include parks and open spaces, transportation, water, sewer, storm water, solid waste, energy, and municipal facilities. Using the existing ratio of land per capita for public use, there is a surplus of 72 acres for public facilities land. The City's developed open space requirement for parks facilities is determined by the parks level of service. The existing parklands are adequate to meet the demand. However, areas with new residential land use discussed in the next section will require an additional community park. The natural open space is determined by the existence of critical and natural areas, and other priority areas within the City. As the City grows, natural open spaces will be identified based on the GMA criteria and best available Science (BAS). Existing data and findings from similar communities indicate Richland has adequate open space to meet the future demand. Additional information regarding the City parklands and open space can be found in the Capital Facilities Element under "Parks, Recreation and Open Space" in this Plan, and in the supporting analysis in Appendix A.

PROPOSED LAND USE

The City is planning to accommodate future growth in two areas within the City, on the north and west sides of the City. One area is located on the southwest side near the City View area, abutting Kennedy Road to the south and Queensgate Drive to the east. The other area is located on the north side of the City abutting the Horn Rapids residential development.

The land use in these areas is re-designated from Urban Reserve to a mix of Low, Medium, and High Density Residential, Commercial, Public Facility, Developed, and Natural Open Space as shown in Table LU-3.

Additional land use re-designation includes a portion of an area in Columbia Point South, re-designated from Natural Open Space and Public Facility to Commercial Recreation. In this area, about 33 acres of Public Facility land, and 72 acres of Developed Open Space land use will change to 89 acres of Commercial Recreation and 16 acres of Natural Open Space land use. See Figure LU-3, the Future Land Use Map.

Table LU-4: Proposed Land Use

Land Use	Acres
City View West and Horn Rapids Northwest	
Low Density Residential	385
Medium Density Residential	70
High Density Residential	31
Commercial	42
Public Facility	40
Developed Open Space	4
Natural Open Space	34
Total	606
Columbia Point South	
Natural Open Space	16
Commercial Recreation	89
Total	105

NATURAL ENVIRONMENT

Critical Areas

Richland's environmentally critical areas include wetlands, fish and wildlife habitat areas, frequently flooded areas, geologic hazard areas, and natural aquifer areas. Most of the critical areas are discussed under the open space subsection below. The critical areas map (Fig. LU-4) indicates wetlands, fish

and wildlife habitat areas and other critical areas such as landslide, erosion, or seismic hazard areas.

The City uses the best available science in developing policies and development regulations to protect the functions and values of critical areas and give special consideration to conservation or protection measures.

Shoreline

Richland's shoreline consists of approximately 2,600 acres of land on the Columbia and Yakima Rivers shoreline. A Shoreline Master Program (SMP) was developed and adopted by Richland City Council and approved by the Department of Ecology in 2014. This Comprehensive Plan incorporates the SMP by reference. The SMP aims to utilize Richland's shoreline for various water-oriented uses and facilities while protecting the ecological functions and cultural and historic values of the shoreline. The SMP designates eight shoreline environments for the Columbia and Yakima Rivers shoreline as follows:

1. Natural Environment
2. Recreation Conservancy Environment
3. Recreation Environment
4. Rural Environment
5. Residential Environment
6. Waterfront Use Environment
7. Industrial Conservancy
8. Aquatic Environment

Open Space

Open space in Richland and the UGA comprises over 17 percent of the total land. These areas include natural areas (Natural Open Space) and more formal developed parks and trails (Developed Open Space) in the land use map. Developed Open Space is

discussed under the Parks and Recreation Sub Element under Capital Facilities. This section discusses the natural open space.

The natural open space system includes the Yakima River and Columbia River shorelines, islands, greenways, and designated areas within residential developments. It also includes environmentally sensitive areas or critical areas where development would be constrained by wetlands, geologic hazards areas, aquifer recharge areas, fish and wildlife habitat areas, and frequently flooded areas along river or stream corridors.

The natural open spaces on the Yakima River include:

- The Tapteal Greenway, located on the lower Yakima River. It provides potential opportunities for non-motorized recreation, education, and habitat protection.
- The Chamna Natural Preserve, located on the north bank of the Yakima River. This area is owned by US Army Corps of Engineers (USACE).
- The Riverview Preserve is located at the confluence of the Yakima and Columbia Rivers and is owned and managed by the USACE.
- Bateman Island in the Yakima River Delta is also owned by the USACE and leased to the City.
- W.E. Johnson Park is located south of Van Giesen Street.

On the Columbia River, open spaces include:

- The Leslie Groves Park area located between Snyder Street and Ferry Street.
- Columbia Point South area; a largely undeveloped area located at the confluence of the Yakima River and the Columbia River.
- The islands on the river that are part of the McNary National Wildlife Refuge.

In 2004, the City worked with community groups and several funding agencies to help Benton County acquire a 575-acre preserve on Badger Mountain located just south of the City limits. The City also purchased properties from private owners along the west branch of Amon Basin in order to enlarge the City-owned open space areas.

Mineral Resources

Mineral resource lands are resource lands that are primarily devoted to the extraction of minerals or that have known or potential long-term commercial significance for the extraction of minerals. The GMA requires cities and counties to designate natural resource lands where appropriate and adopt development regulations to assure the conservation of agricultural, forest, and mineral resource lands. The City undertook a detailed analysis of its mineral resources in 1998 and determined that no lands within the Richland UGA should be designated as mineral resource lands.

BUILT ENVIRONMENT

Historic and Cultural Resources

Due to its settlement history, the City of Richland does not have an abundance of historical resources. Historic structures unique to the City include 12 tract farm houses in the central city and six buildings in downtown that predate World War II, and the Alphabet Homes, built between 1943 and 1951. The Alphabet Homes were based on a series of house plans denoted by a letter in the alphabet (an A house, an F house, etc.). In addition, several apartment buildings and pre-fabricated homes were part of this development scheme. These houses have historical significance in that they were built as part of the federal city created for the Hanford project. Historic structures that have

been formally recognized on the National Register of Historic Places include the “Gold Coast” District, a north Richland neighborhood comprised of Alphabet Homes that have largely retained their original character.

Cultural resources are typically discovered during excavation and site preparation for development proposals. While it is difficult to know where every cultural resource site exists, the Washington State Office of Archaeology and Historic Preservation has records of previous investigations in the region.

Goals and policies in the Comprehensive Plan provide a framework for reviewing and permitting future development proposals. Coordination with the State Office of Archaeology and Historic Preservation and implementation of policies relating to the preservation of cultural and historic resources will help to ensure that these resources are protected.

Urban Design

Urban design applies to the three dimensional aspects of the built environment such as buildings, streets, sidewalks, open spaces, and plazas. It also addresses other urban issues such as circulation and connectivity, sustainability, neighborhoods, and districts.

Design

The City aims to achieve quality design in citywide civic projects such as public buildings and plazas, streetscape and corridor development, public art, parks, and open spaces. High quality design in public projects will set the standards for the City and may encourage further quality developments by the private sector. Richland’s Public Library, Community Center, and the Reach Interpretive Center all display quality design. The City promotes quality design in the

commercial and residential developments through its development standards. The City is also planning to add gateway features in the downtown area that will enhance the identity of the community.

Pedestrian-Friendly Environment

It has been a priority of the community to create a vibrant and livable community in Richland. Goals and policies are geared towards creating a pedestrian-friendly community. Mix of uses, higher density, access to transit, safe sidewalks, streetscape elements, network of paths and trails, building orientation, and articulation are some of the considerations for creating a pedestrian-friendly community. Richland has prioritized its downtown area to be more pedestrian friendly. Swift Corridor development is already underway that will create a pedestrian-friendly connection between the downtown businesses and the residential neighborhoods. The Parkway area, CBD, and Kadlec campus are designed with pedestrian-friendly components.

Circulation and Connectivity

Connectivity between major destinations and neighborhoods within the City and the region is important to Richland. Richland's transportation system aims to provide a multi-modal circulation system for pedestrian, bike, car, and transit users. Richland has multi-use trails connecting its parks and natural areas, as well as some key locations within the City. The City works with public agencies and private developers to create an efficient circulation pattern within business and residential neighborhoods. The proposed Duportail Bridge, once built, will make a significant improvement in connecting the northern and southern parts of Richland.

Public Realm

Richland's public realm includes plazas, parks, playgrounds, sidewalks, and open spaces. Each public realm is different and serves a different purpose in their formal, semi-formal, or natural settings. They offer places for gathering, interaction, and recreation. Public places are further enhanced by artworks and pedestrian amenities. The John Dam Plaza is a heavily used public place for community gathering and events, while the Parkway area offers an urban setting for the community. Parks and natural areas offer recreation and tranquil environment for the residents.

District

The visual character of the Richland UGA varies widely from downtown, Uptown, and the Richland Wye/Island View area, to relatively new commercial areas such as Queensgate and City View, to master planned areas like Columbia Point and Horn Rapids to older alphabet housing neighborhoods in central Richland and to the new residential neighborhoods in Badger Mountain South. Each of these distinct areas calls for a different design approach. In older areas, the emphasis needs to be placed on revitalizing neighborhoods; in other areas, maintenance can be a priority. In newly developing areas, the emphasis needs to be placed on building design and site planning standards. The City recognizes that it needs to take a targeted approach with different urban design standards and strategies to reflect the differing needs of each area within the City.

Environment and Sustainability

Richland's built and natural environment is maintained through multiple design and environmental protection approaches. Its natural resources are protected under the Critical Area Regulations, the SMP, as well as State and Federal Laws. The City also

maintains energy efficiency, renewable energy, and recycling programs.

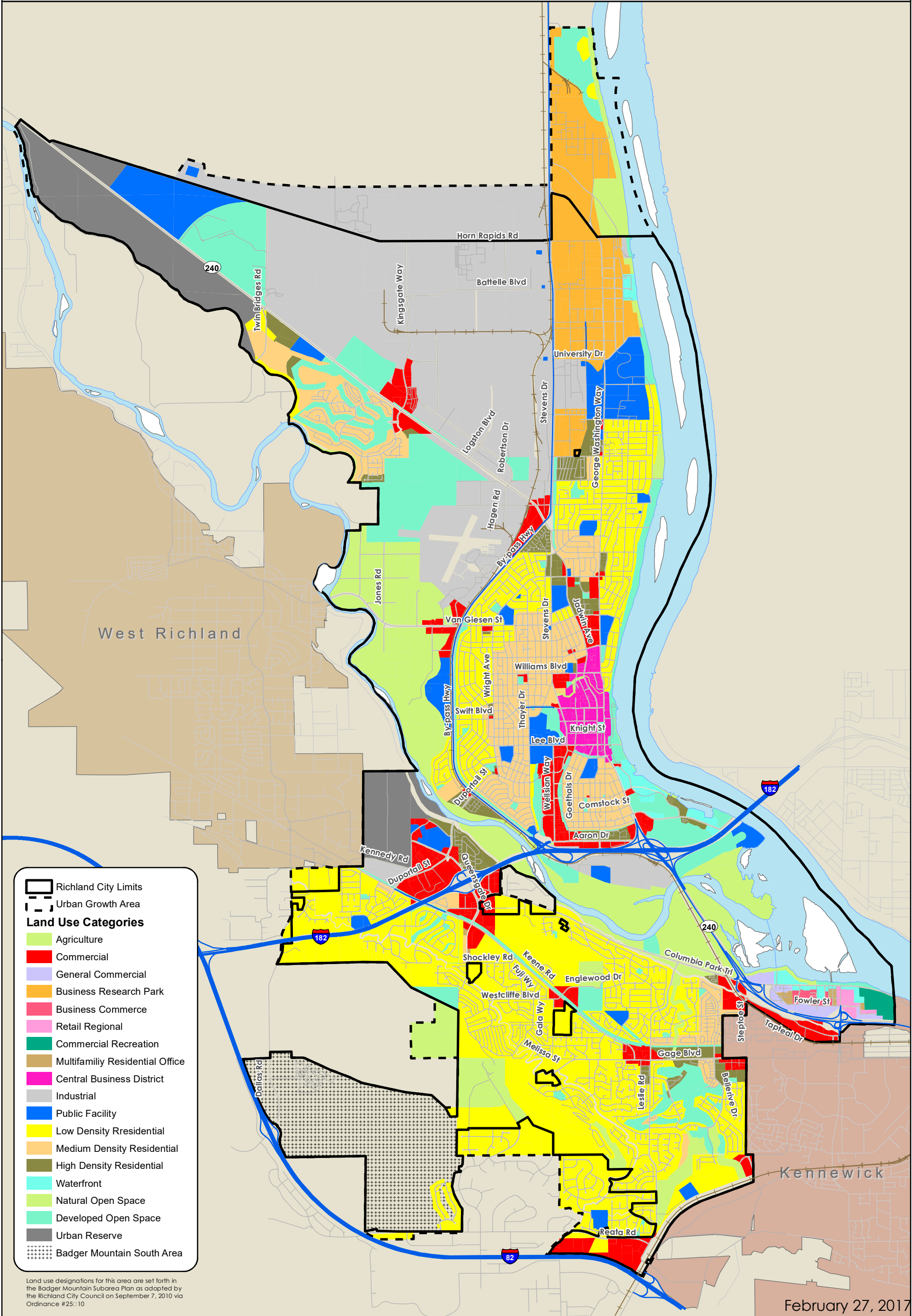
Landscaping

Landscaping is important for maintaining Richland's attractive physical appearance. Proper landscaping can highlight an area's features and add aesthetic value. Landscaping is applicable for both public and private developments. Given the hot-arid climate in the Tri-Cities area, native landscape and plants are more desirable. Using xeriscape principles can make a water-efficient landscape and signify the area's climate and geology. Selection of trees that offer shade on hot summer days is important for this area.



City of Richland

LU-3 - Future Land Use

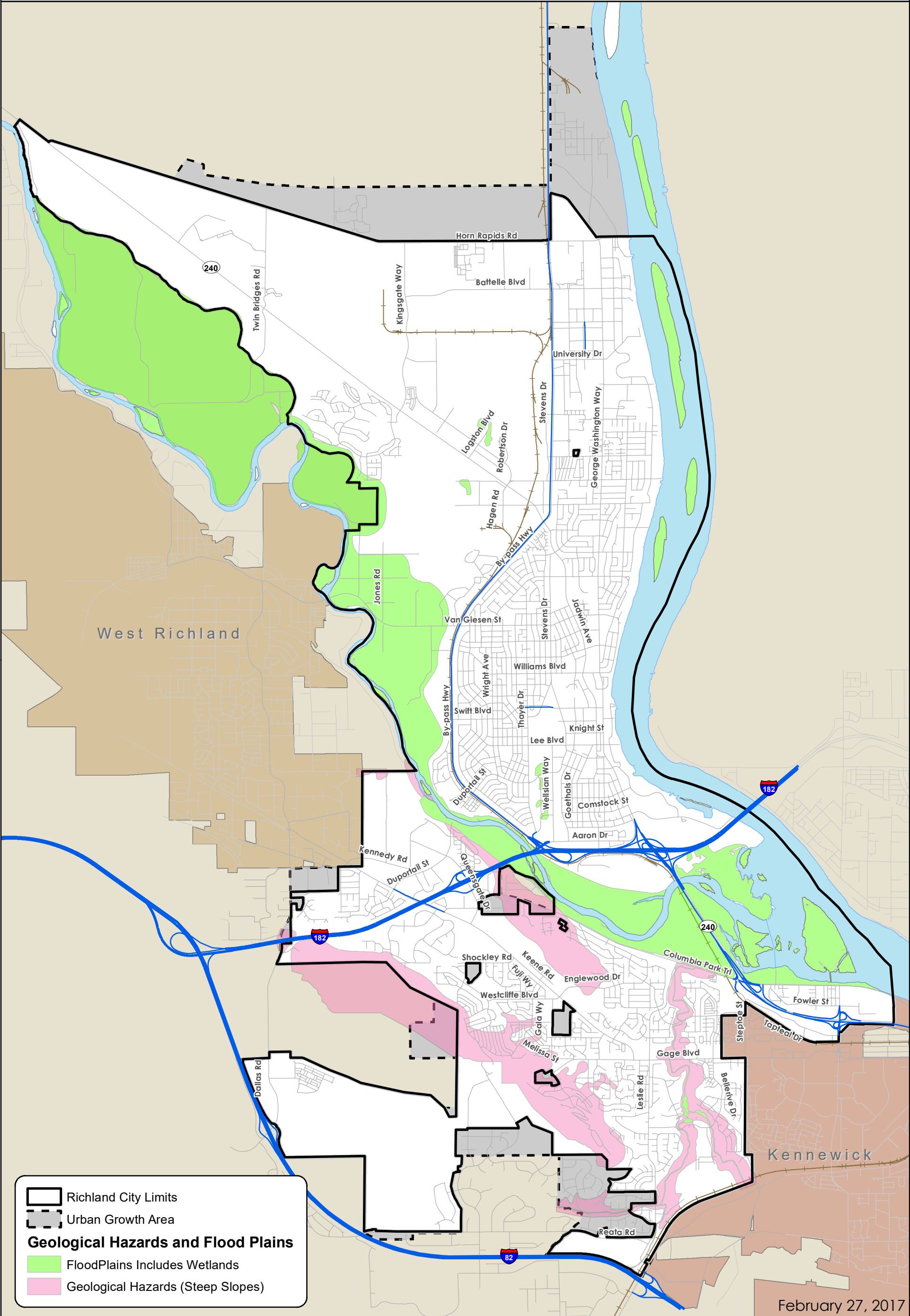


February 27, 2017



City of Richland

LU-4 - Sensitive Areas



Richland City Limits

Urban Growth Area

Geological Hazards and Flood Plains

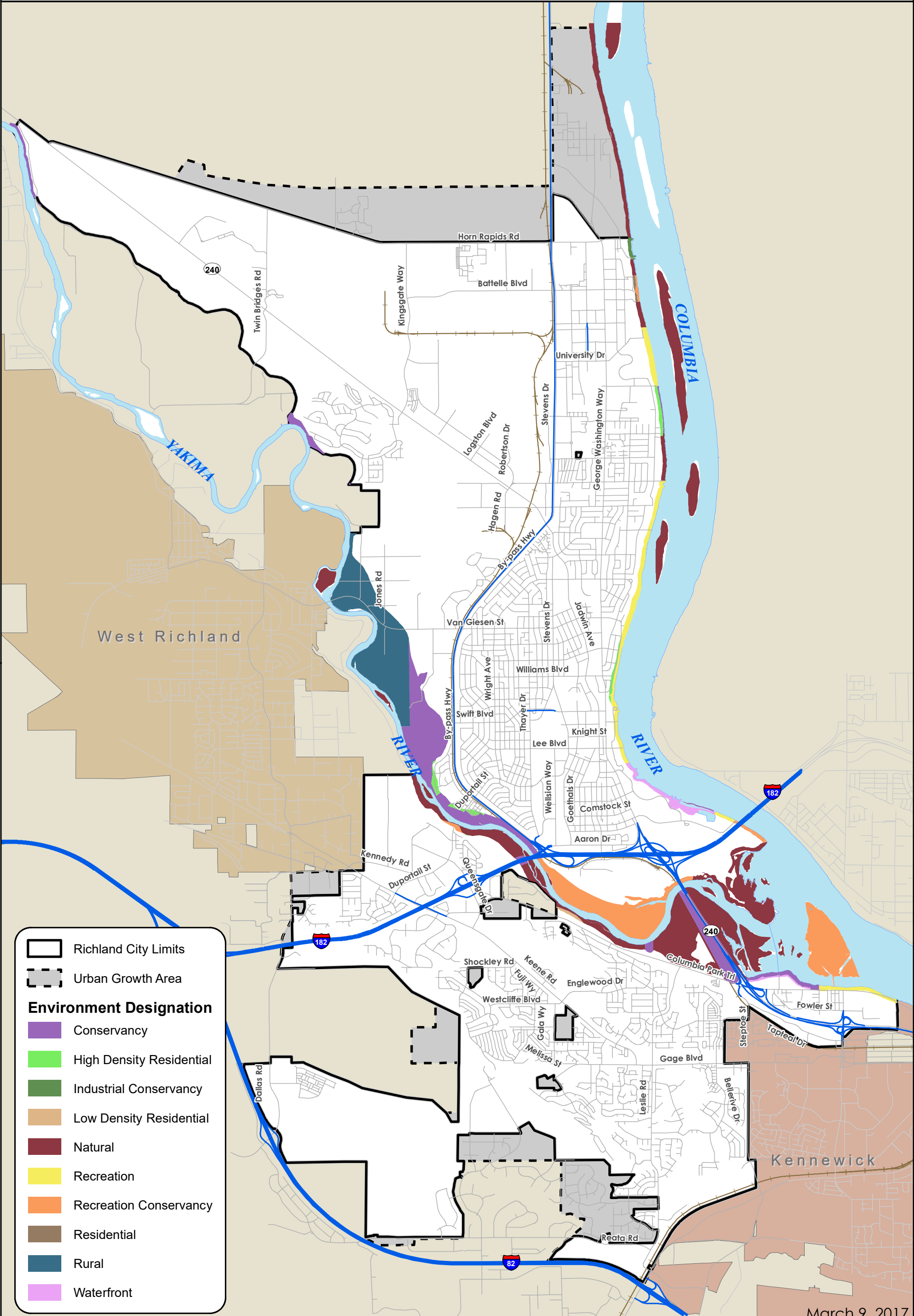
FloodPlains Includes Wetlands

Geological Hazards (Steep Slopes)



City of Richland

LU-5 - Shoreline



Richland City Limits

Urban Growth Area

Environment Designation

Conservancy

High Density Residential

Industrial Conservancy

Low Density Residential

Natural

Recreation

Recreation Conservancy

Residential

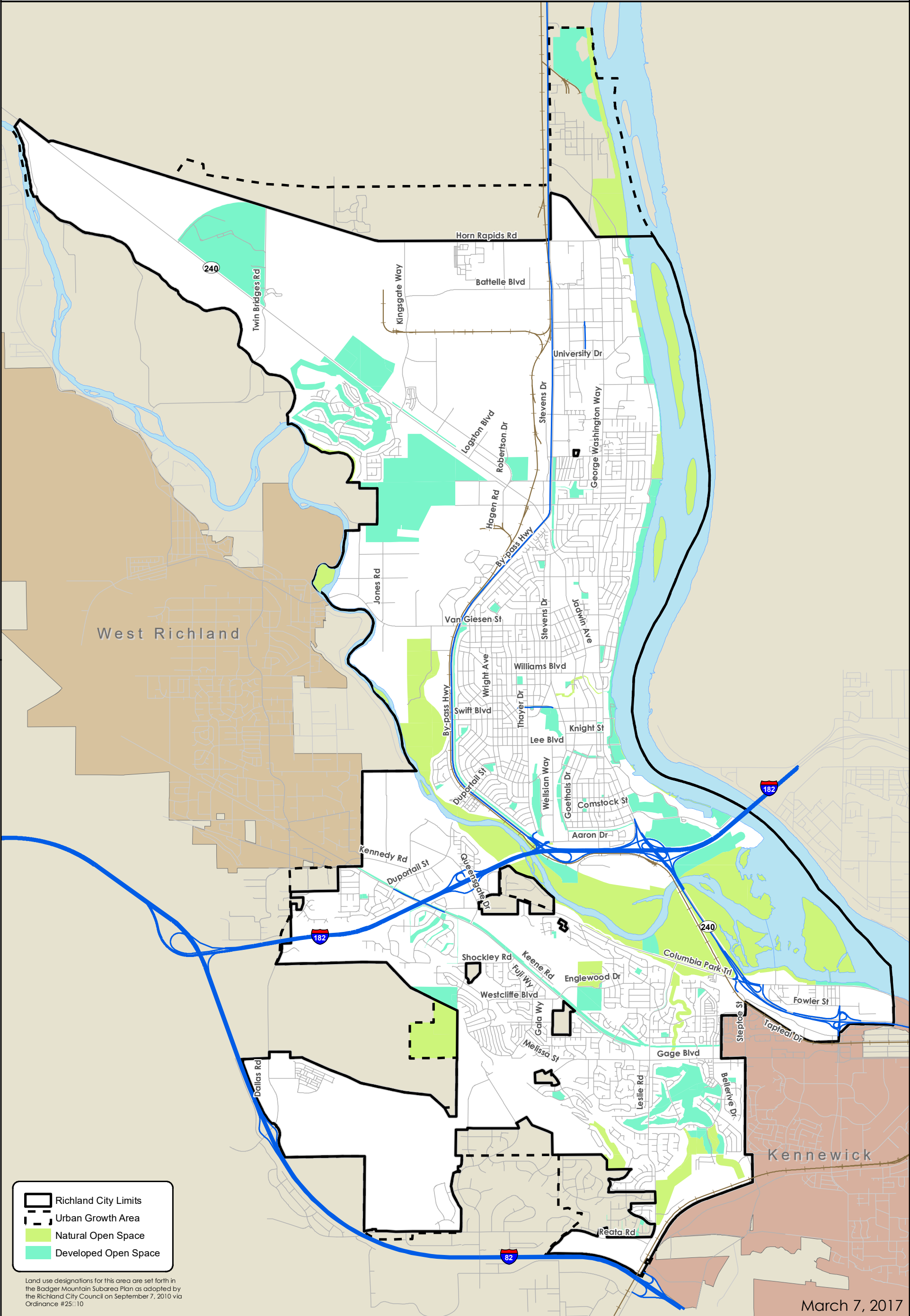
Rural

Waterfront



City of Richland

LU-6 - Open Space



HOUSING ELEMENT



In this chapter, you will find:

- Goals and policies guiding housing in Richland
- Existing housing condition
- Projected needs and addressing the demand

INTRODUCTION

Providing affordable housing for all groups is a priority for Richland. Providing housing near shopping and transportation and offering multiple choices for owner and renter occupied housing would also benefit the City's vision for diversity.

The Housing Element of the City's Comprehensive Plan is intended to provide policy background and broad direction for housing programs and decisions towards meeting the City's goals. Similar to the other elements of the Comprehensive Plan, the Housing Element provides a framework for future planning decisions and outlines goals and objectives the City plans to implement in meeting its housing needs. The Housing Element is consistent with other elements of the Comprehensive Plan.

GOALS AND POLICIES

HE Goal 1: Provide a range of housing densities, sizes, and types for all income and age groups of the Richland community.

Policy 1: Ensure that the comprehensive plan and development regulations allow for a variety of housing types, sizes, densities, and lot configurations such as small lot single family housing, multi-family housing, mixed-use development, cluster development, live/work housing, co-housing, accessory dwelling units, single room occupancy units, zero lot line and similar subdivisions, and planned unit developments.



Policy 2: Encourage mixed-use developments with apartments and condominiums above commercial uses in the City's urban core. Where redevelopment or infill opportunities arise, allow for increased housing density in residential-designated areas that immediately surround the CBD, while respecting the character and scale of the existing neighborhood.

Policy 3: Support the development of senior housing and long-term care/assisted living facilities in the City in close proximity to commercial uses and medical services and facilities.

Policy 4: Promote and provide incentives (such as zoning/rezoning, revised regulations, and provision of infrastructure) for infill development and redevelopment, while respecting the character and scale of the existing neighborhood.

Policy 5: Allow and regulate manufactured homes in the same way as site-built homes.

Policy 6: Plan for an adequate supply of land in appropriate land use designations and zoning categories to accommodate projected household growth, while accommodating other commercial, industrial, and open space needs of the City.

HE Goal 2: Improve affordable housing opportunities for lower-income individuals, households, and first time homebuyers.

Policy 1: Expand the supply of affordable units by promoting owner- and renter-occupied housing in the City, consistent with Comprehensive Plan.

Policy 2: Promote the use of mixed-income housing developments and mixed-use developments that provide both affordable housing and economic opportunities.

Policy 3: Sustain or improve the quality of existing affordable housing stock by encouraging rehabilitation of housing units by current owners.

HE Goal 3: Implement the current version of the Tri-Cities Consolidated Plan.

Policy 1: Provide assistance to lower-income households that participate in local improvement districts for

infrastructure projects. Assistance may be limited to selected neighborhoods or to the neediest households based upon a percentage of median income and fund availability.

Policy 2: Assist infrastructure activities that revitalize and stabilize older or declining neighborhoods or areas in which the majority of households are lower-income.

Policy 3: Improve access for persons with disabilities and the elderly by improving streets and sidewalk systems.

Neighborhood Character

HE Goal 4: Encourage the maintenance and preservation of existing housing stock and residential neighborhoods.

Policy 1: Encourage reinvestment in older residential neighborhoods and support the revitalization of such neighborhoods by keeping the streets and other municipal systems in good repair.

a) Encourage the formation of local improvement districts.

Policy 2: Implement the City's affordable housing and weatherization programs.

b) Continue to participate in the Tri-Cities HOME Consortium.

c) Continue to utilize federal Community Development Block Grant and HOME funds for housing rehabilitation and first-time homebuyer opportunities.

Policy 3: Continue to allow accessory dwelling units in single-family residential districts.

Policy 4: Accommodate non-profit and public agencies' efforts to purchase, construct, and rehabilitate housing to meet the affordable and other housing needs of the community.

Policy 5: Strive to increase the rate of owner-occupancy over time through City's assistance programs.

Policy 6: Maintain a strong code enforcement program.

Policy 7: Update and implement the Island View Master Plan to include mixed-use housing and multi-family residential rehabilitation and construction.

Policy 8: Encourage the use of the City's Crime Prevention Through Environmental Design (CPTED) program in developments.

Policy 9: Continue to participate in the City Police Department's Crime Resistant Community Living (CRCL) Program, which provides free training for property owners and landlords to help provide safe, crime-resistant communities for all residents.

HE Goal 5: Ensure compatibility of new residential developments with established neighborhoods and the community.

Policy 1: Maintain quality design and landscaping in the new developments.



HE Goal 6: Improve Public Facilities.

Policy 1: Support the revitalization of neighborhoods by improving and supporting public facilities that serve neighborhoods of all income levels.

Policy 2: Improve parks and recreation facilities in targeted neighborhoods by supporting a range of improvements to existing or new parks such as building bicycle and walking paths, improving public restrooms, landscaping, or installing play equipment.

Policy 3: Support beautification of our community by integrating art into public facilities in creative and engaging ways.

EXISTING CONDITION

Based on American Community Survey (ACS) Census data of 2015, Richland has a total of 22,130 housing units. About 65 percent of the housing units are owner-occupied and 35 percent renter-occupied. This is similar to the United States occupancy rate of 64 percent owner-occupied and 36 percent renter-occupied. Single unit detached housing types dominate the existing housing inventory with 63 percent of the total share. Based on this data, the housing occupancy rate in Richland is 94 percent.

Table HE-1: Housing Occupancy in Richland

Occupancy Type	Units	%
Owner-occupied	13,622	65.5
Renter-occupied	7,170	34.5
Total occupied ¹	20,792	100
¹ 94% of the total housing units		

Richland's single-family homes are mostly concentrated between Spengler Street and the greenbelt (Abbott Street) in north Richland, and between Columbia Park Trail and Interstate-82 in south Richland. Another concentration of housing exists in north Richland in the Horn Rapids area. The City has new housing developments as well as the old Alphabet Homes built between 1943 and 1951. Alphabet Homes are mostly located in the older part of the City near the downtown area.

PROJECTED NEEDS

As discussed in the Land Use Element, Richland's population growth will require additional housing units in the City in the next 20 years. An increase of over 23,000 people in the City and UGA will require 1,270 additional housing units. This will include housing demand for all income and age groups. With the baby boomers retiring, there is a growing need for affordable senior housing in the City. Based on a discussion with the affordable housing group for seniors over the period of 2010 and 2016, occupancy at the affordable senior housing communities averaged 98 percent. This indicates a high demand for affordable senior housing. The expansion of educational institutions triggers the need for student housing and multi-family housing in conjunction with the region's growing need for single-family housing.

ADDRESSING THE NEEDS

This demand of additional housing will be met by developments in the existing planned areas, infill developments, and by re-designating two Urban Reserve areas. This plan will create a mix of residential, commercial, and public facilities land uses as shown in the land use plan (Fig LU-1). This will add additional housing units including

single-family, multi-family, and apartment homes.

The City's current housing assistance program will continue to assist homeownership for Richland citizens. The City's policies promote infill development, which will be another option for housing development where infrastructure already exists. The City provides additional housing choices by allowing accessory dwelling units in single-family neighborhoods.

TRANSPORTATION ELEMENT



In this chapter, you will find:

- Goals and policies for transportation
- Existing systems and future improvements for:
 - Motorized systems
 - Non-motorized systems

INTRODUCTION

The City of Richland maintains a complete multi-modal network of transportation facilities serving residents and businesses. A brief summary of transportation facilities is provided here, with more details provided in the supporting analysis document (Appendix A).

GOALS AND POLICIES

TE Goal 1: Provide an efficient and multi-modal transportation network including road, trail, rail, water, and air, to support the City's land use vision and existing needs.

Policy 1: Plan new street segments and consider modifying existing streets to provide comfortable and safe elements for bicyclists, pedestrians, and transit users in addition to vehicles.

Policy 2: Identify and secure the rights of way for new and/or expanded transportation corridors.

Policy 3: Support rail services for industries and commerce within the area.

Policy 4: Support regional planning efforts for roadway, rail, air, and non-motorized travel.

Policy 5: Plan and implement transportation system improvements that meet the needs of all areas and residents.

Policy 6: Plan transportation facilities that are compatible with adjacent land uses.

Policy 7: Plan and implement an appropriately classified and designed roadway system that provides for efficient movement of people and goods and the comfort and safety of residential neighborhoods.



TE Goal 2: Improve safety, connectivity, and operating efficiency of the transportation system.

Policy 1: Implement appropriate access control for arterial collectors and arterial streets.

Policy 2: Link local street networks through subdivisions to provide efficient local circulation, as appropriate, and provide additional collector arterial access for major residential areas.

Policy 3: Evaluate, plan, and install traffic control devices and intersection designs to improve travel safety and efficiency.

TE Goal 3: Encourage the use of transportation modes that promote energy conservation, circulation efficiency, and an active lifestyle.

Policy 1: Support increased use of transit, bicycling, and pedestrian travel.

Policy 2: Plan facilities for non-motorized travel across jurisdictional boundaries.

Policy 3: Require sidewalks, improved shoulders, or off-street trails within new developments to accommodate internal bicycle and pedestrian circulation within and between neighborhoods.

Policy 4: Encourage new developments to be pedestrian-friendly and compatible with the public transportation system.

Policy 5: Design a circulation system to become a bicycle-friendly community.

TE Goal 4: Ensure that the road network is sensitive to the natural and built environment and offers a sense of the community.

Policy 1: Use appropriate streetscape and gateway features along the major entryways into the City.

Policy 2: Implement landscaping and other types of buffers along major transportation corridors.

Policy 3: Construct street system improvements to reduce traffic congestion as a measure to improve air quality.

Policy 4: Plan new streets and consider modifying existing streets to include storm water management best practices to reduce pollution from stormwater runoff.

Policy 5: Plan and implement new streets with features that mitigate the hazard to wildlife.

Policy 6: Plan and implement new streets and consider modifying existing streets to improve access control to sensitive areas.

EXISTING SYSTEM AND FUTURE IMPROVEMENTS

The most recent Transportation Plan for the City of Richland was completed in 2005 and was used to prepare the 2008 Comprehensive Plan. Many of the improvements identified in that Plan have been completed. Several studies have been conducted to identify preferred improvements in corridors where congestion is occurring today. These studies have determined the basis for many of the short-range improvements that are identified in the Capital Improvement Program for the City.

Some of the biggest transportation challenges that the City of Richland has is the north-south connections between the downtown original area north of the Yakima River and the developing areas of Richland south of I-182 and the Yakima River including the Queensgate corridor and the Badger South sub-area. Significant investments are moving forward to improve these connections. (This section is being revised)

For the purposes of this Comprehensive Plan Update, traffic counts from 2016 conducted by the Benton Franklin Council of Governments were used to conduct an

analysis of the existing system to identify any additional deficiencies. Those traffic counts were also used to calibrate and update the regional traffic model to be consistent with anticipated land use for year 2040. Subsequently, an analysis for forecast traffic volumes was used to identify potential long-range issues with the transportation network.

Motorized System

Automobile

There are over 275 miles of roadway within the City of Richland, including a functionally classified network of arterial and collector roadways as well as local streets. There are 66 traffic signals within the City (some are operated by WSDOT or the City of Kennewick) and four roundabouts.

Significant improvements identified in the short term include the Duportail Bridge over the Yakima River, the widening and extension of Queensgate Drive, South George Washington Way safety and mobility improvements, and the Center Parkway Extension west of Steptoe Street. These projects are anticipated to cost at least \$53 million.

Long-range improvements include the extension of Gage Boulevard and Queensgate Drive to serve the Badger South sub-area, interchange improvements on both I-182 and SR240, as well as other collector road improvements to serve developing areas. A new arterial route is proposed to connect the existing north end of Queensgate Drive to SR 224 (with a Yakima River crossing) as well as an extension south from Kingsgate Way to connect to SR 224. Additional traffic signals or roundabouts are anticipated at several locations as well.

Air

Commuter air travel service is provided at the Tri-Cities Airport in Pasco. The Richland

Airport provides general aviation facilities on two 4,000 foot runways. The Airport Master Plan currently calls for the extension of the north-south runway to 5,000 feet in order to accommodate large aircraft. This runway extension will require further study and potential mitigation since the Runway Protection Zone will be extended over SR 240 and some developed industrial properties.

Freight

There are currently approximately 30 miles of railroad tracks within the City of Richland. Much of this track is owned by the Port of Benton and operated and maintained through a lease to the Tri-City Railroad (TCRR). TCRR provides local freight switching and interconnect services to the Union Pacific Railroad, while the Burlington Northern Santa Fe provides direct service to the City of Richland.

The rail network has recently been expanded by the City to serve the Horn Rapids Industrial Park and includes a loop that accommodates the loading of unit trains. Additional expansions are anticipated to the north of Horn Rapids Road to serve new industrial property acquired from the Department of Energy.

Port Barge

The Port of Benton provides a high dock as well as a barge slip along the Columbia River in the northern part of the City. These facilities are able to serve barges that travel to the Pacific Ocean and Pacific Rim markets in a cost effective transportation mode.

Transit

There are currently nine transit routes operated by Ben Franklin Transit that serve the City of Richland, with four of those being Inter-City routes that also serve other communities and make connections at Transit Centers. Ben Franklin Transit

regularly modifies its services and routes to accommodate growth and development.

Non-motorized System

Non-motorized facilities within the City of Richland are mainly composed of sidewalks constructed in association with streets and a separate bicycle and pedestrian trail system. There are currently about 30 miles of Class I trails that serve the City of Richland, with over six miles of secondary trails and 36 miles of soft trails that traverse natural areas such as Badger Mountain or Columbia Point South and the Amon Basin. There are also over 68 miles of on-street bike routes that facilitate bicycle travel throughout the City.

FINANCING

The City receives funding for transportation projects from a variety of sources, including impact fees, developer construction, City General Funds, Arterial Street Funds, Transportation Improvement Board grants, Highway Safety Program grants, State funding, Federal Surface Transportation Program funding as well as other Federal Grants.

The City collects Traffic Impact Fee according to Richland Municipal Code (12.03). It is called the South Richland Street Collector Financing Plan. It assists to develop the arterial street network in south Richland and to make other improvements such as traffic signals as traffic volumes grow. The impact fee area generally involves two zones and covers the area south of the Yakima River with the exception of the Badger Mountain South Sub-Area. The impact fee was updated in 2008 and 2012 and is expected to be updated again in 2017.

Details of proposed transportation improvements, timeframe and financing sources can be found in the supporting analysis document (Appendix A).

UTILITIES ELEMENT



In this chapter, you will find:

- Goals and policies for utilities
- Wastewater facilities
- Water supply system and facilities
- Storm water system and facilities
- Solid waste management and facilities
- Energy services
- Utilities provided by others
 - Natural gas supply
 - Telecommunications
 - Irrigation

INTRODUCTION

The Utilities Element of the City of Richland Comprehensive Plan describes utility policies and regulations to implement the goals of the Comprehensive Plan. It was developed in accordance with Section 36.70A070 of the GMA to address utility service within the City of Richland over the next 20 years. It consists of the general location, proposed location, and capacity of all existing utilities in the UGA. General utility corridors are identified. The Element was also developed in accordance with the County-Wide Planning Policies and has been integrated with all other Comprehensive Plan elements to ensure consistency.

GOALS AND POLICIES

UE Goal 1: Utilities should support the land use and economic development goals of the City.

Policy 1: Siting of proposed public facilities should be consistent with adopted land use policies.

Policy 2: When available and permitted under prevailing power supply contracts, the City will use its market access to low-cost electricity to provide favorable rates targeted at expansion and attraction of industries offering additional family-wage jobs.

Policy 3: Ensure that aesthetic impacts of utilities will be addressed through measures such as landscaping and screening.

UE Goal 2: Maintain existing service levels to current customers and ensure that public facilities and services necessary to support development are planned, sized, and constructed to serve new development.

Policy 1: Maintain current utility service levels based on local, state, and federal standards.

Policy 2: Use a minimum 20-year planning horizon to plan for City-provided public utilities and identify new facilities, expansions, and improvements that will be needed. The City will work with other purveyors of public services to provide facilities and services concurrent with development.

Policy 3: Promote the efficient use of land and minimize environmental disturbance by requiring that the facilities of various utilities be located together in the City right-of-way wherever possible.

Policy 4: The City will designate utility corridors and utility facilities as required to facilitate and promote the expansion of commercial and industrial development.

Policy 5: The City will actively cooperate with other utility providers to establish a City electrical service territory boundary that allows the City's municipal utility to serve new loads.

UE Goal 3: Provide utility facilities that ensure environmentally sensitive, safe, and reliable service.

Policy 1: All utility expansion and construction will consider the environment and ways to minimize impacts to it in siting, construction, and use.

Policy 2: The City will use the best available technology to mitigate adverse impacts resulting from utilities projects.

UE Goal 4: Adopt programs to conserve and promote sustainable use of resources.

Policy 1: Establish public outreach programs to promote the conservation of resources, waste reduction, reuse, and recycling.

Policy 2: Implement the City's utility systems management plans.

UE Goal 5: Coordinate with outside utility providers for efficient, cost-effective, and reliable utility service.

Policy 1: Ensure that land will be made available for the location of utility lines, including location within transportation corridors.

Policy 2: Promote, when feasible, location of new public and private utility distribution facilities in shared trenches, and coordination of construction timing to minimize construction-related disruptions to the public and reduce the cost of utility delivery.

Policy 3: When and where natural gas franchises exist, promote the

extension of natural gas distribution lines to and within the UGA, constructed or reconstructed.

Policy 4: Promote a wider range of high-speed internet providers to encourage competition.

WASTEWATER FACILITIES

The Richland sanitary sewer system was originally developed to serve the Richland core area, but has been extended to other areas as they have developed, including north Richland, south Richland, the Badger Mountain area, and the Horn Rapids community. The sanitary sewer system includes a conveyance system, a wastewater treatment facility, and effluent disposal. A General Sewer Plan was adopted in 2016, which provides a general evaluation of the sewer collection system and Wastewater Treatment Plant, a Capital Improvement Plan (CIP) with a particular emphasis on the next 20 years, and assessment of the utility's financial condition and ability to support the recommendations of the CIP.

The existing Richland sanitary sewer collection system serves approximately 40 square miles of area that is divided into seventeen drainage basins. The collection system consists of over 262 miles of gravity collection pipes, which range in size from six inches in diameter to 54 inches in diameter. The City owns and operates 14 pump stations, ranging in size from 1.5 to 35 horsepower. Overall, the collection system had adequate hydraulic capacity to convey current flows as well as future flows. Although the hydraulic analysis indicated relatively few capacity issues, the collection system is showing its age and a proactive renewal and replacement program has been developed to address this.

All flows collected by the Richland sanitary sewer collection system are transported to and treated at the Richland Wastewater Treatment Plant. Since its completion in 1985, the plant has consistently achieved the discharge requirements specified in its National Pollution Discharge Elimination System (NPDES) permit. The plant provides primary sedimentation, followed by secondary treatment using an activated sludge process. Plant effluent is disinfected with chlorine prior to discharge to the Columbia River. Several renewal and replacement projects have been identified at the Wastewater Treatment Plant through the planning period.

WATER SUPPLY SYSTEM

The Richland water system was constructed during the 1940s to support the wartime activities at the Hanford Nuclear Reservation. This temporary system has developed into the modern permanent water system used in the City today. The City's water supply system consists of wells, a surface water treatment plant, pump stations and chlorinators, interties, water lines, and reservoirs. A Water System Plan was completed in 2016 to be adopted in 2017, which provides a general evaluation of the water distribution system and Water Treatment Plant, a CIP with a particular emphasis on the next 20 years, and assessment of the utility's financial condition and ability to support the recommendations of the CIP.

The majority of the population within the corporate limits of the City of Richland is served by the City of Richland Water Utility. The Utility serves approximately 18,689 connections (as of 2016), which includes residential, commercial, and industrial users.

The City has a total available water right of 34,948 acre-feet per year and 43,786 gallons

per minute (gpm) for instantaneous flow. The City appears to have adequate water rights for future growth. The City's potable water sources include a wellfield and the Columbia River Water Treatment Plant (WTP). The wellfield has a total capacity of 15 million gallons per day (MGD) while the WTP has a capacity of 36 MGD. Source capacity is adequate for future growth, and water supplied to the City of Richland is of high quality meeting federal and state drinking water standards.

The City has approximately 340 miles of pipelines in the water distribution system ranging in size from two inches in diameter to 36 inches in diameter. There are ten storage facility sites that provide approximately 22 million gallons of storage and ten booster pumping stations that provide direct water storage to seven pressure zones within the City. Several projects to address capacity as well as renewal/replacement have been identified through the planning period.

STORM WATER SYSTEM

Storm water runoff is the largest remaining contributor of water quality pollution to the waterways of the nation. Richland's storm water system is comprised of components for collection, control, and conveyance of storm water, such as catch basins, conveyance pipes, ditches, ponds, vaults, and outfalls etc. The system consists of about 169 miles of ditches with closed and perforated pipes forming its conveyance system (being updated). The storm water control includes components such as drywells, ponds, pump stations, control structures, storm filtration systems, and oil/water separators with a total of 780 controls. Citywide, there are over 5,000 catch basins and 1900 manholes as part of the collection system.

The City continually updates its system through a combination of programs and facilities. Public involvement, education, and outreach are important components of the program. In addition, managing storm water systems includes illicit discharge detection and elimination, runoff control, operation and maintenance, and monitoring of the system (being updated to make reference to the 2016 storm water plan).

SOLID WASTE MANAGEMENT

The City of Richland Solid Waste Division provides municipal solid waste collection and disposal services to residences and businesses within the City limits. About 26 percent of the solid waste is recycled in Richland based on the 2015 tonnage of generation, recycling, and disposal.

The City of Richland owns and operates the Richland Landfill (also known as the Horn Rapids Landfill). The landfill site is 275 acres in size. Approximately 46 acres are permitted for solid waste disposal. The site also includes a 14-acre composting facility, a residential and small commercial customer transfer station, a scale house and administration building, and an operations and equipment maintenance building.

The City offers curbside recycling to its residential and commercial customers. The City currently operates seven drop-box recycling collection centers throughout the City and delivers the collected recyclable items to Clayton-Ward Recycling in Richland.

The City's waste generation is forecast to increase to 80,000 tons by 2031. The current space in the Landfill will be used up sometime in 2020 at the City's current rate of waste placement. The City is planning for its future solid waste disposal capacity by exploring two options:

1. Expanding landfill capacity on the current site by building a landfill that meets current state and federal design regulations; or
2. Building a transfer station and hauling waste to a large regional landfill.

It is expected that a decision will be made in calendar year 2017, after which preparations will be made to construct the necessary facilities. Regardless of the disposal alternative selected, the City anticipates maintaining its current customer service levels at the Richland landfill.

ENERGY

Richland provides electrical service throughout the City, most of the UGA, and the City's 50-square mile service territory using 552 miles of primary line and eight substations. Ownership and operation of these facilities is shared by the City and the Bonneville Power Administration (BPA). Bulk transmission of electrical power supply to customers in the UGA has historically been provided from the BPA transmission grid, with the local utilities providing final pass-through services. Benton PUD also provides power to a limited number of people in Richland through a service agreement between Benton PUD and the City.

The City currently runs an energy efficiency program by providing incentives for reduced energy usage. Its renewable option program allows residents to purchase clean, zero-emission wind energy. The City also offers low-interest loans to promote use of solar power.

Electrical service plans are designed and upgraded to provide for future growth and accommodate new and increased loads. Richland maintains a performance based level of service where failure in one system will not cause failure of other systems and

can be picked up by other components within eight hours.

Future deficiencies are identified based on projected loads. The City has identified multiple capital improvement projects through the year 2027. Major capital improvement projects include: plan, design, and construction of a new substation in the Dallas Road and Leslie Road area; construction of Kingsgate substation for the Horn Rapids Industrial Park; design and implementation of smart grid/smart metering infrastructure; and purchase of southwest service area infrastructure.

OTHER AGENCY UTILITIES

Natural Gas Supply

Cascade Natural Gas Corporation builds, operates, and maintains natural gas distribution facilities serving the City of Richland. It currently serves most parts of the City. Natural gas is made available concurrently with growth to the best of the purveyor's ability. The City will promote locating utility distribution lines together and using existing utility easements wherever possible.

Telecommunications

Telecommunication in Richland is provided by the licensing agency's franchise agreements with the City. Telecommunication is mostly regulated at the state level by the Washington Utilities and Transportation Commission.

The City of Richland currently franchises Charter Communications to serve its population. Charter provides cable TV, Internet, and phone services in Richland. Some other phone and Internet services providers include but are not limited to

Verizon, Cellular One, U.S. Cellular, AT&T Wireless, T-Mobile, and Cingular Wireless. Telecommunication facilities offer services through cell towers on tall poles, lattice towers, and/or co-located in buildings.

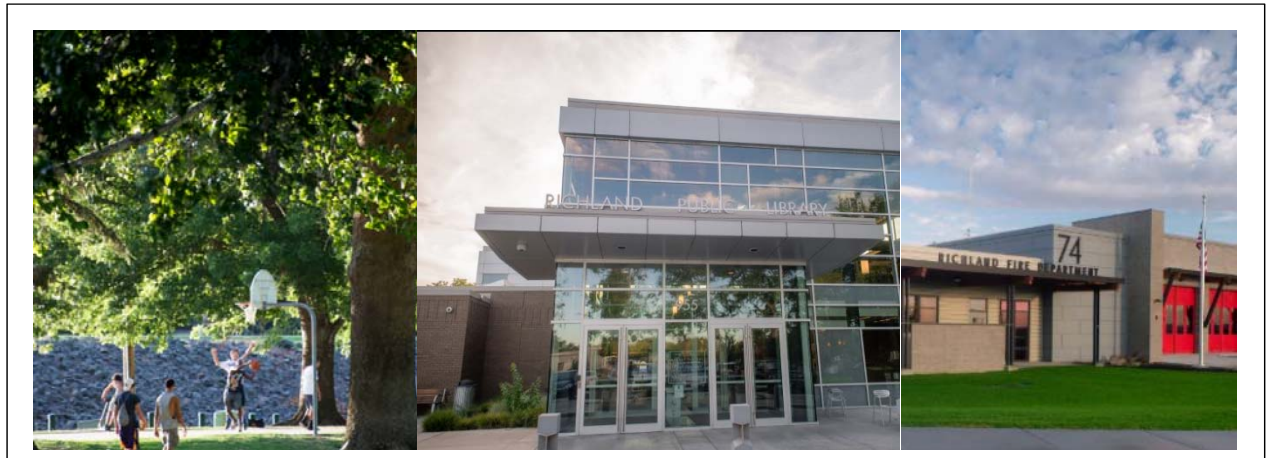
As growth occurs within the City, demand for reliable telecommunication services also grows. Telecommunication companies provide adequate services according to Federal Communications Commission (FCC).

Irrigation

Only portions of the City of Richland currently have irrigation services. The southern part of the City is served by the Columbia, Kennewick and Badger Mountain Irrigation Districts. Columbia Irrigation District operates an irrigation canal and a pump station in that area.

Within the unincorporated UGA, irrigation services are provided by the Columbia and Badger Mountain Irrigation Districts.

CAPITAL FACILITIES ELEMENT



In this chapter, you will find:

- Goals and policies for Capital Facilities
- Parks, recreation, and open spaces
- Municipal facilities
- Fire and emergency services
- Police services
- Schools
- Essential public facilities

INTRODUCTION

The Capital Facilities Element addresses facilities that are important for the City's growth in the next 20 years. Accommodation of the additional growth within the City's available land area and the provision of adequate services for the expected growth are two key aspects to be addressed in the comprehensive planning process. The Comprehensive Plan Supporting Analysis (Appendix A) provides additional details of the Capital Facilities Plan.

This element integrates the Comprehensive Plan with the City's Capital Improvement Plan (CIP) for capital facilities budget allocations. The CIP prioritizes the needs of the City for infrastructure and other capital needs, both within the City and the UGA. Prioritization for budget decisions are made based on the goals and policies and future growth indicated in the Comprehensive Plan. The Capital Improvement Plan (CIP) is a tool for

identifying and prioritizing capital projects and major capital purchases for budget consideration. The plan provides a project planning schedule for at least a six year period and identifies funding sources for projects approved in the current budget cycle.

The CIP is useful in coordinating community planning, determining financial capacity and ensuring capital expenditures demonstrate support for the key elements of the City's Strategic Plan. The CIP is comprised of projects that maintain, enhance, or construct new facilities and infrastructure.

The Richland CIP uses many revenue sources to fund the capital investment projects identified in the CIP, including various taxes, revenues, bonds, and grants. The City also collects park impact fees to mitigate park impacts. Impact fees collected from specific park zones are used within that park district to address the impact by providing park and facilities according to the standards set in the 2014-2019 Parks, Recreation and Open Space Plan.

GOALS AND POLICIES

General Goals and Policies

CF Goal 1: Ensure that adequate infrastructure and public facilities exist or can be provided concurrent with new development takes place.

Policy 1: The City will work with other purveyors of public services to provide facilities and services concurrent with development.

Policy 2: The City will strive to ensure convenient and safe student access to school sites.

CF Goal 2: The City will provide capital facilities that ensure environmentally sensitive, safe, and reliable service.

Policy 1: The City will consider ways to to minimize environmental impacts in siting, construction, and use of all capital facility expansion and construction projects.

Policy 2: The City will mitigate adverse impacts resulting from capital facilities projects according to the State Environmental Policy Act (SEPA) and other local, state and federal requirements.

Policy 3: The City will locate capital facilities identified as essential public facilities to provide the necessary service to the intended users with the least impact on surrounding land uses.

CF Goal 3: Provide adequate resources for capital improvements and make efficient use of fiscal and other resources.

Policy 1: Prioritize capital improvement needs that are consistent with overall planning goals.

Parks, Recreation and Open Space

CF Goal 4: Provide an integrated system of parks, recreation facilities, trails, and open spaces as an asset consistent with the Parks, Trails, Open Space, and Facilities Master Plan that enhances the community's quality of life.

Policy 1: Implement the Parks, Trails, Open Space, and Facilities Master Plan and programs for park and recreation facilities.



Policy 2: Coordinate the development of City of Richland trails, open space, and other recreational facilities and programs with other municipal facilities development, where appropriate.

Policy 3: Extend and improve the multi-use trail system to link parks, activity centers, schools, and employment centers.

Policy 4: Develop and adopt Master Plans for specific parks as necessary.

CF Goal 5: Provide diverse active and passive recreational opportunities for residents and visitors of all ages, based on needs.

Policy 1: Develop participation and interest in organized and individual recreation based on trends and changing lifestyles.

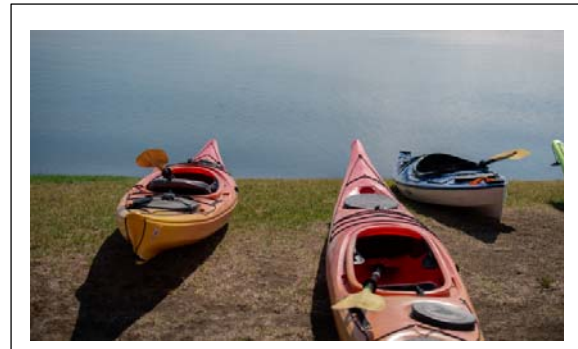
Policy 2: Provide adequate facilities to meet the sports and active recreational needs of different age groups.

Policy 3: Help citizens make full use of existing facilities through increased public awareness, revised and clear maps, and directional signage.

CF Goal 6: Identify, prioritize, and preserve unique natural habitat, ecologically critical areas, shorelines, and significant landforms and develop public recreational activities appropriate to these resources.

Policy 1: Develop property management programs consistent with the SMP.

Policy 2: Provide public access and use of the Columbia River and Yakima River shoreline.



Policy 3: Evaluate opportunities for additional open space to protect significant landforms, critical habitat areas, and appropriate native vegetation areas.

CF Goal 7: Enhance the community and region's cultural and historic heritage through features incorporated in community and regional parks.

Policy 1: In cooperation with the Arts Commission, incorporate art in suitable public locations.

CF Goal 8: Extend and improve the multi-use trail system to link parks, activity centers, schools, and employment centers.

Policy 1: Identify desirable trail linkages and trail extensions needed to connect with the City's trail network as part of existing trail plan.



Schools

CF Goal 9: Work with the Richland and Kennewick School Districts to help meet the needs of the school districts to serve the community.

- Policy 1: Coordinate with the school districts to identify locations of future school sites.
- Policy 2: Continue to work closely with the Richland and Kennewick School Districts and special user groups to promote joint use recreation programs and facilities.
- Policy 3: Develop and maintain safe routes to schools by pedestrian and other modes of transportation.

Municipal Facilities

CF Goal 10: Provide municipal facilities as needed for efficient services, rapid response times, and convenient customer service.

- Policy 1: Consider leveraging investments in new municipal facilities that help the City achieve other goals and operate efficiently.

CF Goal 11: The City's investment in municipal facilities should, to the extent practicable, encourage additional private investment.

- Policy 1: Consider strategically locating certain municipal facilities in areas that can act as catalysts for private developments.

Fire, Police, and Emergency Services

CF Goal 12: The City will provide efficient, cost-effective, and concurrent levels of public safety services designed to maintain quality of life.

- Policy 1: The City will identify the funding mechanism to construct and staff fire and emergency service facilities in areas of the City wherever five hundred homes or more are located outside a four-minute drive time from an existing Richland Fire & Emergency Services facility or a neighboring jurisdiction facility with similar staffing levels participating in an automatic aid agreement.
- Policy 2: The City will identify a funding mechanism to increase staffing levels from three to six in station's initial response districts when the resources/crew out of service norm reaches 4.8 hours per 24-hour period for emergency response (get clarification from Fire Department).
- Policy 3: The City will evaluate the adequacy of the public safety facilities and equipment, mutual and auto aid agreements, and personnel staffing levels and deployment needs for the present and projected change.

CF Goal 13: Maintain and improve safe neighborhoods in Richland.

- Policy 1: Maintain an adequate force of police officers throughout the City.
- Policy 2: Implement physical planning and Crime Prevention Through Environmental Design (CPTED) principles to enhance user surveillance, de-opportunize criminal activities, and minimize potential for crimes.
- Policy 3: Create a high level of public awareness and support from the community for positive engagement with the police and crime prevention and deterrence programs

CF Goal 14: Provide efficient, cost-effective, and concurrent levels of public safety services designed to maintain quality of life.

- Policy 1: Maintain community education programs on crime and fire prevention to increase the level of community awareness.
- Policy 2: Emphasize continued cooperation through inter-local agreements with rural fire districts, fire, and police agencies of adjacent jurisdictions and other public safety service providers.
- Policy 3: Evaluate the adequacy of public safety facilities and equipment, mutual aid agreements, and personnel staffing and program needs, for the present and for changes in needs with anticipated growth.
- Policy 4: Ensure quality public safety personnel to serve the community.

Library Facilities

CF Goal 15: Maintain the Richland Public Library as a center of creativity and innovation that also offers services, collections, and gathering spaces that meet diverse needs.

- Policy 1: Provide library facilities appropriate for Richland's population, circulation, technology, books, and material resources.
- Policy 2: Maintain adequate service levels, based on comparative statistics gathered by the Washington State



Library for libraries of a similar statistical size.

- Policy 3: Maintain and accommodate technological advances in resource and information management.

PARKS, RECREATION, AND OPEN SPACE

Richland's parks system consists of neighborhood parks, community parks, regional parks, special use areas, linear parks, and natural open spaces in 2,286 acres of land. Richland's open space is discussed under the Land Use Element.

Table CF-1: Park Categories

Park type	Acres	Number of Parks
Neighborhood Parks	78.6	25
Community Parks	220	4
Regional Parks	170	2
Special Use Areas	702	11
Linear Parks	240	9
Natural Open Space	873.98	7
Total Parks and Recreation Areas	2,285.6	58

In addition to City-owned parks, Richland residents enjoy parks and recreational facilities owned by other agencies such as the Badger Mountain Centennial Preserve owned by Benton County, the open space owned by USACE, and Richland School District facilities, etc.

The City also has a system of trails consisting of Class 1 trails, secondary trails, and soft trails. The existing trails map (Fig. TE-6) indicates the locations and distribution of trails throughout the City.

Richland Parks and Public Facilities Department offers events, aquatic, and athletics programs in multiple City-owned facilities (see Table CF-2). Listed below is a brief sample of activity categories with categories changing based on demand:

- Aquatics swim lessons, lap swim, open swim pre-school educational activities
- Arts & Crafts, General Education-chess, hunter education, first aid, and more
- Dog training, park ranger programs, geocaching, hikes, and classes
- Home and garden, language, computer and technologies
- Fitness
- Yoga, martial arts, dance, wellness-check-ups
- Sports: team and individual sports

- Adventure camp for youth
- Cards, socials trips

The table below indicates existing sport facilities.

Table CF-2: Public, School District and City of Richland Facilities

Facility Type	Existing Inventory
Youth Baseball Game Fields	10 Fields
Youth Baseball Practice Fields	12 Fields
Youth Softball Game Fields	5 Fields
Youth Softball Practice Fields	10 Fields
Adult Softball Fields	4 Fields
Indoor Basketball Practice Courts (Richland School District)	7 Courts
Indoor Basketball Game Courts (Richland School District)	5 Courts
Indoor Volleyball Courts	21 Courts
Outdoor Swimming Pool	1 Pool
Youth Soccer Practice Fields	27 Fields
Youth Lacrosse Game Fields	0 Fields
Youth Lacrosse Practice Fields	0 Fields
Youth Football Game Fields	1 Field
Youth Football Practice Fields	0 Field
Golf Driving Ranges	1 Range
Golf, 18-Hole Courses	1 Course
Archery Ranges	1 Course
Skateboard Park	22,700 sf
Outdoor Tennis Courts	28 Courts

As the City grows, the use of park and recreation facilities will increase. The current inventory of neighborhood parkland is adequate to meet the future demand. New areas re-designated with this Comprehensive Plan update will require one additional community park to serve the area. There is a need to complete the park amenities at Badger Mountain Park and Hanford Legacy Park. Master plans have been completed for each Community Park. Additional

recreational facilities will be needed such as sports fields and courts, golf courses, etc.

Although Richland includes more open space than adjacent communities do, there is community interest in preserving open space. Approximately 34 acres of Urban Reserve land along the Yakima River is re-designated to Natural Open Space (Table LU-3). The need for open space and associated cost to maintain them should be further assessed through stakeholders and public involvement.

MUNICIPAL FACILITIES

This section describes the City of Richland's administrative buildings and other municipal facilities, including City Hall, City Hall Annex, Community Center, Development Services Center, and the City Shops and Warehouse Facility.

The current City Hall, located at the intersection of Swift Boulevard and George Washington Way was constructed in 1959. It houses the Council Chambers, along with a few other departments. The City Hall Annex adjacent to it was built in 1977.

The Community Center was constructed in 2002 and serves a dual role as a new senior center and a recreation and meeting facility. It also houses the administrative offices of the Parks Department.

The Development Services Center building was acquired from the federal government as surplus property and renovated to become a one-stop planning and development facility.

The City's shops complex is located on a 160-acre parcel near the Queensgate interchange. The complex was constructed in 1999. In 2010, the City constructed an addition to house the City's IT data center. The complex consists of three separate buildings and outdoor storage.

An evaluation of the City Hall building was done last in 2003 and was assessed that the facility was inadequate in size and flexibility and does not comply with basic accessibility and energy code requirements. Based on this, a new City Hall has been planned across the street from its current location, in the parking lot of the Federal Courthouse. The new building will be three stories, approximately 46,000 square feet, and will combine the City Hall, the City Hall Annex, and the Development Services Building into one facility, therefore eliminating three aging buildings. Construction will begin in 2017 and will be completed in 2018.

An assessment of major municipal facilities is available in the supporting analysis document (Appendix A), under the Capital Facilities Element.

FIRE AND EMERGENCY SERVICES AND FACILITIES

Fire and emergency medical services are a key part of public safety services for the citizens of Richland and the thousands of visitors and workers who pass through the City. The City of Richland has a professional fire department, which provides fire and life safety protection, emergency medical services (EMS), technical rescue and hazardous materials response to citizens, visitors, and the business community.

The Richland Fire & Emergency Services Department also provides Advanced Life Support EMS through Inter-local Agreements to segments of unincorporated areas of Benton County.

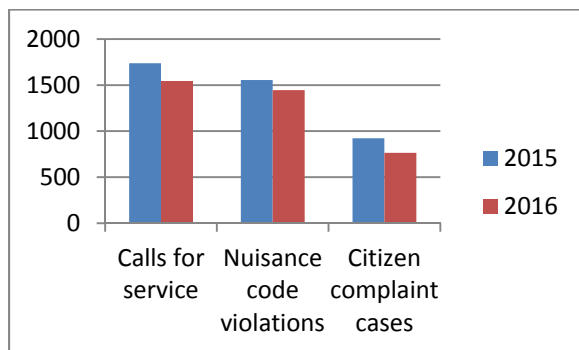
POLICE SERVICES

The Richland Police Department provides law enforcement services within the City limits. Law enforcement within the unincorporated UGA is currently provided by the Benton County Sheriff's office. The Police Department is located at 871 George Washington Way. The station was constructed in 2001.

The Richland Police Department established a partnership with the Washington State Department of Corrections (DOC) in 2002 to better monitor criminals who are under active DOC supervision and living in Richland. At present, Richland Police is also leading the Benton County Emergency Management Agency's activities.

Based on 2015 and 2016 data, the incidence of some types of crime is decreasing while other types are increasing. For code enforcement cases, calls for service, code violations, and citizen complaints are decreasing as shown in the table below.

Figure CF-1: Code Violations



Richland Police provides a value-based service. Richland measures its levels of service for public safety based on the committed and uncommitted time of the officers and support staff. Future growth will increase demand for police protection services and police department community programs. However, the Department is currently not seeking an increase in the number of police officers as it aims to meet its

demand through an efficient allocation of committed time. It continues its current programs of community services and crime prevention programs.

LIBRARY FACILITIES

Library services for Richland residents are provided primarily by the Richland Public Library, operated by the City of Richland Parks and Public Facilities Department. Additional library services are available at the Washington State University (WSU) Consolidated Information Center (CIC), Columbia Basin College in Pasco, and the Mid-Columbia Library System in the adjacent jurisdictions. The Kadlec Neurological Resource Center has a specialized library on neurological disorders that is open to the public.

SCHOOLS

Richland is served by both Richland and Kennewick School Districts, as the school district borders do not follow the municipalities' geographic borders. Schools serving Richland students are as follows:

Elementary schools: Badger Mountain, Jason Lee, Jefferson, Lewis and Clark, Marcus Whitman, Orchard, Sacajawea, Tapteal, White Bluffs, William Wiley, and Vista.

Middle schools: Carmichael, Chief Joseph, Enterprise, and Desert Hills.

High schools: Richland High, Hanford High, Rivers Edge, Three Rivers HomeLink, and Kamiakin.

Special education schools located outside Richland but serving the region include: Delta High School (Science, Technology, Engineering, Math) located in Pasco and Tri-Tech Skills Center located in Kennewick.

School districts provide services based on population growth. Currently, the planned

growth of the Badger Mountain South area is creating the need for future schools in this area. The Richland School District is planning to expand service in this area on approximately 54 acres owned by the school district. Adequate services such as roads, utilities, and safety are needed in this area to serve the school site once built. The school districts face challenges in locating school sites within the UGAs. Coordination between the school district and City during the planning process helps addressing the siting issues.

ESSENTIAL PUBLIC FACILITIES

Essential Public Facilities (EPF) include facilities that are typically difficult to site due to difficulties in finding the suitable and appropriate locations and perceived or real environmental, economic, or social impacts. Examples of EPF include airports, state education facilities, state and local correctional facilities, solid waste handling facilities, state or regional transportation facilities, the interstate highway system etc.

Cities and counties are required to establish a process for identifying and siting essential public facilities and adopt or amend its development regulations as necessary to provide for the siting of secure community transition facilities.

Richland reviews the siting of such facilities with a process established in the Richland Municipal Code (RMC 23.42.060, Essential public facilities).

APPENDICES

- A. Comprehensive Plan Supporting Analysis
- B. Benton County Countywide Planning Policies
- C. Environmental Impact Statement Summary Document
- D. Public Involvement Summary
- E. City of Richland Shoreline Master Program Update , 2014
- F. City of Richland Capital Improvement Plan 2017 to 2030
- G. Economic Development Plan (City to provide the updated plan info)
- H. 2015 General Sewer Plan Update
- I. City of Richland Comprehensive Water System Plan, 2010
- J. City of Richland 2016 Storm Water Management Program Plan Update
- K. City of Richland 2011 Solid Waste Management Plan
- L. Parks and Recreation Plan
- M. Implementation Strategies



PLANNING COMMISSION AGENDA ITEM COVERSHEET

Meeting Date: 04/19/2017

Agenda Category: Business

Prepared By: Rick Simon, Development Services Manager

Subject:

2018 Transportation Improvement Program

Request:

Recommended Motion:

Summary:

Jeff Peters, the City's Transportation and Development Manager will present the draft 2018 Transportation Improvement Program.

Attachments:



PLANNING COMMISSION AGENDA ITEM COVERSHEET

Meeting Date: 04/19/2017

Agenda Category: Business

Prepared By: Rick Simon, Development Services Manager

Subject:

Review Draft Critical Areas Ordinance

Request:

Key 5 - Natural Resources Management

Recommended Motion:

No action is needed at this time.

Summary:

Attached, is the latest draft of the Critical Areas Ordinance. The latest changes are shown in green, underlined text. Previous changes are shown in either purple or blue text and red strikeouts show the language that would be deleted from the existing code. This latest draft has incorporated new requirements that are found in a document titled "Wetland Guidance for CAO Updates" published by the State Department of Ecology, June 2016.

An updated map of critical areas will be provided at the workshop.

Attachments:

1. Critical Areas Ordinance Draft 4/19/17

April 19, 2017 Draft

Article I. General Introduction

- 22.10.010 General purpose and intent.
- 22.10.020 General applicability of these regulations.
- 22.10.030 General relationship of regulations of one type of **sensitive critical** area protection to other regulations.
- 22.10.040 Definitions

Article II. Wetlands

- 22.10.050 ~~Applicability to wetlands.~~ Reserved
- 22.10.060 ~~Regulation wetlands.~~ Reserved
- 22.10.070 Regulated activities in wetlands.
- 22.10.080 Exemptions ~~to wetland regulations.~~ and allowed uses in wetlands
- 22.10.090 Wetland inventory maps.
- 22.10.100 Rating – Categories of wetland.
- 22.10.110 Wetland buffer areas.
- 22.10.115 Buffer modifications.
- 22.10.120 Wetland alteration and mitigation.
- 22.10.125 Stormwater runoff.
- 22.10.130 Mitigation standards, criteria, and plan requirements.
- 22.10.140 Wetland mitigation plan requirements.
- 22.10.150 Performance standards for wetlands mitigation planning.
- 22.10.160 Wetland monitoring program and contingency plan.
- 22.10.165 Unauthorized alterations and enforcement

Article III. Fish and Wildlife Habitat Areas

- 22.10.170 ~~Definitions – Fish and wildlife habitat areas.~~ Reserved
- 22.10.180 Exemption from fish and wildlife regulations.
- 22.10.190 Fish and wildlife habitat inventory maps.
- 22.10.200 ~~Classification of fish and wildlife habitat areas.~~ Reserved
- 22.10.210 Fish and wildlife habitat buffer areas.
- 22.10.220 Fish and wildlife habitat alteration.
- 22.10.230 Fish and wildlife habitat performance standards and incentives.

Article IV. Geologic Hazard Areas

- 22.10.240 Identification and definition.
- 22.10.250 Applicability to geological hazards.
- 22.10.260 Geologic hazard inventory maps.
- 22.10.270 Preliminary assessment.
- 22.10.280 Geologic reports and studies.
- 22.10.290 Administrative evaluation of geologic reports and studies.
- 22.10.295 Assurance.

Article V. Critical Aquifer Recharge Areas

- 22.10.300 Identification and definition
- 22.10.210 Critical aquifer recharge area maps
- 22.10.320 Exemptions for critical aquifer recharge area regulations
- 22.10.330 Reports and studies
- 22.10.340 Performance standards
- 22.10.350 Uses prohibited in critical aquifer recharge areas
- 22.10.360 General exemptions.
- 22.10.370 Permit process and application requirements.

- 22.10.380 Requirements of qualified consultants.
- 22.10.390 Land divisions.
- 22.10.400 On-site density transfer for sensitive critical areas.
- 22.10.410 General procedural provisions.
- 22.10.420 General savings provision – Reasonable use.
- 22.10.430 No special duty created.
- 22.10.440 Severability.

22.10.010 General purpose and intent.

- A. Sensitive Critical areas perform many important biological and physical functions that benefit the city of Richland and its residents.

These functions include, but are not limited to, the following (by type):

1. Wetlands: helping to maintain water quality; storing and conveying stormwater and flood water; recharging and discharging ground water; contributing to stream flow during low flow periods; stabilizing stream banks and shorelines; providing important wildlife habitat providing food, breeding, nesting and/or rearing habitat for fish and wildlife; improving water quality through biofiltration, adsorption and retention and transformation of sediments, nutrients and toxicants and serving as areas for recreation, educational and scientific study, and aesthetic appreciation; and
 2. Fish and wildlife habitat areas: maintaining species diversity and genetic diversity of local flora and fauna; providing opportunities for food, cover, nesting, breeding and movement for fish and wildlife; serving as areas for recreation, educational and scientific study and aesthetic appreciation; helping to maintain air and water quality; controlling erosion; and providing neighborhood separation and visual diversity within urban areas.
 3. In addition, certain portions of the city of Richland are characterized by geologic hazards that pose a risk to public and private property, to human life and safety and to the natural systems that make up the environment of the city of Richland. These lands are affected by natural processes that make them susceptible to landslides, seismic activity, and/or severe erosion. The city of Richland maintains that protection of sensitive critical areas and regulation of geologic hazards are necessary to protect the public health, safety, and welfare.
 4. In addition, certain portions of the City are located within critical aquifer recharge areas that pose a risk to public health and safety. These lands are susceptible to the degradation of ground water quality and quantity that could potentially impact potable water systems.
- B. This section of the Richland Municipal Code contains standards, guidelines, criteria and requirements intended to identify, analyze, avoid and mitigate probable impacts to the city of Richland's sensitive critical areas ~~and geologic hazard areas~~ and to enhance and restore them when possible. The intent of these regulations is to protect ecological functions, avoid environmental impacts where such avoidance is feasible and reasonable. In appropriate circumstances, impacts to ~~sensitive and geologic hazard~~ critical areas that result from regulated activities may be minimized, rectified, reduced and/or compensated for, consistent with the requirements of this section. The city of Richland's goal shall be to achieve no net loss of wetlands

and to avoid probable impacts, to the extent practical, to fish and wildlife habitat and within geologic hazard other critical areas.

C. It is the intent of this ~~section~~ chapter to:

1. Implement the goals and policies of the city of Richland's comprehensive plan, including those goals and policies that pertain to natural features and environmental protection; ~~aesthetics and community character; adequate housing and infrastructure; opportunities for economic development; creation of a balanced transportation system; adequate public facilities; and achievement of a mix of land use types and densities consistent with the city of Richland's land use plan;~~

2. Recognize and protect the beneficial functions of critical ~~Protect sensitive areas through the application of the most current, accurate, and complete scientific or technical information available as determined according to WAC 173-26-201(2)(a), and in consultation with state and federal agencies and other qualified professionals and integrate the full spectrum of state, tribal, and federal programs;~~

3. Serve as a basis for exercise of the city of Richland's substantive authority under the State Environmental Policy Act (SEPA) and the city of Richland's SEPA rules;

4. Comply with the requirements of the Growth Management Act (RCW 36.70A) and implementing rules; and

5. Coordinate environmental review and permitting of proposals to avoid duplication and delay.

D. The city of Richland further notes that Benton County, the U.S. Department of Fish and Wildlife, the U.S. Department of Energy and the Washington State Department of Ecology have identified and mapped some portions of the city of Richland – based on topographic, geologic, hydrologic, and habitat characteristics – where the conditions indicate that sensitive areas or geologic hazards may exist. Additional study and mapping are needed to verify that such conditions do prevail and are needed to identify other areas that are potentially ~~geologic hazards sensitive~~ critical areas. Mapping will enable the city of Richland to provide notice of the potential presence of sensitive critical areas or the risks associated with developing lands subject to geologic hazards to the public. It should be noted that the boundaries of the sensitive critical areas and geologic hazard areas displayed on these maps are approximate and are not intended to be used for individual site assessment. When differences occur between what is illustrated on these maps and current site conditions, the actual presence or absence of environmentally sensitive critical areas or geologic hazard areas on the site shall determine the action to be taken.

E. Compliance with the provisions of this chapter does not constitute compliance with other federal, state and local regulations. Other permits, including but not limited to HPA permits, Army Corps of Engineers Section 404 permits, and/or NPDES permits may be required. It is the responsibility of the applicant to comply with other requirements apart from the provisions of this chapter.

22.10.020 General applicability of these regulations.

- A. The provisions of these regulations shall apply to any activity that affects critical areas or their established buffers unless otherwise exempt.
- B. To avoid duplication, the following permits and approvals shall be subject to and coordinated with the requirements of these regulations: ~~clearing and~~ grading; subdivision or short subdivision; building permit; planned unit development; shoreline substantial development; variance; ~~conditional and special use permits.~~ and other permits leading to the development or alteration of land. ~~rezones and annexations.~~ The City shall not approve any permit or otherwise issue any authorization to alter the condition of any land, water or vegetation, or to construct or alter any structure or improvement in, over or on a critical area or associated buffer, without first assuring compliance with the requirements of this chapter.

22.10.030 General relationship of regulations of one type of sensitive critical area protection to other regulations.

These regulations shall apply as an overlay and in addition to zoning, land use and other regulations, including critical areas regulations, established by the city of Richland. The provisions of this chapter apply whether or not a permit or other type of City approval is being sought

- A. Areas characterized as sensitive critical may also be subject to other regulations established by this chapter due to the overlap or multiple functions of some sensitive or critical areas. For example, some landslide hazard areas (e.g., steep slopes) adjacent to wetlands may be regulated by buffering requirements according to the wetland management provisions of this chapter. Wetlands may be defined and regulated according to the wetland section and habitat management provisions of this chapter. In the event of any conflict among regulations in this chapter or with any other regulations of the City of Richland for a particular sensitive critical area, those regulations that provide greater protection to the environmentally sensitive or critical area shall apply.
- B. ~~These sensitive area regulations shall apply as an overlay and in addition to zoning, land use, and other regulations established by the city of Richland. In the event of any conflict between these regulations and any other regulations of the city of Richland, the regulations which provide greater protection to environmentally sensitive areas shall apply.~~

22.10.040 Definitions ~~—Wetlands.~~

For purposes of this article, the following definitions shall apply:

“Administrator” means such person as the City Manager of the City of Richland shall designate to administer and enforce the provisions of this title.

“Applicant” means the person, party, firm, partnership, corporation, or other entity that proposes any activity that could affect a ~~wetland.~~ sensitive critical area.

“Agricultural activities, existing and ongoing” includes those activities conducted on lands defined in RCW 84.34.020(2), and those activities involved in the production of crops and livestock, including, but not limited to, operation and maintenance of farm and stock ponds or drainage ditches, irrigation systems,

changes between agricultural activities, and normal operation, maintenance or repair of existing serviceable structures, facilities or improved areas. Activities that bring a previously nonagricultural area into agricultural use are not part of an ongoing activity. An operation ceases to be ongoing when the area on which it was conducted is proposed for conversion to a nonagricultural use or has lain idle for a period of longer than five years, unless the idle land is registered in a federal or state soils conservation program.

“Artificially created wetland” means wetlands created through purposeful action from nonwetland sites, including but not limited to irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscaping amenities, ~~or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway.~~ Wetlands may include those artificial wetlands intentionally created from nonwetland areas to mitigate the conversion of wetlands. (Term not used in text of code)

“Best available science” means use of a valid scientific process that includes the following:

1. Peer Review. The information has been critically reviewed by other persons who are qualified professionals or based on scientific publications.

2. Method. The methods used to obtain the information are clearly stated and able to be replicated. The methods are standardized in the pertinent scientific discipline or, if not, the methods have been appropriately peer-reviewed to assure their reliability and validity.

3. Logical conclusions and reasonable inferences. The conclusions presented are based on reasonable assumptions supported by other studies and consistent with the general theory underlying the assumptions. The conclusions are logically and reasonably derived from the assumptions and supported by the data presented. Any gaps in information and inconsistencies with other pertinent scientific information are adequately explained.

4. Quantitative Analysis. The data has been analyzed using appropriate statistical or quantitative methods.

5. Context. The information is placed in proper context. The assumptions, analytical techniques, data, and conclusions are appropriately framed with respect to the prevailing body of pertinent scientific knowledge.

6. References. The assumptions, analytical techniques, and conclusions are well referenced with citations to relevant, credible literature and other pertinent existing information. (Term not used in text of code)

“Best available science” means current scientific information used in the process to designate, protect, or restore critical areas that is derived from a valid scientific process as defined by WAC 365-195-900 through 925.

“Best management practices (BMPs)” ~~excludes existing, ongoing, and new agricultural activities outside of sensitive areas and their buffers.~~ BMPs are current and evolving conservation practices, or systems of practices, management or operational measures, or design and construction techniques; or normal and accepted industry standards that are applied to land use activity in a manner which:

- A. Controls soil loss and reduces water surface and ground water quality degradation caused by nutrients, wastes, toxics, and sediment; and
- B. Minimizes and mitigates adverse impacts to the natural chemical, physical and biological environment of the city; and
- C. Utilizes the city's natural resources on a long-term, sustainable yield basis.
- D. Protect trees, vegetation, and soils designated to be retained during and following site construction and use native plant species appropriate to the site for revegetation of disturbed areas; and
- E. Prevent contamination of surface and groundwater resources, and protect from impacts to native and other desirable vegetation with BMPs for chemical pesticide, herbicide, and fertilizer applications.

"Buffer" means an area adjacent to a sensitive critical area that functions to avoid loss or diminution of the ecologic functions and values of the sensitive critical area. Specifically, a buffer may:

- Preserve the ecologic functions and values of a system including, but not limited to, providing microclimate conditions, shading, input of organic material, and sediments; room for variation and changes in natural wetland, river, or stream characteristics; providing for habitat for lifecycle stages of species normally associated with the resource; and
- Physically isolate a sensitive critical area such as a wetland, river, or stream from potential disturbance and harmful intrusion from surrounding uses using distance, height, visual, and/or sound barriers, and generally including dense native vegetation, but also may include human-made features such as wildlife friendly fences and other barriers;
- Act to minimize risk to the public from loss of life, well-being, or property damage resulting from natural disasters such as from landslide or flooding.

~~"Channel migration zone" means the area along a river within which the channel(s) can be reasonably predicted to migrate over time as a result of natural and normally occurring hydrological and related processes when considered with the characteristics of the river and its surroundings. For the purpose of this program, the channel migration zone excludes areas separated from the active river channel by legally existing artificial structures that are likely to restrain channel migration including, but not limited to, flood control facilities, transportation facilities, and structures built above or constructed to remain intact through the 100-year flood. (Term not used in text of code.)~~

"Clearing" means the removal of trees, brush, grass, ground cover, or other vegetative matter from a site which exposes the earth's surface of the site.

~~"Creation" means the production or formation of a wetland through artificial means from an upland (dry) site.~~ (wetland) means the manipulation of the physical, chemical, or biological characteristics present to develop a wetland on an upland or deepwater site, where a wetland did not previously exist. Establishment results in a gain in wetland acreage [and function]. [A typical action is the excavation of upland soils to elevations that will produce a wetland hydroperiod and hydric soils, and support the growth of hydrophytic plant species.]

"Critical habitat" or "critical wildlife habitat" means habitat areas associated with threatened, endangered, sensitive, or priority species of plants or wildlife which, if altered, could reduce the likelihood that the species will maintain and reproduce over the long term. Such areas are documented with reference to lists, categories and definitions of species promulgated by the Washington Department of Wildlife (Non-Game Data System Special Animal Species) as identified in WAC 232-12-011 or 232-12-014

and in the priority habitat species lists compiled in compliance with WAC 365-190-080; or by rules and regulations adopted currently or hereafter by the U.S. Fish and Wildlife Service.

“Critical habitat” also includes the following types of areas:

- A. Regionally rare native fish and wildlife habitat (i.e., one of five or fewer examples of the habitat within the Mid-Columbia region).
- B. Fish and wildlife areas with irreplaceable ecological functions, including but not necessarily limited to the following:
 - 1. The areas listed as a national wildlife refuge, national park, natural area preserve or any preserve or reserve designated under WAC 332-30-151;
 - 2. The Lake Wallula wildlife habitat areas managed by the U.S. Army Corps of Engineers, including the Yakima River Wildlife Management Area and the Hanford Islands in the Columbia River managed by the U.S. Fish and Wildlife Service;
 - 3. Category I wetlands as defined in RMC 22.10.100;
 - 4. State nature area preserves or natural resource conservation areas identified by state law and managed by the Department of Natural Resources;
 - 5. Documented habitat, other than accidental presence, of threatened or endangered species;
 - 6. Documented habitat, other than accidental presence, of regional or national significance for migrating birds.

“Department” means the city of Richland community and development services group.

“Earth/earth material” means naturally occurring rock, soil, stone, sediment, or combination thereof.

“Enhancement” means the improvement of an existing viable wetland or buffer, such as by increasing plant diversity, increasing wildlife habitat, installing environmentally compatible erosion controls, or removing nonindigenous plant or pest animal species.

“Enhancement” (habitats in general) means the improvement of existing habitat such as by increasing plant density or structural diversity, or by removing nonindigenous or noxious species.

Enhancement (wetlands) means the manipulation of the physical, chemical, or biological characteristics of a wetland to heighten, intensify, or improve specific function(s) or to change the growth stage or composition of the vegetation present. Enhancement is undertaken for specified purposes such as water quality improvement, flood water retention, or wildlife habitat. Enhancement results in a change in wetland function(s) and can lead to a decline in other wetland functions, but does not result in a gain in wetland acres. [Examples are planting vegetation, controlling non-native or invasive species, and modifying site elevations to alter hydroperiods.] Activities typically consist of planting vegetation, controlling non-native or invasive species, modifying site elevations or the proportion of open water to influence hydroperiods, or some combination of these activities.

“Erosion” means wearing away of rock or soil by the gradual detachment of soil and rock fragments by water, wind, ice, and other mechanical and chemical forces.

“Erosion Hazard Areas” are areas identified by the United States Department of Agriculture Soil Conservation Service as having a severe rill and inter-rill erosion hazard.

“Establishment” (creation) means the manipulation of the physical, chemical or biological characteristics of a site to develop a wetland on an upland or deepwater site where a wetland did not previously exist. Establishment results in a gain in wetland acres. Activities typically involve excavation of upland soils to elevations that will produce a wetland hydroperiod, create hydric soils, and support the growth of hydrophytic plant species.

“Excavation” means the mechanical removal of earth material.

~~“Existing and ongoing agricultural activities” include those activities conducted on lands defined in RCW 84.34.020(2), and those activities involved in the production of crops and livestock, including, but not limited to, operation and maintenance of farm and stock ponds or drainage ditches, irrigation systems, changes between agricultural activities, and normal operation, maintenance or repair of existing serviceable structures, facilities or improved areas. Activities that bring a previously nonagricultural area into agricultural use are not part of an ongoing activity. An operation ceases to be ongoing when the area on which it was conducted is proposed for conversion to a nonagricultural use or has lain idle for a period of longer than five years, unless the idle land is registered in a federal or state soils conservation program.~~
(Note: moved to: “agricultural activities, existing and ongoing”)

“Federal Manual” or “federal methodology” means the methodology for identifying wetlands in the field as described in the current Federal Manual for Identifying and Delineating Jurisdictional Wetlands.

“Fill/fill materials” means a deposit of earth materials placed by human or mechanical (machine) means.

“Fill” means earth or any other substance or material placed in or on the ground, including earth retaining structures. In wetlands it includes any action that raises the elevation or creates dry land.

“Filling” means the act of transporting or placing (by any manner or mechanism) fill material from, to, or on any soil surface, sediment surface, or other fill material.

~~“Geotechnical report or geotechnical analysis” means a scientific study or evaluation conducted by a qualified expert that includes a description of the ground and surface hydrology and geology, estimates of susceptibility to erosion, sliding, earthquake, or other geological events, and the extent of risk to the health and safety of persons and property. Such a report shall include conclusions and recommendations regarding the effect of the proposed development on geologic conditions, the adequacy of the site to be developed, the impacts of the proposed development, alternative approaches to the proposed development, and measures to mitigate potential site-specific and cumulative geological and hydrological impacts of the proposed development, including the potential adverse impacts to adjacent and down-gradient properties. Geotechnical reports shall conform to accepted technical standards and must be prepared by qualified professional engineers or geologists who have professional expertise regarding the regional and local geology and processes. (Term not used in text of code.)~~

“Grading” means any excavating, filling, clearing, leveling, or contouring of the ground surface by human or mechanical means.

“Grading” means the movement or redistribution of the soil, sand, rock, gravel, sediment, or other material on a site in a manner that alters the natural contour of the land.

“Habitat management” means management of land to maintain species in suitable habitats within their natural geographic distribution so that isolated subpopulations are not created. This does not imply maintaining all habitat or individuals of all species in all cases.

“Habitat map” means maps of plant cover types/communities (titled: Fish and Wildlife Conservation Areas) adopted by the city of Richland to indicate the potential presence of wildlife species.

“High impact land use” means land uses that are generally associated with relatively high levels of human activity or disturbance, development of structures, or substantial wetland habitat impacts. Depending on their context, high impact land uses can include, but are not limited to, residential buildings and structures, active recreation areas and facilities, commercial and industrial land uses, buildings and structures, and similar uses and activities which create a significant potential for impacts to wetlands. The context for determining the impact of a land use includes the sensitivity of the wetland, the density and intensity of adjacent development, the amount of impervious surface, the orientation of proposed buildings and structures and other relevant factors as determined in an individual case.

“In-kind mitigation” means replacement of wetlands with substitute wetlands whose characteristics closely approximate those destroyed or degraded by a regulated activity.

“Landslide Hazard Areas” are areas that are potentially subject to landslides based on a combination of geologic, topographic, and hydrologic factors. They include any areas susceptible because of any combination of bedrock, soil, slope (gradient), slope aspect, structure, hydrology, or other factors. Landslide hazard areas include, but are not limited to, the following types of areas:

1. Areas delineated by the United States Department of Agriculture Soil Conservation Service as having a severe limitation for building site development;
2. Areas designated as quaternary slumps, earthflows, mudflows, lahars, or landslides on maps published by the United States Geological Survey or Department of Natural Resources Division of Geology and Earth Resources;
3. Areas with all three of the following characteristics:
 - a. Areas with slope steeper than 15 percent;
 - b. Hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock; and
 - c. Springs or ground water seepage;
4. Areas that have shown movement during the holocene epoch (from 10,000 years ago to the present) or which are underlain or covered by mass wastage debris of that epoch;
5. Areas with slopes that are parallel or subparallel to planes of weakness (such as bedding planes, joint systems, and fault planes) in subsurface materials;
6. Areas with slopes having gradients steeper than 80 percent subject to rockfall during seismic shaking;
7. Areas potentially unstable as a result of rapid stream incision, stream bank erosion and undercutting by wave action;
8. Areas that show evidence of, or on, an active alluvial fan presently or potentially subject to inundation by debris flows or catastrophic flooding; or
9. Areas with a slope of 40 percent or steeper and with a vertical relief of 10 or more feet except areas composed of consolidated rock. A slope is delineated by establishing its toe and top and measured by averaging the inclination over at least 10 feet of vertical relief.

“Low impact land use” means land uses that are typically associated with relatively low levels of human activity, disturbance or development and that are conducted in a manner as to minimize impacts to the buffer. Low impact land uses may include:

- A. Conservation or restoration activities aimed at protecting the soil, water, vegetation, or wildlife;
- B. Passive recreation, including walkways or trails located in the outer 25 percent of the buffer area;
- C. Educational and scientific research activities, provided prior approval is obtained from the approval authority;
- D. Normal and routine maintenance and repair of any existing public or private facilities, provided appropriate measures are undertaken to minimize impacts to the wetland and its buffer and that disturbed areas are restored immediately to a natural condition; or
- E. Agricultural land uses that do not create a significant probable wetland impact.

“Mitigation” means a series of prioritized actions that when achieved in full ensures project impacts will result in no net loss of habitat value or fish and wildlife populations.

“Mitigation” involves actions that proceed in sequence from the highest to the lowest priority as follows:

- A. Avoiding impacts to environmentally sensitive critical areas by not taking action or parts of actions.
 - B. Minimizing impact by limiting the degree or magnitude of the action and its implementation.
 - C. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
 - D. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
 - E. Compensating for the impact by replacing or providing substitute resources or environments.
- While monitoring alone is not considered mitigation for purposes of these regulations, it may be part of a comprehensive mitigation program.

F. Monitoring the hazard or other required mitigation and taking remedial action when necessary.

“Native vegetation” means vegetation indigenous to the area in question.

~~“Out-of-kind mitigation” means replacement of wetlands with substitute wetlands whose characteristics do not closely approximate those destroyed or degraded by a regulated activity.~~

~~“Permanent erosion control” means continuous on-site and off-site control measures that are needed to control conveyance or deposition of earth, and turbidity or pollutants after development, construction, or restoration. (Term not used in text of code.)~~

Preservation (wetlands) means the removal of a threat to, or preventing the decline of, wetland conditions by an action in or near a wetland. This term includes the purchase of land or easements, repairing water control structures or fences, or structural protection. Preservation does not result in a gain of wetland acres [but may result in a gain in functions over the long term].

"Priority habitat" means a habitat type with unique or significant value to one or more species. An area classified and mapped as priority habitat must have one or more of the following attributes:

- Comparatively high fish or wildlife density;
- Comparatively high fish or wildlife species diversity;

- Fish spawning habitat;
- Important wildlife habitat;
- Important fish or wildlife seasonal range;
- Important fish or wildlife movement corridor;
- Rearing and foraging habitat;
- Important marine mammal haul-out;
- Refugia habitat;
- Limited availability;
- High vulnerability to habitat alteration;
- Unique or dependent species; or
- Shellfish bed.

A priority habitat may be described by a unique vegetation type or by a dominant plant species that is of primary importance to fish and wildlife (such as oak woodlands or eelgrass meadows or shrub steppe habitat). A priority habitat may also be described by a successional stage (such as, old growth and mature forests). Alternatively, a priority habitat may consist of a specific habitat element (such as a consolidated marine/estuarine shoreline, talus slopes, caves, snags) of key value to fish and wildlife. A priority habitat may contain priority and/or nonpriority fish and wildlife

"Priority species" means species requiring protective measures and/or management guidelines to ensure their persistence at genetically viable population levels. Priority species are those that meet any of the criteria listed below.

- A. Criterion 1. State-listed or state proposed species. State-listed species are those native fish and wildlife species legally designated as endangered (WAC 232-12-014), threatened (WAC 232-12-011), or sensitive (WAC 232-12-011). State proposed species are those fish and wildlife species that will be reviewed by the department of fish and wildlife (POL-M-6001) for possible listing as endangered, threatened, or sensitive according to the process and criteria defined in WAC 232-12-297.
- B. Criterion 2. Vulnerable aggregations. Vulnerable aggregations include those species or groups of animals susceptible to significant population declines, within a specific area or statewide, by virtue of their inclination to congregate. Examples include heron colonies, seabird concentrations, and marine mammal congregations.
- C. Criterion 3. Species of recreational, commercial, and/or tribal importance. Native and nonnative fish, shellfish, and wildlife species of recreational or commercial importance and recognized species used for tribal ceremonial and subsistence purposes that are vulnerable to habitat loss or degradation.
- D. Criterion 4. Species listed under the federal Endangered Species Act as either proposed, threatened, or endangered.

"Qualified consultant," for purposes of these regulations, shall mean a professionally trained and/or certified wildlife biologist or ecologist or other professional with expertise in the scientific disciplines necessary to identify, evaluate and manage habitat.

"Qualified professional" for the purpose of these regulations, shall mean a person with experience and training in the pertinent scientific discipline, and who is a qualified scientific expert with expertise appropriate for the relevant critical area subject in accordance with WAC 365-195-905(4). A qualified professional must have obtained a B.S. or B.A. or equivalent degree in biology, ecology, engineering,

environmental studies, fisheries, geomorphology, or related field, and two years of related work experience.

- A. A qualified professional for habitats or wetlands must have a degree in biology, ecology or related field and professional experience related to the subject species. A Qualified wetland specialist” is further defined below.
- B. A qualified professional for a geological hazard must be a professional engineer or geologist, licensed in the state of Washington.
- C. A qualified professional for critical aquifer recharge areas means a hydrogeologist, geologist, engineer, or other scientist with experience in preparing hydrogeologic assessments.

“Qualified wetland specialist” means a person or firm with experience and training in wetland issues, and with experience in performing delineations, analyzing wetland impacts, and recommending wetland mitigation and restoration. Qualifications include:

- A. A Bachelor of Science or Bachelor of Arts or equivalent degree in biology, botany, ecology, environmental studies, fisheries, soil science, wildlife or related field, and two years of related work experience, including a minimum of one year of experience delineating wetlands using the Unified Federal Manual preparing wetland reports. Additional education may substitute for one year of related work experience; or
- B. Four years of related work experience and training, with a minimum of two years’ experience delineating wetlands with the Unified Federal Manual and preparing wetland reports.

~~Qualified Consultant. A “qualified wetland specialist” means a person or firm with experience and training in wetland issues, and with experience in performing delineations, analyzing wetland impacts, and recommending wetland mitigation and restoration. Qualifications include:~~

~~A. A Bachelor of Science or Bachelor of Arts or equivalent degree in biology, botany, or environmental studies, fisheries, soil science, wildlife or related field, and two years of related work experience, including a minimum of one year of experience delineating wetlands using the Unified Federal Manual preparing wetland reports. Additional education may substitute for one year of related work experience; or~~

~~B. Four years of related work experience and training, with a minimum of two years’ experience delineating wetlands with the Unified Federal Manual and preparing wetland reports.~~

“Re-establishment:” means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural or historic functions to a former wetland. Re-establishment results in a gain in wetland acres (and functions). Activities could include removing fill material, plugging ditches, or breaking drain tiles.

“Regulated activity” means activities occurring in or near and/or potentially affecting a wetland or wetland buffer that are subject to the provisions of this section. Regulated activities generally include, but are not limited to, any filling, dredging, dumping or stockpiling, draining, excavation, flooding, construction or reconstruction, driving pilings, obstructing, shading, clearing or harvesting.

“Rehabilitation” (wetland): means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural or historic functions [and processes] of a degraded wetland. Rehabilitation results in a gain in wetland function but does not result in a gain in

wetland acres. [Activities could involve breaching a dike to reconnect wetlands to a floodplain or returning tidal influence to a wetland.]

"Restore", "Restoration" or "ecological restoration" means the reestablishment or upgrading of impaired natural or enhanced ecological shoreline processes or functions. This may be accomplished through measures including but not limited to re-vegetation, removal of intrusive shoreline structures and removal or treatment of toxic materials. Restoration does not imply a requirement for returning the shoreline area to pre-Columbia Basin Project, aboriginal or pre-European settlement conditions.

~~"Restoration" means the reestablishment of a viable wetland from a previously filled or degraded wetland site.~~

"Secondary habitat" or "secondary wildlife habitat" means areas with one or more of the following attributes: comparatively high wildlife density; high wildlife species richness; significant wildlife breeding habitat; significant wildlife seasonal ranges; significant movement corridors; limited availability; and/or high vulnerability. Secondary habitat offers less diversity of animal and plant species than critical habitat, but is important for performing the essential functions of habitat.

"Seismic Hazard Areas" are areas subject to severe risk of damage as a result of earthquake induced ground shaking, slope failure, settlement, soil liquefaction, or surface faulting. One indicator of potential for future earthquake damage is a record of earthquake damage in the past. Ground shaking is the primary cause of earthquake damage in Washington. The strength of ground shaking is primarily affected by: (1) magnitude of an earthquake; (2) distance from the source of an earthquake; (3) type of thickness of geologic materials at the surface; and (4) type of subsurface geologic structure.

"Site" means any parcel or combination of contiguous parcels where the proposed project impacts a wetland(s) or other critical area.

"Slope" means an inclined earth surface, the inclination of which is expressed as the ratio of horizontal distance to vertical distance.

"Structural diversity" means the relative degree of diversity or complexity of vegetation in a habitat area as indicated by the stratification or layering of different plant communities (e.g., ground cover, shrub layer, and tree canopy); the variety of plant species; and the spacing or pattern of vegetation.

"Structure" means a permanent or temporary edifice or building, or any piece of work artificially built or composed of parts joined together in some definite manner, whether installed on, above, or below the surface of the ground or water, except for vessels;

"Substrate" means the soil, sediment, decomposing organic matter or combination of those located on the bottom surface of the wetland.

~~"Temporary erosion control" means on-site and off-site control measures that are needed to control conveyance or deposition of earth, turbidity or pollutants during development, construction, or restoration.~~ (Term not used in text of code.)

“Wetland” or “wetlands” refers to areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from nonwetland sites, including but not limited to irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from non-wetland areas to mitigate the conversion of wetlands or wetland areas preserved as mitigation for the conversion of wetlands. For identifying and delineating a regulated wetland, the methodology shall be done in accordance with the approved federal wetland delineation manual and applicable regional supplements as provided in RCW 90.58.380 and WAC 173-22-035. ~~However, wetlands do include those artificial wetlands intentionally created to mitigate conversion of wetlands.~~

“Wetland buffer area” means a naturally vegetated and undisturbed, enhanced or revegetated zone surrounding a natural, restored or newly created wetland that is an integral part of a wetland ecosystem, and protects a wetland from adverse impacts to the integrity and value of the wetland. Wetland buffers serve to moderate runoff volume and flow rates; reduce sediment, chemical nutrient and toxic pollutants; provide shading to maintain desirable water temperatures; provide habitat for wildlife; and protect wetland resources from harmful intrusion.

~~Wetland Class. The U.S. Fish and Wildlife Service wetland classification scheme uses a hierarchy of systems, subsystems, classes and subclasses to describe wetland types (refer to USFWS, December 1979, Classification of Wetlands and Deepwater Habitats of the United States for a complete explanation of the wetland classification scheme). Eleven class names are used to describe wetland and deepwater habitat types. These include: forested wetland, scrub-shrub wetland, emergent wetland, moss-lichen wetland, unconsolidated shore, aquatic bed, unconsolidated bottom, rock bottom, rocky shore, stream bed, and reef. (Term not used in text of code.)~~

“Wetland delineation” means the delineation requires the actual flagging or staking in the field of the edges of the wetland by a qualified consultant or their representative.

“Wetland determination” means a report prepared by a qualified consultant that identifies, characterizes and analyzes potential impacts to wetlands consistent with applicable provisions of these regulations. A determination does not include a formal delineation.

Article 2 - Wetlands

~~22.10.050 Applicability to wetlands.~~

~~A. See RMC 22.10.020 for general applicability.~~

~~B. Nonproject actions, limited to: rezones and annexations.~~

~~22.10.060 Regulation wetlands.~~

~~A. All Category I wetlands;~~

~~B. Category II and III wetlands greater than one-half acre; and~~

~~C. Category IV wetlands greater than one acre.~~

22.10.070 Regulated activities in wetlands.

The following activities which occur in conjunction with a development application within a wetland and its associated buffer, or outside a wetland or buffer, but affecting the wetland or buffer, shall be regulated pursuant to the standards of this chapter:

A. Removing, excavating, disturbing or dredging soil, sand, gravel, minerals, organic matter or materials of any kind;

B. Dumping, discharging or filling with any material;

C. Draining, flooding or disturbing the water level or water table;

D. Driving, piling or placing obstructions;

E. Constructing, reconstructing, demolishing or altering any structure or infrastructure if the activity results in greater impervious surface coverage;

F. Destroying or altering vegetation including through clearing, harvesting, intentional burning, shading or planting vegetation that would alter the character of wetland;

G. Activities that result in significant changes in water temperature, physical or chemical characteristics of wetland water sources, introduction of pollutants, including water quantity and quality as stated in Chapter 90.03 RCW and Chapter 173-201 WAC;

H. Alteration of natural drainage patterns or any activity that results in a discharge of stormwater runoff into a wetland; and

I. Any other activities affecting a wetland or wetland buffer not otherwise exempt from the provisions of this section. [Ord. 48-93; Ord. 23-01].

22.10.080 Exemptions ~~to wetland regulations.~~ and allowed uses in wetlands

~~A. See RMC 22.10.300 for general exemptions to all sensitive areas.~~

~~B. The following activities shall be exempt from the provisions of this chapter, provided they are conducted using best management practices on wetlands:~~

~~1. Activities involving artificially created wetlands intentionally created from nonwetland sites, including but not limited to, grass-lined swales, irrigation and drainage ditches, detention facilities, and landscape features, except wetlands created as mitigation.~~

~~C. Notwithstanding the exemptions provided by RMC 22.10.300 and by this chapter, any otherwise exempt activities occurring in or near wetlands shall comply with the intent of these standards and shall consider on-site alternatives that avoid or minimize probable wetland impacts.~~

- A. Wetlands. The following wetlands are exempt from the buffer provisions contained in this Chapter and the normal mitigation sequencing process in (citation needed here) They may be filled if impacts are fully mitigated based on provisions in RMC 22.10.120 Wetland alteration and mitigation. In order to verify the following conditions, a critical area report for wetlands must be submitted.
1. All isolated Category III and IV wetlands less than 1,000 square feet that:
 - a. Are not associated with riparian areas or buffer
 - b. Are not part of a wetland mosaic.
 - c. Do not contain habitat identified as essential for local populations of priority species identified by Washington Department of Fish and Wildlife or species of local importance.
 - d. Are not a vernal pool.
 - e. Are not an alkali wetland
 - f. Do not contain aspen stands
- B. Activities Allowed in Wetlands. The activities listed below are allowed in wetlands. These activities do not require submission of a sensitive critical area report, except where such activities result in a loss of the functions and values of a wetland or wetland buffer. These activities include:
1. Conservation or preservation of soil, water, vegetation, fish, shellfish, and/or other wildlife that does not entail changing the structure or functions of the existing wetland.
 2. The harvesting of wild crops in a manner that is not injurious to natural reproduction of such crops and provided the harvesting does not require tilling of soil, planting of crops, chemical applications, or alteration of the wetland by changing existing topography, water conditions, or water sources.
 3. Agricultural activities that are existing and ongoing, provided that they implement applicable Best management Practices (BMPs) contained in the latest editions of the USDA Natural Resources Conservation Services Field office Technical Guide; or develop a farm conservation plan in coordination with the local conservation district. BMPs and/or farm plans should address potential impacts to wetlands from livestock, nutrient and farm chemicals, soil erosion and sediment control and agricultural drainage infrastructure. BMPs and/or farm plans should ensure that ongoing agricultural activities minimize their effects on water quality, riparian ecology, salmonid populations and wildlife habitat.
 4. Drilling for utilities/utility corridors under a wetland, with entrance/exit portals located completely outside of the wetland buffer, provided that the drilling does not interrupt the ground water connection to the wetland or percolation of surface water down through the soil column. Specific studies by a hydrologist are necessary to determine whether the ground water connection to the wetland or percolation of surface water down through the soil column will be disturbed.
 5. Enhancement of a wetland through the removal of non-native invasive plant species. Removal of invasive plant species shall be restricted to hand removal unless permits from the appropriate regulatory agencies have been obtained for approved biological or chemical treatments. All removed plant material shall be taken away from the site and appropriately disposed of. Plants that appear on the Washington State Noxious Weed Control Board list of noxious weeds must be handled and disposed of according to a noxious weed control plan appropriate to that species. Re-vegetation with appropriate native species at natural densities shall occur in conjunction with removal of invasive plant species.

6. Educational and scientific research activities
 7. Normal and routine maintenance and repair of any existing public or private facilities within an existing right-of-way, provided that the maintenance or repair does not expand the footprint or use of the facility or right-of-way.
- C. Notwithstanding the exemptions provided by this chapter, any otherwise exempt activities occurring in or near wetlands shall comply with the intent of these standards and shall consider on-site alternatives that achieve no net loss of ecological wetland functions.

22.10.090 Wetland inventory maps.

The approximate location and extent of wetlands within the city of Richland's planning area are shown on the sensitive critical areas maps adopted as part of this section. These maps shall be used only as a general guide for the assistance of property owners and the public, as the boundaries are generalized. The actual type, extent and boundaries of wetlands shall be determined in the field by a qualified consultant according to the procedures, definitions and criteria established by this chapter. In the event of any conflict between the wetland location or designation shown on the city of Richland's maps and the criteria or standards of this chapter, the results of applying the criteria and standards during the field investigation shall control.

22.10.100 Rating – Categories of wetland.

Wetlands shall be designated Category I, Category II, Category III, or Category IV ~~or locally significant~~ according to the following criteria:

A. Category I, II, III, and IV are set forth in the Washington State Department of Ecology's Wetland Rating System for Eastern Washington, ~~October 1991 (Publication No. 91-58) or as amended. Publication #04-06-030, as may be amended in the future (hereinafter referred to as the Ecology Wetlands Rating System).~~

~~B. "Locally significant wetlands" are those that are deemed important to the city of Richland because they function as part of a water quality or flood mitigation program, are planned to be or can be integrated into an identified open space plan or system, or serve other substantial public purposes. Locally significant wetlands may be considered for acquisition by the city of Richland pursuant to land trade, purchase of a fee or lesser interest, or other appropriate mechanism.~~

22.10.110 Wetland buffer areas.

- A. The establishment of wetland buffer areas shall be required for all development proposals and activities adjacent to wetlands to protect the integrity, function and value of the wetland. Buffers shall consist of an undisturbed area of vegetation established to protect the functions and values of the wetland. The standard buffer widths assume that the buffer is vegetated with a native plant community appropriate for the ecoregion. If the existing buffer is unvegetated, sparsely vegetated, or vegetated with invasive species that do not perform needed functions, the buffer should either be planted to create the appropriate plant community or the buffer should be widened to ensure that adequate functions of the buffer are provided. Buffers shall be determined in conjunction with considerations of wetland type and quality, approved wetland alterations, and required mitigation measures. Buffers shall be determined in

conjunction with considerations of wetland type and quality, approved wetland alterations and required mitigation measures. Buffers are not intended to be established or to function independently of the wetland they are established to protect; the establishment of a buffer shall not operate to prevent a use or activity that would otherwise be permitted in the wetland subject to mitigation.

- A. B. Buffers shall be measured from the wetland edge as delineated using the [1987 Army Corps of Engineers Wetlands Delineation Manual](#) and the Arid West Regional Supplement. Buffers shall be ~~Washington State Wetlands Identification and Delineation Manual and~~ marked in the field. Required buffer widths shall be determined according to the proposed land use (Table 22.10.110(C) below) and the wetland category in Table 22.10.110(D). ~~reflect the sensitivity of the wetland and the type and intensity of human activity proposed to be conducted near the wetland.~~
- C. ~~The following buffer widths are established:~~ The following table describes the types of land use:

WETLAND CATEGORY	HIGH IMPACT LAND USE	LOW IMPACT LAND USE
Category-I	150 feet	75-feet
Category-II	100 feet	50-feet
Category-III	50 feet	25-feet
Category-IV	50 feet	25-feet

Table 22.10.110(C) - Types of Land Uses

<u>Level of Impact from Proposed Change in Land Use</u>	<u>Types of Land Use Based on Common Zoning Designations</u>
<u>High</u>	• <u>Commercial</u> • <u>Urban</u> • <u>Industrial</u> • <u>Institutional</u> • <u>Retail sales</u> • <u>Residential (more than 1 unit/acre)</u> • <u>High-intensity recreation (golf courses, ball fields, etc.)</u> • <u>Conversion to high intensity agriculture (dairies, nurseries, greenhouses, growing and harvesting crops requiring annual tilling and raising and maintaining animals, etc.)</u> • <u>Hobby Farms</u>

<u>Moderate</u>	• <u>Residential (1 unit/acre or less)</u> • <u>Moderate-intensity open space (parks with biking, jogging, etc.)</u> • <u>Paved driveways and gravel driveways serving 3 or more residences</u> • <u>Paved trails</u> • <u>Conversion to moderate intensity agriculture (orchards, hay fields, etc.)</u> • <u>Utility corridor or right-of-way shared by several utilities and including access/maintenance road</u>
<u>Low</u>	• <u>Low-intensity open space (hiking, bird-watching, preservation of natural resources, etc.)</u> • <u>Timber management (cutting of trees only)</u> • <u>Gravel driveways serving 2 or fewer residences</u> • <u>Unpaved trails</u> • <u>Utility corridor without a maintenance road and little or no vegetation management.</u>

- D. ~~Buffer widths may be modified by averaging buffer widths or by enhancing buffer quality as set forth herein.~~ The following buffer widths are established:

Table 22.10.110(D) – Buffer Widths

<u>Wetland Characteristics</u>	<u>Buffer Width by Impact of Proposed Land Use</u>	<u>Other Measures Recommended for Protection</u>
<u>Category IV Wetlands (For wetlands scoring less than 16 points for all functions)</u>		
<u>Score for all 3 basic functions is less than 16 points</u>	<u>Low – 25 ft.</u> <u>Moderate – 40 ft.</u> <u>High – 50 ft.</u>	<u>None</u>
<u>Category III Wetlands (For wetlands scoring 16-18 points for all functions)</u>		
<u>Moderate level of function for habitat (score for habitat 5-7 points)</u>	<u>Low – 75 ft.</u> <u>Moderate – 110 ft.</u> <u>High – 150 ft.</u>	<u>None</u>
<u>Score for habitat 3-4 points</u>	<u>Low – 40 ft.</u> <u>Moderate – 60 ft.</u> <u>High – 80 ft.</u>	<u>None</u>
<u>Category II Wetlands (For wetlands that score 19-21 points or more for all functions or having the “Special Characteristics” identified in the rating system)</u>		
<u>High level of function for habitat (score for habitat 8-9 points)</u>	<u>Low – 100 ft.</u> <u>Moderate – 150 ft.</u> <u>High – 200 ft.</u>	<u>Maintain connections to other habitat areas.</u>
<u>Moderate level of function for habitat (score for habitat 5-7 points)</u>	<u>Low – 75 ft.</u> <u>Moderate – 110 ft.</u> <u>High – 150 ft.</u>	<u>None</u>

<u>Wetland Characteristics</u>	<u>Buffer Width by Impact of Proposed Land Use</u>	<u>Other Measures Recommended for Protection</u>
<u>High level of function for water quality improvement and low for habitat (score for water quality 8-9 points; habitat less than 5 points)</u>	<u>Low – 50 ft.</u> <u>Moderate – 75 ft.</u> <u>High – 100 ft.</u>	<u>No additional surface discharges of untreated runoff</u>
<u>Riparian forest</u>	<u>Buffer width to be based on score for habitat functions or water quality functions</u>	<u>Riparian forest wetlands need to be protected at a watershed or subbasin scale</u> <u>Other protection based on needs to protect habitat and/or water quality functions</u>
<u>Not meeting above characteristic</u>	<u>Low – 50 ft.</u> <u>Moderate – 75 ft.</u> <u>High – 100 ft.</u>	<u>None</u>
<u>Category I Wetlands (For wetlands that score 22 points or more for all functions or having the “Special Characteristics” identified in the rating system)</u>		
<u>Wetlands of High Conservation Value</u>	<u>Low – 125 ft.</u> <u>Moderate – 190 ft.</u> <u>High – 250 ft.</u>	<u>No additional surface discharges to wetland or its tributaries.</u> <u>No septic systems within 300 ft. of wetland.</u> <u>Restore degraded parts of buffer.</u>
<u>High level of function for habitat (score for habitat 8-9 points)</u>	<u>Low – 100 ft.</u> <u>Moderate – 150 ft.</u> <u>High – 200 ft.</u>	<u>Restore degraded parts of buffer.</u> <u>Maintain connections to other habitat areas</u>
<u>Moderate level of function for habitat (score for habitat 5-7 points)</u>	<u>Low – 75 ft.</u> <u>Moderate – 110 ft.</u> <u>High – 150 ft.</u>	<u>None</u>
<u>High level of function for water quality improvement (8-9 points) and low for habitat (less than 5 points)</u>	<u>Low – 50 ft.</u> <u>Moderate – 75 ft.</u> <u>High – 100 ft.</u>	<u>No additional surface discharges of untreated runoff</u>
<u>Not meeting above characteristics</u>	<u>Low – 50 ft.</u> <u>Moderate – 75 ft.</u> <u>High – 100 ft.</u>	<u>None</u>

22.10.115 Buffer modifications

1. ~~Buffer width averaging shall be allowed only where the applicant demonstrates to the department that the wetland contains variations in sensitivity due to existing physical characteristics, that lower~~

intensity land uses would be located adjacent to areas where the buffer width is reduced, that width averaging will not adversely impact the wetland functional values, and that the total area contained within the buffer after averaging is no less than that contained within the standard buffer prior to averaging.

2. Buffer width may be reduced by up to 25 percent if the existing buffer area is vegetated with greater than 90 percent areal cover of native species and a report by a qualified wetlands specialist demonstrates that a smaller than standard wetland buffer will provide all of the buffer functions necessary to protect all functions and values of the wetland. The department may require long-term monitoring of the buffer and wetland with appropriate contingency actions if adverse impacts to the wetland occur.

3. Notwithstanding the reductions permitted in subsections (D)(1) and (2) of this section, buffer widths shall not be reduced by more than 50 percent of the required buffer or to less than 25 feet.

E. The minimum buffer width stated in subsection (E)(3) of this section shall be increased not more than 125 percent (buffer width x 1.25) when the qualified consultant determines, based upon a site-specific wetland analysis, that impacts on the wetland from a proposed development can only be mitigated by a greater buffer width. The standard wetland buffer width shall be increased:

1. When the adjacent land is susceptible to severe erosion and erosion control measures will not effectively prevent adverse wetland impacts; or

2. When the standard buffer has minimal or degraded vegetative cover that cannot be improved through enhancement; or

3. When the minimum buffer for a wetland extends into an area with a slope of greater than 25 percent, the buffer shall be the greater of:

a. The minimum buffer for that particular wetland; or

b. Twenty-five feet beyond the point where the slope becomes 25 percent or less.

F. Low impact uses and activities that are consistent with the purpose and function of the wetland buffer and do not detract from its integrity may be permitted within the buffer depending on the sensitivity of the wetland. Examples of uses and activities which may be permitted in appropriate cases include pedestrian trails, viewing platforms, stormwater management facilities such as grass-lined swales, and utility easements. Uses permitted within the buffer shall be located in the outer portion of the buffer as far as possible from the wetland.

G. Required buffers shall not deny all reasonable use of property. A variance from buffer width requirements may be granted by the city of Richland upon a demonstration by the applicant that:

1. There are special circumstances applicable to the subject property or to the intended use such as shape, topography, location or surroundings that do not apply generally to other properties and which support the granting of a variance from the buffer width requirements;

2. Such buffer width variance is necessary for the preservation and enjoyment of a substantial property right or use possessed by other similarly situated property, but which because of special circumstances is denied to the property in question;

~~3. The granting of such buffer width variance will not be materially detrimental to the public welfare or injurious to the property or improvement; and~~

~~4. The granting of the buffer width variance will not materially affect the subject wetland.~~

~~5. All variances shall be in accord with RMC 23.70.110 through 23.70.170.~~

A. Buffer averaging to improve wetland protection may be permitted when all of the following conditions are met:

1. The wetland has significant differences in characteristics that affect its habitat functions, such as a wetland with a forested component adjacent to a degraded emergent component or a “dual-rated” wetland with a Category I area adjacent to a lower rated area.
2. The buffer is increased adjacent to the higher functioning area of habitat or more sensitive portion of the wetland and decreased adjacent to the lower functioning or less sensitive portion as demonstrated by a critical areas report from a qualified wetland professional.
3. The total area of the buffer after averaging is equal to the area required without averaging.
4. The buffer at its narrowest point is never less than either $\frac{3}{4}$ of the required width or 75 feet for Category I and II, 50 feet for Category III, and 25 feet for Category IV, whichever is greater.

B. Averaging for proposed land to allow reasonable uses may be allowed when all of the following are met:

1. There are no feasible alternatives to the site design that could be accomplished without buffer averaging.
2. The averaged buffer will not result in degradation of the wetland’s functions and values as demonstrated by a critical areas report from a qualified wetland professional.
3. The total buffer area after averaging is equal to the area required without averaging.
4. The buffer at its narrowest point is never less than either $\frac{3}{4}$ of the required width or 75 feet for Category I and II, 50 feet for Category III, and 25 feet for Category IV, whichever is greater.

C. Reduction in buffer width based on reducing the intensity of impacts from proposed land uses

1. The buffer widths recommended for proposed land uses with high-intensity impacts to wetlands can be reduced to those recommended for moderate-intensity impacts under the following conditions:
 - a. For wetlands that score moderate or high for habitat (5 points or more for the habitat functions), the width of the buffer can be reduced if both of the following criteria are met:
 - i. A relatively undisturbed, vegetated corridor at least 100 feet wide is protected between the wetland and any other Priority Habitats as defined by the Washington State Department of Fish and Wildlife (“relatively undisturbed” and “vegetated

corridor” are defined in the Washington State Wetland Rating System for Eastern Washington – 2014 Update, or latest update). Priority Habitats in eastern Washington include:

- Wetlands
- Riparian zones
- Cliffs
- Urban natural open space

ii. The corridor must be protected for the entire distance between the wetland and the Priority Habitat by some type of legal protection such as a conservation easement.

iii. Measures to minimize the impacts of different land uses on wetlands, such as the examples summarized as applicable in Table 22.10.110(D), are applied.

b. For wetlands that score fewer than 5 points for habitat, the buffer width can be reduced to that required for moderate land-use impacts by applying applicable measures to minimize the impacts of the proposed land uses (see examples in Table 22.10.115 D).

D. Examples of Measures Required Mitigation to minimize impacts to wetlands from changes in land uses with high impacts:

Table 22.10.115 D

<u>Types Examples of Disturbance</u>	<u>Activities and Uses that Cause Disturbances</u>	<u>Examples of Measures to Minimize Impacts Required Mitigation</u>
<u>Lights</u>	• <u>Parking lots</u> • <u>Warehouses</u> • <u>Manufacturing</u> • <u>Residential areas</u>	• <u>Direct lights away from wetland</u>
<u>Noise</u>	• <u>Manufacturing</u> • <u>Residential areas</u>	• <u>Locate activity that generates noise away from wetland</u> • <u>If warranted, enhance existing buffer with native vegetation plantings adjacent to noise source</u> • <u>For activities that generate relatively continuous, potentially disruptive noise, such as certain heavy industry or mining, establish an additional 10' heavily vegetated buffer strip immediately adjacent to the outer wetland buffer</u>
<u>Toxic runoff*</u>	• <u>Parking lots</u> • <u>Roads</u> • <u>Manufacturing</u> • <u>Residential areas</u> • <u>Application of agricultural pesticides</u> • <u>Landscaping</u>	• <u>Route all new, untreated runoff away from wetland while ensuring wetland is not dewatered</u> • <u>Establish covenants limiting use of pesticides within 150 ft of wetland</u> • <u>Apply integrated pest management</u>

<u>Stormwater runoff</u>	• <u>Parking lots</u> • <u>Roads</u> • <u>Manufacturing</u> • <u>Residential areas</u> • <u>Commercial</u> • <u>Landscaping</u>	• <u>Retrofit stormwater detention and treatment for roads and existing adjacent development</u> • <u>Prevent channelized flow from lawns that directly enters the buffer</u> • <u>Use Low Intensity Development techniques</u>
<u>Change in water regime</u>	• <u>Impermeable surfaces</u> • <u>Lawns</u> • <u>Tilling</u>	• <u>Infiltrate or treat, detain, and disperse into buffer new runoff from impervious surfaces and new lawns</u>
<u>Pets and human disturbance</u>	• <u>Residential areas</u>	• <u>Use privacy fencing; plant dense vegetation to delineate buffer edge and to discourage disturbance using vegetation appropriate for the ecoregion; place wetland and its buffer in a separate tract</u>
<u>Dust</u>	• <u>Tilled fields</u>	• <u>Use BMPs to control dust</u>
* These examples are not necessarily adequate for minimizing toxic runoff if <u>sensitive</u>, threatened or endangered species are present at the site.		

- E. The minimum buffer width stated in Table 22.10.110(D) Wetland Buffer Widths shall be increased when the qualified consultant determines, based upon a site-specific wetland analysis, that impacts on the wetland from a proposed development can only be mitigated by a greater buffer width. The standard wetland buffer width shall be increased:
1. When the adjacent land is susceptible to severe erosion and erosion control measures will not effectively prevent adverse wetland impacts; or
 2. When the standard buffer has minimal or degraded vegetative cover that cannot be improved through enhancement; or
 3. When the wetland provides habitat for a species that is particularly sensitive to disturbance (listed by the federal government of the state as endangered, threatened, candidate, monitored or documented priority species or habitat for those species or has unusual nesting or resting sites such as heron rookeries or raptor nesting trees), the width of the buffer should be increased to provide adequate protection for the species based on its particular life-history needs: or
 4. When the minimum buffer for a wetland extends into an area with a slope of greater than 25 percent, the buffer shall be increased by 50 percent. the greater of:
 - a. The minimum buffer for that particular wetland; or
 - b. Twenty-five feet beyond the point where the slope becomes 25 percent or less.
- F. Low impact uses and activities (see Table 22.10.110(C)) that are consistent with the purpose and function of the wetland buffer and do not detract from its integrity may be permitted within the buffer depending on the sensitivity of the wetland. Examples of uses and activities that may be permitted in appropriate cases, based on guidance in the Wetlands and CAO Guidance for Small

Cities, Eastern Washington version (dated January 2010, revised October 2012 and June 2016 and as may be amended in the future), include pedestrian trails, viewing platforms, stormwater management facilities such as grass-lined swales, and utility easements. Uses permitted within the buffer shall be located in the outer portion of the buffer as far as possible from the wetland.

- G. A variance from buffer width requirements may be granted by the city of Richland Hearing Examiner following Type II permit procedures as set forth in Title 19 of the Richland Municipal Code upon a demonstration by the applicant that the following criteria are met:
1. That the strict application of the bulk, dimensional or performance standards set forth in this title preclude, or significantly interfere with, reasonable use of the property;
 2. That the hardship described in (1) of this subsection is specifically related to the property, and is the result of unique conditions such as irregular lot shape, size, or natural features and the application of this title, and not, for example, from deed restrictions or the applicant's own actions;
 3. That the design of the project is compatible with other authorized uses within the area and with uses planned for the area under the comprehensive plan and applicable development regulations and will not cause adverse impacts to the wetland;
 4. That the variance will not constitute a grant of special privilege not enjoyed by the other properties in the area;
 5. That the variance requested is the minimum necessary to afford relief; and
 6. That the public interest will suffer no substantial detrimental effect.

H. Signs and Fencing of Wetlands and Buffers

1. Temporary markers. The outer perimeter of the wetland buffer and the clearing limits identified in an approved permit or land use approval shall be marked in the field with temporary "clearing limits" fencing in such a way as to ensure that no unauthorized intrusion will occur. The marking is subject to inspection by the administrator prior to the commencement of permitted activities. Temporary marking shall be maintained throughout completion of all construction activities.
2. Permanent signs. As a condition of any permit or land use approval, the administrator may require the applicant to install permanent signs along the boundary of a wetland or its buffer. Permanent signs shall be made of an enamel-coated metal face and attached to a metal post. Signs, when required, shall be posted at an interval of one every fifty feet or one per lot if a lot is less than 50 feet wide and must be maintained by the property owner in perpetuity. Wording of the sign shall note the presence of a protected wetland area and/or wildlife habitat. Specific wording of the sign shall be approved by the administrator.
3. Fencing.
 - a. The applicant shall be required to install a permanent fence around the wetland or its buffer when domestic grazing animals are present or may be introduced on site.
 - b. Fencing installed as part of a proposed activity or as required by the administrator shall be designed so as not to interfere with species migration and shall be constructed in a manner that minimizes impacts to the wetland and associated habitat.

22.10.120 Wetland alteration and mitigation.

A. All adverse impacts to wetland functions and values shall be mitigated. Mitigation actions by an applicant or property owner shall occur in the following priority sequence:

1. Avoiding the impact by not taking a certain action or parts of actions or moving the action;
2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology and engineering, or by taking affirmative steps to avoid or reduce adverse impacts;
3. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
4. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; ~~and/or~~
5. Compensating for the impact by replacing or providing substitute resources or environments. Preference shall be given to measures that replace the impacted functions on-site or in the immediate vicinity of the impact. However, alternative compensatory mitigation within the watershed that addresses limiting factors or identified critical needs based on watershed or comprehensive resource management plans may be authorized.

6. Monitoring the adverse impact and taking appropriate corrective measures.

B. Where impacts cannot be avoided, the applicant or property owner shall seek to implement other appropriate mitigation actions in compliance with the intent, standards and criteria of this section. These shall include consideration of alternative site plans and building layouts and/or reduction in the density or scope of the proposal.

C. Alteration of wetlands and/or their buffers may be permitted by the department administrator subject to the following criteria:

1. Category I Wetlands. Alterations of Type I wetlands shall be avoided ~~subject to the reasonable use provisions of these regulations.~~

2. Category II, III and IV Wetlands.

a. Any proposed alteration and mitigation shall comply with the requirements of this section through RMC 22.10.150; and

b. Where enhancement is proposed, replacement ratios comply with the requirements of RMC 22.10.130(C); and

c. No net loss of wetland function and value will occur due to the alteration; and

d. Avoids alterations of wetlands previously enhanced or created as mitigation.

~~3. Category III Wetlands.~~

~~a. The proposed mitigation complies with the requirements of this section through RMC 22.10.150; and~~

~~b. Where enhancement is proposed, replacement ratios comply with the requirements of RMC 22.10.130(C); and~~

~~c. No net loss of wetland function and value will occur due to the alteration.~~

22.10.125 Stormwater runoff.

New development within 150 feet of a wetland buffer shall contain stormwater runoff within the developed portions of the site. No stormwater runoff shall drain into the wetland. Deviations from this standard may be approved by the ~~department administrator~~; provided, that a study undertaken by a qualified consultant in accordance with the provisions of RMC 22.10.140 indicates that the potential discharge of stormwater runoff from a development site into a wetland is adequately mitigated to protect the functions and values of the wetland. In the case of a Category 3 ~~III~~ or Category 4 ~~IV~~ wetland, stormwater management facilities may be located within the outer 25 percent of the required wetland buffer; provided, that a determination is made that no other location is feasible and the location of such facilities will not have an adverse impact on the functions and values of the wetland.

22.10.130 Mitigation standards, criteria, and plan requirements.

~~A. Location and Timing of Mitigation:~~

- ~~1. Mitigation shall be provided on-site, except where on-site mitigation is not feasible or practical due to physical features of the property. The burden of proof shall be on the applicant to demonstrate that mitigation cannot be provided on-site.~~
- ~~2. When mitigation cannot be provided on site, mitigation shall be provided in the immediate vicinity of and within the same watershed as the permitted activity on property owned or controlled by the applicant. When possible, this means within the same watershed as the location of the proposed project.~~
- ~~3. In-kind mitigation shall be provided except when the applicant demonstrates and the department concurs that greater functional and habitat value can be achieved through out-of-kind mitigation.~~
- ~~4. Only when it is determined by the department that subsections (A)(1), (2) and (3) of this section are inappropriate and/or impractical shall off-site, out-of-kind mitigation be considered.~~
- ~~5. Whether occurring on-site or off site, the mitigation project shall occur near an adequate water supply (river, stream, ground water) with a hydrologic connection to the wetland to ensure a successful wetlands development or restoration.~~
- ~~6. Any agreed-upon proposal shall be completed before initiation of other permitted activities, unless a phased or concurrent schedule has been approved by the department.~~
- ~~7. Wetland acreage replacement ratios shall be as specified in subsection (C) of this section.~~

A. Types of Compensatory Mitigation. Mitigation for lost or diminished wetland and buffer functions shall rely on a type listed below in order of preference. A lower preference form of mitigation shall be used only if the applicant's qualified wetland professional demonstrates to the satisfaction of the Administrator that all higher-ranked types of mitigation are not viable, consistent with the criteria in this section.

1. Restoration: Restoration is divided into:

- a. Re-establishment.

- b. Rehabilitation.
- 2. Establishment (creation). If a site is not available for wetland restoration to compensate for expected wetland and/or buffer impacts, the Administrator may authorize creation of a wetland and buffer upon demonstration by the applicant's qualified wetland professional that:
 - a. The hydrology and soil conditions at the proposed mitigation site are conducive for sustaining the proposed wetland and that creation of a wetland at the site will not likely cause hydrologic problems elsewhere;
 - b. Adjacent land uses and site conditions do not jeopardize the viability of the proposed wetland and buffer (e.g., due to the presence of invasive plants or noxious weeds, stormwater runoff, noise, light or other impacts); and
 - c. The proposed wetland and buffer will eventually be self-sustaining with little or no long-term maintenance.
- 3. Enhancement. Applications proposing to enhance wetland or associated buffers shall demonstrate how the proposed enhancement will increase the wetland's buffer's functions, how this increase in function will adequately compensate for the impacts, and how existing wetland functions at the mitigation site will be protected.
- 4. Protection/Maintenance (Preservation). Permanent protection of a Category I or II wetland and associated buffer at risk of degradation can be used only if:
 - a. The administrator determines that the proposed preservation is the best mitigation option;
 - b. The proposed preservation site is under threat of undesirable ecological change due to permitted, planned, or likely actions that will not be adequately mitigated under existing regulations;
 - c. The area proposed for preservation is of high quality or critical for the health of the watershed or basin due to its location. Some of the following features may be indicative of high-quality sites:
 - i. Category I or II wetland rating (using the wetland rating system for Eastern Washington);
 - ii. Rare or irreplaceable wetland type or aquatic habitat that is rare or a limited resource in the area;
 - iii. The presence of habitat for priority or locally important wildlife species;
 - iv. Provides biological and/or hydrological connectivity;
 - vi. Priority sites in an adopted watershed plan.
 - d. Permanent preservation of the wetland and buffer will be provided through a conservation easement or tract held by an appropriate natural land resource manager, such as a land trust.
 - e. The administrator may approve other legal and administrative mechanisms in lieu of a conservation easement if determined to be adequate to protect the site.
 - f. Ratios for preservation in combination with other forms of mitigation generally range from 10:1 to 20:1, as determined on a case-by-case basis, depending on the quality of the wetlands being

impacted and the quality of the wetlands being preserved. Ratios for preservation as the sole means of mitigation generally start at 20:1.

B. Location and Timing of Mitigation.

1. Location of Compensatory Mitigation. Compensatory mitigation actions shall be conducted within the same sub-drainage basin and on the site of the alteration except when all of a through d below apply. In that case, mitigation may be allowed off site within the subwatershed of the impact site. When considering off-site mitigation, preference should be given to using alternative mitigation, such as a mitigation bank, an in-lieu fee program, or advanced mitigation.
 - a. There are no reasonable opportunities on site or within the sub-drainage basin (e.g., on-site options would require elimination of high-functioning upland habitat), or opportunities on site or within the sub-drainage basin do not have a high likelihood of success based on a determination of the capacity of the site to compensate for the impacts. Considerations should include: anticipated replacement ratios for wetland mitigation, buffer conditions and proposed widths, available water to maintain anticipated hydrogeomorphic classes of wetlands when restored, proposed flood storage capacity, and potential to mitigate riparian fish and wildlife impacts (such as connectivity).
 - b. On-site mitigation would require elimination of high-quality upland habitat.
 - c. Off-site mitigation has a greater likelihood of providing equal or improved wetland functions than the altered wetland.
 - d. Off-site locations shall be in the same sub-drainage basin unless:
 - i. Established watershed goals for water quality, flood storage or conveyance, habitat, or other wetland functions have been established by the City and strongly justify location of mitigation at another site.
 - ii. The design for the compensatory mitigation project needs to be appropriate for its location (i.e., position in the landscape). Therefore, compensatory mitigation should not result in the creation, restoration, or enhancement of an atypical wetland. An atypical wetland refers to a compensation wetland (e.g., created or enhanced) that does not match the type of existing wetland that would be found in the geomorphic setting of the site (i.e., the water source[s] and hydroperiod proposed for the mitigation site are not typical for the geomorphic setting). Likewise, it should not provide exaggerated morphology or require a berm or other engineered structures to hold back water. For example, excavating a permanently inundated pond in an existing seasonally saturated or inundated wetland is one example of an enhancement project that could result in an atypical wetland. Another example would be excavating depressions in an existing wetland on a slope, which would require the construction of berms to hold the water.
2. Timing of Compensatory Mitigation. It is ~~desirable~~ **preferred** that compensatory mitigation projects be completed prior to activities that will disturb wetlands. At the least, compensatory mitigation shall be completed immediately following disturbance and prior to use or occupancy

of the action or development. Construction of mitigation projects shall be timed to reduce impacts to existing fisheries, wildlife, and flora.

3. The administrator may authorize a one-time, temporary delay in completing construction or installation of the compensatory mitigation when the applicant provides a written explanation from a qualified wetland professional as to the rationale for the delay. An appropriate rationale would include identification of the environmental conditions that could produce a high probability of failure or significant construction difficulties (e.g., project delay lapses past a fisheries window, or installing plants should be delayed until the dormant season to ensure greater survival of installed materials). The delay shall not create or perpetuate hazardous conditions or environmental damage or degradation, and the delay shall not be injurious to the health, safety, or general welfare of the public. The request for the temporary delay must include a written justification that documents the environmental constraints that preclude implementation of the compensatory mitigation plan. The justification must be verified and approved by the City administrator.

C. Mitigation Performance Standards.

1. Adverse impacts to wetlands functions and values shall be mitigated. Mitigation actions shall be implemented in the preferred sequence identified in RMC 22.10.120(A). Proposals which include less preferred and/or compensatory mitigation shall demonstrate that:

a. All feasible and reasonable measures will be taken to reduce impacts and losses to the original wetland; including a description of how preferred order of wetlands mitigation was followed: 1) restoration (including reestablishment and rehabilitation); 2) creation (establishment); 3) enhancement in combination with restoration or creation; and 4) preservation of high quality, at risk wetlands.

b. Compensatory mitigation shall be allowed only after mitigation sequencing is applied and higher priority means of mitigation are determined to be infeasible, and shall achieve equivalent or greater wetland ecological functions.

~~b.~~ c. No overall net loss will occur in wetland functions and values; and

~~c.~~ d. The restored, created or enhanced wetland will be as persistent and sustainable as the wetland it replaces.

D. Wetland Replacement Ratios.

1. Where wetlands alterations are permitted by the ~~department~~ administrator, the applicant shall restore or create equivalent areas of wetlands in order to compensate for wetland losses. Equivalent areas shall be determined according to acreage, function, type, location, timing factors, and projected success of restoration or creation.

2. The following acreage replacement ratios shall be applied: ~~used as targets. The department may vary these standards if the applicant can demonstrate and the department agrees that the variation will provide adequate compensation for lost wetland area, functions and values, or if other circumstances as determined by the department justify the variation.~~

WETLAND-SYSTEM CATEGORY/CLASS	WETLAND-CREATION AND REPLACEMENT RATIO*	WETLAND-ENHANCEMENT RATIO**
Category I	6:1	12:1
Category II and III		
—Forested	3:1	6:1
—Scrub/Shrub or Emergent	2:1	4:1
Category IV	1.5:1	3:1

* Acres replaced: acres altered.

** Acres enhanced: acres altered.

Table 22.10.130(C) Mitigation ratios for eastern Washington¹

<u>Category and Type of Wetland Impacts</u>	<u>Re- establishment or Creation</u>	<u>Rehabilitation Only²</u>	<u>Re- establishment or Creation (R/C) and Rehabilitation (RH)²</u>	<u>Re-establishment or Creation (R, C) and Enhancement (E)²</u>	<u>Enhancement Only²</u>
<u>All Category IV</u>	<u>1.5:1</u>	<u>3:1</u>	<u>1:1 R/C and 1:1 RH</u>	<u>1:1 R/C and 2:1 E</u>	<u>6:1</u>
<u>All Category III</u>	<u>2:1</u>	<u>4:1</u>	<u>1:1 R/C and 2:1 RH</u>	<u>1:1 R/C and 4:1 E</u>	<u>8:1</u>
<u>Category II Forested</u>	<u>4:1</u>	<u>8:1</u>	<u>1:1 R/C and 4:1 RH</u>	<u>1:1 R/C and 6:1 E</u>	<u>16:1</u>
<u>Category II Vernal Pool</u>	<u>2:1 Compensation must be seasonally ponded wetland</u>	<u>4:1 Compensation must be seasonally ponded wetland</u>	<u>1:1 R/C and 2:1 RH</u>	<u>Case-by-case</u>	<u>Case-by-case</u>
<u>All other Category II</u>	<u>3:1</u>	<u>6:1</u>	<u>1:1 R/C and 4:1 RH</u>	<u>1:1 R/C and 8:1 E</u>	<u>12:1</u>
<u>Category I Forested</u>	<u>6:1</u>	<u>12:1</u>	<u>1:1 R/C and 10:1 RH</u>	<u>1:1 R/C and 20:1 E</u>	<u>24:1</u>
<u>Category I based on score for functions</u>	<u>4:1</u>	<u>8:1</u>	<u>1:1 R/C and 6:1 RH</u>	<u>1:1 R/C and 12:1 E</u>	<u>16:1</u>
<u>Category I Natural Heritage site</u>	<u>Not considered possible³</u>	<u>6:1 Rehabilitation of a Natural Heritage site Case by case</u>	<u>R/C Not considered possible³</u>	<u>R/C Not considered possible³</u>	<u>Case-by-case</u>

<u>Category I Alkali</u>	<u>Not considered possible³</u>	<u>6:1 Rehabilitation of an alkali wetland</u>	<u>R/C Not considered possible³</u>	<u>R/C Not considered possible³</u>	<u>Case-by-case</u>
<u>Category I Bog</u>	<u>Not considered possible³</u>	<u>6:1 Rehabilitation of a bog</u> <u>Case by case</u>	<u>R/C Not considered possible³</u>	<u>R/C Not considered possible³</u>	<u>Case-by-case</u>

1. Ratios for rehabilitation and enhancement may be reduced when combined with 1:1 replacement through creation or re-establishment. See Table 1b, Wetland Mitigation in Washington State – Part 1: Agency Policies and Guidance--Version 1, (Ecology Publication #06-06-011a, Olympia, WA, March 2006 or as revised).
2. These ratios are based on the assumption that the rehabilitation or enhancement actions implemented represent the average degree of improvement possible for the site. Proposals to implement more effective rehabilitation or enhancement actions may result in a lower ratio, while less effective actions may result in a higher ratio. The distinction between rehabilitation and enhancement is not clear-cut. Instead, rehabilitation and enhancement actions span a continuum. Proposals that fall within the gray area between rehabilitation and enhancement will result in a ratio that lies between the ratios for rehabilitation and the ratios for enhancement
3. Natural Heritage sites, alkali wetland, and bogs are considered irreplaceable wetlands because they perform some functions that cannot be replaced through compensatory mitigation. Impacts to such wetlands would therefore result in a net loss of some functions no matter what kind of compensation is proposed.

Reference:

Washington State Department of Ecology, U.S. Army Corps of Engineers Seattle District, and U.S. Environmental Protection Agency Region 10, March 2006. Wetland Mitigation in Washington State – Part 1: Agency Policies and Guidance (Version 1). Washington State Department of Ecology Publication #06-06-011a, Olympia, WA.

~~3. The qualified consultant in the wetlands report may, where feasible, recommend that restored or created wetlands shall be a higher wetland category than the altered wetland in exchange for requiring less than the required amount of restored or created wetland acreage for Categories II, III, and IV only.~~

3. Credit/Debit Method. To more fully protect functions and values, and as an alternative to the mitigation ratios found in the joint guidance “Wetland Mitigation in Washington State Parts I and II” (Ecology Publication #06-06-011a-b, Olympia, WA, March, 2006, or as revised), the administrator may allow mitigation based on the “credit/debit” method developed by the Department of Ecology in “Calculating Credits and Debits for Compensatory Mitigation in Wetlands of Eastern Washington: Final Report” (Ecology Publication #11-06-015, August 2012, or as revised).

22.10.140 Wetland mitigation plan requirements.

Where it is determined by the city administrator that compensatory wetland mitigation is required or appropriate, a mitigation plan shall be prepared consistent with the provisions below and shall also meet the minimum requirements contained in the Wetlands and CAO Guidance for Small Cities, Eastern Washington version (dated January 2010, revised October 2012, June 2016, and as amended in the future). The purpose of the plan is to prescribe mitigation to compensate for impacts to the wetland functions, values and acreage as a result of the proposed action. This plan shall consider the chemical, physical, and biological impacts on the wetland system using a recognized wetlands assessment methodology and/or best professional judgment. The mitigation plan shall be prepared in two phases, a conceptual phase and a detailed phase.

A. Conceptual Plan – Standards and Criteria. The applicant shall prepare a conceptual mitigation plan for submission to the ~~department~~ administrator at a premitigation conference. The conceptual mitigation plan shall include:

1. General goals of the mitigation plan;
2. A review of literature or experience to date in restoring or creating the type of wetland proposed;
3. Location of proposed wetland compensation area;
4. General hydrologic patterns on the site following construction;
5. Nature of compensation, including wetland types (in-kind ~~and out-of-kind~~), general plant selection and justification, approximate project sequencing and schedule, and approximate size of the new wetland buffer;
6. A conceptual maintenance plan; and
7. Conceptual monitoring and contingency plan.

B. Detailed Plan – Standards and Criteria. Following acceptance of the conceptual mitigation plan by the department [administrator](#), the applicant will prepare a detailed mitigation plan. Each detailed plan shall contain, at a minimum, the following seven components, and shall be consistent with the standards in RMC 22.10.100 through 22.10.130:

1. A clear statement of the objectives of the mitigation. The goals of the mitigation plan should be stated in terms of the new wetland functions and values compared to the functions and values of the original wetland. Objectives should include:
2. Qualitative and quantitative standards for success of the project, including hydrologic characteristics (water depths, water quality, hydroperiod/hydrocycle characteristics, flood storage capacity); vegetative characteristics (community types, species composition, density, and spacing); faunal characteristics, and final topographic elevations.
3. An ecological assessment of the wetland values and wetland buffers that will be lost as a result of the activities, and of the replacement wetlands and buffers, including but not limited to the following:
 - i. Acreage of project;
 - ii. Existing functions and values;
 - iii. Sizes of wetlands, wetland buffers, and areas to be altered;
 - iv. Vegetative characteristics, including community type, areal coverage, species composition, and density;
 - v. Habitat type(s) to be enhanced, restored, or created; and
 - vi. Dates for beginning and completion of the mitigation project, and sequence of construction activities.
4. A statement of the location, elevation, and hydrology of the new site, including the following:
 - a. Relationship of the project to the watershed and existing water bodies;
 - b. Topography of site using the smallest readily available intervals, preferably one-foot contour intervals but two-foot is acceptable;

- c. Water level data, including depth and duration of seasonally high water table;
 - d. Water flow patterns;
 - e. Grading, filling and excavation, including a description of imported soils;
 - f. Irrigation requirements, if any;
 - g. Water pollution mitigation measures during construction;
 - h. Areal coverage of planted areas to open water areas (if any open water is to be present); and
 - i. Appropriate buffers.
5. A planting plan, describing what will be planted, and where and when the planting will occur, as follows:
- a. Soils and substrate characteristics;
 - b. Specify substrate stockpiling techniques; and
 - c. Planting instructions, including species, stock type and size, density or spacing of plants, and water and nutrient requirements.
6. A monitoring and maintenance plan, consistent with RMC 22.10.160.
- a. Specify procedures for monitoring and site maintenance [including control of invasive species](#); and
 - b. Submit monitoring reports to the department [administrator](#).
7. A contingency plan, consistent with these regulations.
8. A detailed budget for implementation of the mitigation plan, including monitoring, maintenance and contingency phases.
9. A guarantee, in the form of a bond or other security device in a form and amount acceptable to the city attorney, assuring that the work will be performed as planned and approved, consistent with these regulations, [including monitoring, maintenance and contingency](#).

22.10.150 Performance standards for wetlands mitigation planning.

- A. The following performance standards shall be incorporated into mitigation plans submitted to the city of Richland:
- 1. Plants should be indigenous to the region (not introduced or foreign species);
 - 2. Plants should be adaptable to a broad range of water depths;
 - 3. Plants should be commercially available or available from local sources;
 - 4. Plant species high in food and cover value for fish and wildlife are recommended, when possible;
 - 5. Plants should be mostly perennial species;

6. Avoid committing significant areas of site to species that have questionable potential for successful establishment;
 7. Plant selection must be approved by wetlands biologist/ecologist;
 8. Water depth is not to exceed six and one-half feet (two meters);
 9. The grade or slope that water flows through the wetland is not to exceed six percent;
 10. Slopes within the wetland basin and the buffer zone should not be steeper than 3:1 (horizontal to vertical);
 11. The substrate should consist of a minimum of one foot, in depth, of clean (uncontaminated with chemicals, or solid/hazardous wastes) inorganic/organic materials;
 12. Planting densities and placement of plants should be determined by a qualified professional and shown on the design plans;
 13. The wetland (excluding the buffer area) should not contain more than 60 percent open water as measured at the seasonal high water mark;
 14. Minimum buffer widths should extend ~~25 to 100 feet from the wetland boundary~~; from the wetland boundary in accordance with buffer requirements in Table 22.10.110(D) Wetland Buffer Widths for the proposed category rating of the wetland that will be created.
 15. The planting plan must be approved by the ~~deputy city manager for~~ community ~~and~~ development ~~services~~ administrator or consultant acting on behalf of the city;
 16. Stockpiling should be confined to upland areas and contract specifications should limit stockpile durations to less than four weeks. Any area designated as open space shall not be used to stockpile material should not be designated as an open space area;
 17. Planting instructions which describe proper placement, diversity, and spacing of seeds, tubers, bulbs, rhizomes, sprigs, plugs, and transplanted stock;
 18. Apply controlled release fertilizer, if reasonable and prudent, at the time of planting and afterward only as plant conditions warrant (determined during the monitoring process);
 19. Install an irrigation system, if necessary, for initial establishment period; and
 20. Construction specifications and methods must be approved by a qualified consultant and the ~~department~~ administrator.
- B. On completion of construction, the wetland mitigation project must be signed off by the applicant's qualified consultant and the ~~department~~ administrator. Signature will indicate that the construction has been completed as planned and all design elements have been fully and correctly implemented. If there have been changes in the implementation of the plan, a written explanation from the consulting biologist must be included.

22.10.160 Wetland monitoring program and contingency plan.

A. A monitoring program shall be implemented to determine the success of the mitigation project and any necessary corrective actions. This chapter shall determine if the original goals and objectives are being met.

B. A contingency plan shall be established for compensation in the event that the mitigation project is inadequate or fails. A performance and maintenance bond or other acceptable security device is required to ensure the applicant's compliance with the terms of the mitigation agreement. The amount of the performance and maintenance bond shall equal 125 percent of the cost of the mitigation project for a period of ~~three~~ five years. The ~~department~~ administrator may agree to reduce the bond in phases in proportion to work successfully completed over the period of the bond.

1. During monitoring, scientific procedures for establishing the success or failure of the project must be used;

2. For vegetation determinations, permanent sampling points shall be established;

3. Vegetative success will be defined as 80 percent ~~per year~~ survival of planted trees and shrubs and 80 percent ~~per year~~ cover of desirable understory or emergent species during the monitoring period;

4. Submit monitoring reports on the current status of the mitigation project to the ~~department~~ administrator. The reports are to be prepared by a qualified consultant and reviewed by the city's consultant and should include monitoring information on wildlife, vegetation, water quality, water flow, stormwater storage and conveyance, and existing or potential degradation, and shall be produced on the following schedule:

a. At the time of construction;

b. Thirty days after planting;

c. Early in the growing season of the first year;

d. End of the growing season of the first year;

e. Twice the second year; and

f. Annually thereafter;

5. Monitor ~~between three and~~ for five growing seasons, ~~depending on the complexity of the wetland system. The time period will be determined and specified by the qualified consultant in writing prior to the implementation of the site plan;~~ If the mitigation goals are not obtained within the initial 5-year period, the applicant remains responsible for restoration of the natural resource values and functions until the mitigation goals agreed to in the mitigation plan are achieved;

6. If necessary, correct for failures in the mitigation project;

7. Replace dead or undesirable vegetation with appropriate plantings, based on the approved planting plan or RMC 22.10.150;

8. Repair damages caused by erosion, settling, or other geomorphological processes;

9. Redesign mitigation project (if necessary) and implement the new design; and

10. Correction procedures shall be approved by a qualified consultant and the ~~department~~ administrator.

11. The area where the mitigation occurred and any associated buffer shall be located in a critical area tract, a conservation easement or similar legal instrument as approved by the Administrator to ensure the future protection of the mitigation site.

22.10.165 Unauthorized Alterations and Enforcement

A. When a wetland or its buffer has been altered in violation of this Chapter, all ongoing development work shall stop and the critical area shall be restored. The City administrator shall have the authority to issue a “stop-work” order to cease all ongoing development work and order restoration, rehabilitation, or replacement measures at the owner’s or other responsible party’s expense to compensate for violation of provisions of this Chapter.

B. Requirement for Restoration Plan. All development work shall remain stopped until a restoration plan is prepared and approved by City. Such a plan shall be prepared by a qualified professional using the currently accepted scientific principles and shall describe how the actions proposed meet the minimum requirements described in Subsection C. The administrator shall, at the violator’s expense, seek expert advice in determining the adequacy of the plan. Inadequate plans shall be returned to the applicant or violator for revision and resubmittal.

C. Minimum Performance Standards for Restoration. The following minimum performance standards shall be met for the restoration of a wetland, provided that if the violator can demonstrate that greater functions and habitat values can be obtained, these standards may be modified:

1. The historic structure, functions, and values of the affected wetland shall be restored, including water quality and habitat functions.

2. The historic soil types and configuration shall be restored to the extent practicable.

3. The wetland and buffers shall be replanted with native vegetation that replicates the vegetation historically found on the site in species types, sizes, and densities. The historic functions and values should be replicated at the location of the alteration.

4. Information demonstrating compliance with other applicable provisions of this Chapter shall be submitted to the Administrator.

D. Site Investigations. The administrator is authorized to make site inspections and take such actions as necessary to enforce this Chapter. The administrator shall present proper credentials and make a reasonable effort to contact any property owner before entering onto private property.

E. Penalties. See Section 22.10.410.

F. If the wetland affected cannot be restored, money from any associated penalties shall be deposited in a dedicated account for the preservation or restoration of landscape processes and functions in the watershed in which the affected wetland is located. The City administrator may

coordinate its preservation or restoration activities with others to optimize the effectiveness of the restoration action.

G. ~~Illegal modifications. Wetland rating categories shall not change due to illegal modifications made by the applicant or with the applicant's knowledge.~~

Article III. Fish and Wildlife Habitat Areas

22.10.170 Definitions – Fish and wildlife habitat areas.

For purposes of this article, the following definitions shall apply:

~~“Critical habitat,” or “critical wildlife habitat” means habitat areas associated with threatened, endangered, sensitive, or priority species of plants or wildlife which, if altered, could reduce the likelihood that the species will maintain and reproduce over the long term. Such areas are documented with reference to lists, categories and definitions of species promulgated by the Washington Department of Wildlife (Non-Game Data System Special Animal Species) as identified in WAC 232-12-011 or 232-12-014 and in the priority habitat species lists compiled in compliance with WAC 365-190-080; or by rules and regulations adopted currently or hereafter by the U.S. Fish and Wildlife Service.~~

~~“Critical habitat” also includes the following types of areas:~~

~~A. Regionally rare native fish and wildlife habitat (i.e., one of five or fewer examples of the habitat within the Mid-Columbia region).~~

~~B. Fish and wildlife areas with irreplaceable ecological functions, including the following:~~

~~1. The areas listed as a national wildlife refuge, national park, natural area preserve or any preserve or reserve designated under WAC 332-30-151;~~

~~2. The Lake Wallula wildlife habitat areas managed by the U.S. Army Corps of Engineers, including the Yakima River Wildlife Management Area and the Hanford Islands in the Columbia River managed by the U.S. Fish and Wildlife Service;~~

~~3. Category I wetlands as defined in RMC 22.10.100;~~

~~4. State nature area preserves or natural resource conservation areas identified by state law and managed by the Department of Natural Resources;~~

~~5. Documented habitat, other than transient and/or occasional presence, of threatened or endangered species;~~

~~6. Documented habitat, other than transient and/or occasional presence, of regional or national significance for migrating birds.~~

~~“Enhancement” means the improvement of existing habitat such as by increasing plant density or structural diversity, or by removing nonindigenous or noxious species.~~

~~“alt” means a species, plant community type, or habitat that has been introduced or modified as a result of human actions.~~

~~“Habitat management” means management of land to maintain species in suitable habitats within their natural geographic distribution so that isolated subpopulations are not created. This does not imply maintaining all habitat or individuals of all species in all cases.~~

~~“Habitat map” means maps of plant cover types/communities (titled: Fish and Wildlife Conservation Areas) adopted by the city of Richland to indicate the potential presence of wildlife species.~~

~~“Native vegetation” means vegetation existing on a site or plant species that are indigenous to the area in question.~~

~~“Priority species” means fish and wildlife species requiring protective measures for their perpetuation due to their population status, their sensitivity to habitat alteration and/or their recreational, commercial, or tribal importance, as identified by the Washington Department of Fish and Wildlife.~~

~~“Qualified consultant,” for purposes of these regulations, shall mean a professionally trained and/or certified wildlife biologist or ecologist or other professional with expertise in the scientific disciplines necessary to identify, evaluate and manage habitat. See RMC 22.10.320 for more information.~~

~~“Secondary habitat” or “secondary wildlife habitat” means areas with one or more of the following attributes: comparatively high wildlife density; high wildlife species richness; significant wildlife breeding habitat; significant wildlife seasonal ranges; significant movement corridors; limited availability; and/or high vulnerability. Secondary habitat offers less diversity of animal and plant species than critical habitat, but is important for performing the essential functions of habitat.~~

~~“Structural diversity” means the relative degree of diversity or complexity of vegetation in a habitat area as indicated by the stratification or layering of different plant communities (e.g., ground cover, shrub layer and tree canopy); the variety of plant species; and the spacing or pattern of vegetation.~~

~~“Wildlife habitat” means areas that provide food, protective cover, nesting, breeding or movement for fish and wildlife and with which individual species have a primary association.~~

~~“Wildlife report” means a report, prepared by a qualified consultant, that evaluates plant communities and wildlife functions and values on a site, consistent with the format and requirements established by this chapter. [Ord. 48-93; Ord. 23-01].~~

22.10.180 Exemption from fish and wildlife regulations.

A. See RMC 22.10.300~~360~~ for general exemptions to all ~~sensitive~~ critical areas.

B. The following activities shall be exempt from the provisions of this chapter related to fish and wildlife habitat, provided they are conducted using best management practices:

1. Activities involving artificially created habitat, including but not limited to grass-lined swales, irrigation and drainage ditches, detention facilities such as reservoirs, ponds, and landscape features, except for habitat areas created as mitigation.

C. Notwithstanding the exemption provided by this section, any otherwise exempt activities occurring in or near critical habitat areas shall comply with the intent of these standards and shall consider on-site

alternatives that avoid or minimize potential habitat impacts and shall consider the timing of exempt work to minimize disturbances to wildlife including disturbance to migratory bird nesting sites.

22.10.190 Fish and wildlife habitat inventory maps.

The approximate location and extent of habitat areas within the city of Richland's planning area are shown on the maps adopted as part of this chapter. These maps shall be used as a general guide only for the assistance of property owners and other interested parties; boundaries are generalized. The actual type, extent, and boundaries of habitat areas shall be determined by a qualified professional according to the procedures, definitions, and criteria established by this article. In the event of any conflict between the habitat location or type shown on the city of Richland's maps and the criteria or standards of this article, the criteria and standards resulting from the field investigation shall control.

~~22.10.200 Classification of fish and wildlife habitat areas.~~

~~Wildlife habitat areas shall be established as critical, secondary or tertiary according to the criteria established in RMC 22.10.170.~~

22.10.210 Fish and wildlife habitat buffer areas.

- A. A. The establishment of buffer areas shall be required for regulated activities in or adjacent to habitat areas. Buffer shall consist of an undisturbed area of native vegetation established to protect the integrity, functions, and values of the affected habitat. Enhancement of buffers may be required if a portion of the buffer has been cleared, or if tree or shrub cover is substantially less than a native climax community.

B. Buffer widths for the riparian areas adjacent to the Columbia and Yakima Rivers are set forth in RMC 26.60.42. For all other, non shoreline, wildlife habitat areas, the following buffer widths are established:

WILDLIFE HABITAT TYPE	HIGH IMPACT LAND USE	LOW IMPACT LAND USE
Critical	150	75
Secondary	100	50

C. Buffers shall be measured, on a horizontal plane, from the habitat edge as delineated by a qualified consultant. Required buffer widths shall reflect the sensitivity of the habitat and the type and intensity of human activity proposed to be conducted nearby. Buffers shall be determined by the ~~department~~ administator based on information in the wildlife report supplemented by its own investigations, the sensitivity and value of the habitat areas, the intensity and design of the proposed use, and adjacent uses and activities.

~~D. Buffer widths may be modified by averaging buffer widths or by enhancing buffer quality as set forth herein.~~

~~1. Buffer width averaging shall be allowed only where the applicant demonstrates to the department that:~~

~~a. The habitat contains variations in sensitivity due to the existing physical characteristics;~~

~~b. That lower intensity land uses would be located adjacent to areas where buffer width is reduced;~~

~~c. That width averaging will not adversely impact the habitat functional values; and~~

~~d. That the total area contained within the buffer after averaging is no less than that contained within the standard buffer prior to averaging.~~

~~2. Buffer width may be reduced by up to 25 percent if the existing buffer area is vegetated with greater than 90 percent areal cover of native species and a report by a qualified fish/wildlife specialist demonstrates that a smaller than standard buffer will provide all of the buffer functions necessary to protect all functions and values of the habitat. The department may require long term monitoring of the buffer with appropriate contingency actions if adverse impacts to the wetland occur. In no instance, however, shall the buffer width be reduced by more than 50 percent of the required buffer or be less than 25 feet.~~

D. Administrative Buffer Adjustments.

1. The required buffer widths established in this section may be modified by the City administrator for a development on existing legal lots of record in place at the time of adoption of this program, in accordance with the provisions of this section only where the applicant demonstrates all of the following:

a. Averaging is necessary to avoid an extraordinary hardship to the applicant caused by circumstances peculiar to the property, and no feasible alternative exists;

b. The designated buffer area contains variations in sensitivity to ecological impacts due to existing physical characteristics or the character of the buffer varies in slope, soils, or vegetation;

c. The total area contained within the buffer after averaging is no less than that contained within the standard buffer prior to averaging;

d. The minimum buffer width at its narrowest point shall not be less than seventy five (75) percent of the buffer width established under this section; and

e. The buffer width averaging does not result in a net loss of ecological function.

2. Standard Buffer Reduction. Reductions of up to twenty-five (25) percent of the standard buffer may be approved if the applicant demonstrates to the satisfaction of the City administrator that a mitigation plan developed by a qualified professional indicates that enhancing the buffer (by removing invasive plants or impervious surfaces, and planting native vegetation, or installing habitat features or other means) will result in a reduced buffer that functions at a higher level than the existing standard buffer. Any mitigation plan that includes the planting of vegetation shall also include a monitoring program.

3. In-fill Development. In an effort to facilitate in-fill development in approved plats, the City administrator may approve requests to reduce the standard wildlife habitat buffers up to a maximum of fifty (50) percent for a new single-family residence and appurtenant structures in accordance with the following criteria:

a. Where there are single-family residences within 150 feet on either side of the proposed residence in an existing plat, the buffer shall be determined as the greater of one of the following three options: 1) a common line drawn between the nearest corners of the nearest residences; 2) a common line calculated by the average of the nearest residence's existing buffer; or 3) a fifty (50) percent reduction of the standard buffer.

b. Where there is only a residence located within 150 feet on one side of the proposed residence in an existing plat, the standard buffer shall be determined as the greater of a common line drawn between the nearest corner of the nearest residence and the nearest point of the standard buffer on the adjacent vacant lot, a common line calculated by the average of the nearest residence's setback and the standard buffer for the adjacent vacant lot, or a fifty (50) percent reduction of the standard buffer.

E. The buffer width stated in subsection (B) of this section shall be increased ~~not more than 125 percent (buffer width x 1.25)~~ when the qualified consultant determines, based upon a site-specific habitat analysis, that impacts on the habitat from a proposed development can only be mitigated by a greater buffer width. The standard habitat buffer width shall be increased:

1. When the adjacent land is susceptible to severe erosion and erosion control measures will not effectively prevent adverse habitat impacts; or

2. When the standard buffer has minimal or degraded vegetative cover that cannot be improved through enhancement; or

3. When the wetland or other habitat area provides habitat for a species that is particularly sensitive to disturbance (such as sensitive, threatened or endangered species), the width of the buffer should be increased to provide adequate protection for the species based on its particular, life-history needs; or

~~3. 4.~~ When the minimum buffer for a habitat extends into an area with a slope of greater than 25 percent, the buffer shall be the greater of:

a. The minimum buffer for that particular habitat; or

b. Twenty-five feet beyond the point where the slope becomes 25 percent or less.

F. Low impact uses and activities which are consistent with the purpose and function of the habitat buffer and do not detract from its integrity may be permitted within the buffer depending on the sensitivity of the habitat involved. Examples of uses and activities which may be permitted in appropriate cases include pedestrian trails, viewing platforms, stormwater management facilities such as grass-lined swales and utility easements.

G. Required buffers shall not deny all reasonable use of property. A variance from buffer widths requirements may be granted by the city of Richland Hearing Examiner, in accordance with the procedures set forth in RMC Title 19 for Type II permits, upon a showing by the applicant that:

1. There are special circumstances applicable to the subject property or to the intended use such as shape, topography, location or surroundings that do not apply generally to other properties and which support the granting of a variance from the buffer width requirement;
2. Such buffer width variance is necessary for the preservation and enjoyment of a substantial property right or use possessed by other similarly situated property but which because of special circumstances is denied to the property in question;
3. The granting of such buffer width variance will not be materially detrimental to the public welfare or injurious to the property or improvement; and
4. All variances shall be in accord with RMC 23.70.110 through 23.70.170.

1. That the strict application of the bulk, dimensional or performance standards set forth in this title preclude, or significantly interfere with, reasonable use of the property;
2. That the hardship described in (1) of this subsection is specifically related to the property, and is the result of unique conditions such as irregular lot shape, size, or natural features and the application of this title, and not, for example, from deed restrictions or the applicant's own actions;
3. That the design of the project is compatible with other authorized uses within the area and with uses planned for the area under the comprehensive plan and applicable development regulations and will not cause adverse impacts to the habitat;
4. That the variance will not constitute a grant of special privilege not enjoyed by the other properties in the area;
5. That the variance requested is the minimum necessary to afford relief; and
6. That the public interest will suffer no substantial detrimental effect.

22.10.220 Fish and wildlife habitat alteration.

A. Adverse impacts to habitat functions and values shall be mitigated to the extent feasible and reasonable. Mitigation actions by an applicant or property owner shall occur in the following preferred sequence:

1. Avoiding the impact altogether by not taking a certain action or parts of actions;
2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology and engineering, or by taking affirmative steps to avoid or reduce adverse impacts;
3. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
4. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;
5. Compensating for the impact by replacing ~~or providing substitute resources or environments~~ enhancing, or providing similar substitute resources or environments. Preference shall be given to measures that replace the impacted functions on-site or in the immediate vicinity of the impact;

6. Monitoring the impact over time and taking corrective measures to minimize additional impacts.

B. Where impacts cannot be avoided, the applicant or property owner shall seek to implement other appropriate mitigation actions in compliance with the intent, standards and criteria of this section. In an individual case, these actions may include consideration of alternative site plans and layouts, reductions in the density or scope of the proposal, and/or implementation of the performance standards listed in RMC 22.10.230.

C. Alteration of habitat and/or their buffers may be permitted by the ~~department~~ administrator subject to the following standards:

1. Critical Habitat. Alterations of critical habitat shall be avoided, subject to the reasonable use provisions of this chapter.
2. Secondary Habitat. Alterations of secondary habitat may be permitted; provided, that the applicant mitigates adverse impacts consistent with the performance standards and other requirements of this chapter.

22.10.230 Fish and wildlife habitat performance standards and incentives.

A. The performance standards and criteria contained in this section shall be incorporated into plans submitted for regulated activities and shall:

1. Consider habitat in site planning and design;
2. Locate buildings and structures in a manner that preserves and minimizes adverse impacts to important habitat areas;
3. Integrate retained habitat into open space and landscaping, consistent with the provisions of all open space and landscaping requirements;
4. Where possible, consolidate habitat and vegetated open space in contiguous blocks;
5. Locate habitat contiguous to other habitat areas, open space or landscaped areas to contribute to a continuous system or corridor that provides connections to adjacent habitat areas and allows movement of wildlife;
6. Use native species in any landscaping of disturbed or undeveloped areas and in any enhancement of habitat or buffers;
7. Emphasize heterogeneity and structural diversity of vegetation in landscaping and food producing plants beneficial to wildlife;
8. Remove and/or control any noxious or undesirable species of plants and animals;
9. Preserve significant trees and/or snags, preferably in groups, consistent with achieving the objectives of these standards;
10. Buffers shall be preserved and shall be surveyed, staked, and fenced prior to any constructed work, including grading and clearing, that may take place on the site; and

11. Temporary erosion and sedimentation controls, pursuant to an approved plan, shall be implemented during construction.

B. A ~~landscape~~ vegetation management plan shall be submitted consistent with the requirements, goals and standards of this chapter. The plan shall reflect the report prepared pursuant to RMC 22.10.310~~370~~ Any required mitigation, including supplemental buffer plantings, shall be guaranteed by a bond or other acceptable security device. is required to ensure Such bond or other security device shall be required to assure ing successful establishment of required planting including for an appropriate monitoring period. The amount of the ~~performance and maintenance bond~~ or other security device shall equal 125 percent of the cost of the mitigation project for a period of five years. The City administrator may agree to reduce the bond in phases in proportion to work successfully completed over the period of the bond.

C. As an incentive to encourage preservation of secondary habitat as defined in this article, the net amount of landscaping required by the city of Richland may be reduced by one-quarter acre for each one acre of secondary habitat and buffer preserved on the site; however, that amount cannot exceed 50 percent of the amount of required landscaping. The reduction shall be calculated on the basis of square feet of habitat preserved or enhanced and square feet required. Habitat and habitat buffer that is enhanced by the applicant may also qualify for this reduction. Preservation of secondary habitat shall be execution of an easement or other protective device acceptable to the city of Richland.

Article IV. Geologic Hazard Areas

22.10.240 Identification and definition.

A. Geologic hazard areas identification and designation shall be consistent with the minimum guideline classifications established in WAC 365-190-120 which includes any future amendments to the code. Areas that are susceptible to one or more of the following types of hazards shall be classified as a geologic hazard area:

1. Erosion hazard;
2. Landslide hazard;
3. Seismic hazard; and
4. Mine hazard.

B. Erosion Hazard Areas. Those areas that are identified by the United States Department of Agriculture Soil Conservation Service as having a severe rill and inter-rill erosion hazard.

C. Landslide Hazard Areas. Those areas that are potentially subject to landslides based on a combination of geologic, topographic, and hydrologic factors. They include any areas susceptible because of any combination of bedrock, soil, slope (gradient), slope aspect, structure, hydrology, or other factors. Landslide hazard areas include, but are not limited to, the following types of areas:

1. Areas delineated by the United States Department of Agriculture Soil Conservation Service as having a severe limitation for building site development;
2. Areas designated as quaternary slumps, earthflows, mudflows, lahars, or landslides on maps published by the United States Geological Survey or Department of Natural Resources Division of Geology and Earth Resources;
3. Areas with all three of the following characteristics:
 - a. Areas with slope steeper than 15 percent;
 - b. Hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock; and
 - c. Springs or ground water seepage;
4. Areas that have shown movement during the holocene epoch (from 10,000 years ago to the present) or which are underlain or covered by mass wastage debris of that epoch;
5. Areas with slopes that are parallel or subparallel to planes of weakness (such as bedding planes, joint systems, and fault planes) in subsurface materials;
6. Areas with slopes having gradients steeper than 80 percent subject to rockfall during seismic shaking;
7. Areas potentially unstable as a result of rapid stream incision, stream bank erosion and undercutting by wave action;
8. Areas that show evidence of, or on, an active alluvial fan presently or potentially subject to inundation by debris flows or catastrophic flooding; or
9. Areas with a slope of 40 percent or steeper and with a vertical relief of 10 or more feet except areas composed of consolidated rock. A slope is delineated by establishing its toe and top and measured by averaging the inclination over at least 10 feet of vertical relief.

D. Seismic Hazard Areas. Those areas subject to severe risk of damage as a result of earthquake induced ground shaking, slope failure, settlement, soil liquefaction, or surface faulting. One indicator of potential for future earthquake damage is a record of earthquake damage in the past. Ground shaking is the primary cause of earthquake damage in Washington. The strength of ground shaking is primarily affected by: (1) magnitude of an earthquake; (2) distance from the source of an earthquake; (3) type of thickness of geologic materials at the surface; and (4) type of subsurface geologic structure.

E. Mine Hazard Areas. Those areas underlain by, adjacent to, or affected by mine working areas as designated by the Washington State Department of Natural Resources.

22.10.250 Applicability to geological hazards.

The provisions of this article shall apply to any activity that occurs in or within 200 feet of a geologic hazard area unless otherwise exempt. These activities include but are not limited to the following:

- A. Removing, excavating, disturbing or dredging soil, sand, gravel, minerals, organic matter or materials of any kind;

B. Dumping, discharging or filling with any material;

C. Driving piling or placing obstructions;

D. Constructing, reconstructing, demolishing or altering the size of any structure or infrastructure which has an adverse effect on a geologic hazard area; destroying or altering vegetation through clearing or harvesting; and any project permit established in Chapter 19.20 RMC.

22.10.260 Geologic hazard inventory maps.

The approximate location and extent of geologic hazard areas within the city of Richland's planning area are shown on the sensitive critical areas maps adopted as part of this chapter. These maps should be used as a general guide only for the assistance of property owners and the city of Richland to identify and designate geologic hazard areas.

22.10.270 Preliminary assessment.

A. The city of Richland administrator shall conduct a preliminary assessment of the proposed activity. The preliminary assessment shall consist of reviewing geologic hazard inventory maps, conducting an on-site evaluation, and, if necessary, consulting with state and/or federal agencies to determine whether there is a reasonable belief that a proposed activity may be present within 200 feet of a geologic hazard area. In the event there is a disagreement as to whether the activity is within 200 feet of a geologic hazard area, a geologic report prepared by a qualified consultant as defined in RMC 22.10.320380 shall be required, at the property owner or applicant's expense, to determine this issue.

B. If it is determined that there is a reasonable belief that a proposed activity may be present within 200 feet of a geologic hazard area, then geologic reports and studies are required at the property owner or applicant's expense.

22.10.280 Geologic reports and studies.

A. Geologic studies and reports shall comply with the requirements established in RMC 22.10.310370(B)(6), Permit process and application requirements. ~~These studies and reports shall be prepared using best available science to protect the functions and values of the geologic hazard area. Best available science includes using a valid scientific process that includes the following:~~

~~1. Peer Review. The information has been critically reviewed by other persons who are qualified professionals or based on scientific publications.~~

~~2. Method. The methods used to obtain the information are clearly stated and able to be replicated. The methods are standardized in the pertinent scientific discipline or, if not, the methods have been appropriately peer-reviewed to assure their reliability and validity.~~

~~3. Logical conclusions and reasonable inferences. The conclusions presented are based on reasonable assumptions supported by other studies and consistent with the general theory underlying the~~

~~assumptions. The conclusions are logically and reasonably derived from the assumptions and supported by the data presented. Any gaps in information and inconsistencies with other pertinent scientific information are adequately explained.~~

~~4. Quantitative Analysis. The data has been analyzed using appropriate statistical or quantitative methods.~~

~~5. Context. The information is placed in proper context. The assumptions, analytical techniques, data, and conclusions are appropriately framed with respect to the prevailing body of pertinent scientific knowledge.~~

~~B. References. The assumptions, analytical techniques, and conclusions are well referenced with citations to relevant, credible literature and other pertinent existing information.~~

22.10.290 Administrative evaluation of geologic reports and studies.

The city of Richland [administrator](#) shall review the geologic reports and studies to determine the significant risks posed by the activity to life and property on and off the project site. The city of Richland may approve, conditionally approve or deny an activity, as appropriate, based on the degree to which significant risks are posed to public and private property and to the health and safety of the community. Conditional approval of the activity may include mitigation measures based on the geologic reports and studies. Where potential impacts of the activity cannot be effectively mitigated, or where the risk to public health, safety and welfare of the community is significant notwithstanding mitigation, the activity shall be denied.

22.10.295 Assurance.

The city of Richland [administrator](#) may require assurance from the owner or applicant and/or its geologic consultant that the activity creates a minimal risk of danger to life or property on or off the project site. Such assurance may include the following:

- A. A letter from the geologic consultant who prepared the required study and report stating that the activity creates a minimal risk of danger to life or property on or off the project site; or
- B. A letter from the owner or applicant stating its understanding and acceptance of any risk of injury or damage associated with the activity and agreeing to notify any future purchasers of the site, portions of the site, or structures located on the site of the geologic hazard.

Article V. Critical Aquifer Recharge Areas Protection

22.10.300 Identification and definition.

Critical aquifer recharge areas (CARAs) are defined as those areas having a critical recharging effect on aquifer use for potable water in community systems. CARAs are classified and designated as follows:

- A. Those areas designated as “Wellhead Protection Areas” pursuant to WAC 246-290-135(3) and the groundwater contribution area in WAC 246-291-125. Wellhead protection areas shall, for

the purpose of this regulation, include the identified recharge areas associated with either Group A public water supply wells and those Group B wells with a wellhead protection plan filed with the City and/or Benton Franklin Health District; and

- B. Any land identified in the Soil Survey of Benton County as having high potential for aquifer recharge, as determined by the Administrator.

In order to protect the public health and safety, prevent degradation of ground water and for potentially usable potable water, and to provide for regulations that prevent and control risks to the degradation of ground water quality and quantity, development in CARAs shall be subject to the standards described in this section.

22.10.310 Critical Aquifer Recharge Area maps.

The approximate location and extent of aquifer recharge areas within the city of Richland's shoreline planning area are shown on the sensitive critical areas maps adopted as part of this SMP, as provided in the City's SMP Inventory, Analysis and Characterization report. Wellhead protection areas are shown in the City's adopted Wellhead Protection Plan as presented in the City's 2017 Water System Plan. These maps should be used as a general guide only for the assistance of property owners and the city of Richland to identify and designate critical aquifer recharge areas.

22.10.320 Exemptions from Critical Aquifer Recharge Area regulations.

The following activities shall be exempt from the CARA provisions of this section, provided they are conducted using best management practices for protecting surface and ground water quality:

1. Single-family residential development.
2. Development and improvement of parks, recreation facilities, open space, or conservation areas resulting in less than five percent total site impervious surface area that do not increase the use of a hazardous substance.
3. Group A public water system source development and associated infrastructure.
4. Public water supply aquifer storage and recovery (ASR) facilities.
5. Public water pipelines and supply storage structures.
6. The following underground storage tank (UST) systems, including any piping connected thereto:
 1. Any UST system holding hazardous wastes subject to Subtitle C of the Federal Solid Waste Disposal Act, or a mixture of such hazardous waste and other regulated substances;
 2. Any wastewater treatment tank system that is part of a wastewater treatment facility regulated under Section 402 or 307(b) of the Clean Water Act;
 3. Equipment or machinery that contains regulated substances for operational purposes such as hydraulic lift tanks and electrical equipment tanks;
 4. Any UST system whose capacity is one hundred ten (110) gallons or less;
 5. Any UST system that contains a de minimis concentration of regulated substances;

6. Any emergency spill or overflow containment UST system that is expeditiously emptied after use;
7. UST systems used for storing heating oil for consumptive use on the premises where stored; except that such systems which store in excess of one thousand one hundred (1,100) gallons are subject to the release reporting requirements of WAC 173-360-372;
8. Any pipeline facility (including gathering lines) regulated under:
 - a. The Natural Gas Pipeline Safety Act of 1968 (49 U.S.C. App. 1671, et seq.), or
 - b. The Hazardous Liquid Pipeline Safety Act of 1979 (49 U.S.C. App. 2001, et seq.), or
 - c. Which is an intrastate pipeline facility regulated under state laws comparable to the provisions of the law referred to in Section 40.410.010(B)(3)(j)(1) or (2) of this definition;
9. Surface impoundments, pits, ponds, or lagoons;
10. Stormwater or wastewater collection systems;
11. Flow-through process tanks;
12. Storage tanks situated in an underground area (such as a basement, cellar, vault, mineworking drift, shaft, or tunnel), if the storage tank is situated upon or above the surface of the floor.

22.10.330 Reports and Studies

Reports for CARAs shall be submitted to the administrator by the applicant ~~for~~ **when** a development proposal activity not otherwise exempted as provided in Section 26.60.059 **22.210.320** is proposed on a parcel within an aquifer recharge area. Requirements for a hydrogeologic assessment are found in Section 26.60.081, **22.10.370** Permit process and application requirements.

22.10.340 Performance Standards

1. Activities may only be permitted in a critical aquifer recharge area if the applicant can show that the proposed activity will not cause contaminants to enter the aquifer and that the proposed activity will not adversely affect the recharging of the aquifer.
2. The proposed activity must comply with the water source protection requirements and recommendations of the U.S. Environmental Protection Agency, Washington State Department of Health, Washington State Department of Ecology, and the Benton County Health Department.
3. The proposed activity must be designed and constructed in accordance with existing local, state and federal laws and regulations, and the Stormwater Management Manual for Eastern Washington, as amended (Ecology 2004) and/or the locally adopted program, as applicable.

22.10.350 Uses Prohibited in Critical Aquifer Recharge Areas

The following activities and uses are prohibited in CARAs:

1. Landfills. Landfills, including hazardous or dangerous waste, municipal solid waste, special waste, woodwaste, and inert and demolition waste landfills;
2. Underground Injection Wells. Class I, III, and IV wells and subclasses 5F01, 5D03, 5F04, 5W09, 5W10, 5W11, 5W31, 5X13, 5X14, 5X15, 5W20, 5X28, and 5N24 of Class V wells;
3. Mining in critical aquifer recharge areas determined to be highly susceptible in the City's Wellhead Protection Plan.
 - a. Metals and hard rock mining;
 - b. Sand and gravel mining.
4. Wood Treatment Facilities. Wood treatment facilities that allow any portion of the treatment process to occur over permeable surfaces (both natural and manmade);
5. Storage, Processing, or Disposal of Radioactive Substances. Facilities that store, process, or dispose of radioactive substances.

Article VI. General Information

22.10.360 General exemptions.

The following activities shall be exempt from the provisions of this chapter, provided they are conducted using best management practices:

- A. Existing and ongoing agricultural activities, as defined in RMC 22.10.040;
- B. Maintenance, operation and reconstruction of existing roads, streets, utilities, and associated structures; provided, that reconstruction of any structures may not increase the impervious area;
- C. Normal maintenance, repair and reconstruction of residential or commercial structures; provided, that reconstruction of any structures may not increase the impervious floor area;
- D. Site investigative work and studies necessary for preparing land use applications, including soils tests, water quality studies, wildlife studies and similar tests and investigations; provided, that any disturbance of sensitive critical areas shall be the minimum necessary to carry out the work or studies;
- E. Educational activities, scientific research, and outdoor recreational activities, including but not limited to interpretive fields, bird watching, fishing and hiking, that will not have a significant effect on the habitat area;
- F. Public agency emergency activities necessary to prevent an immediate threat to public health, safety or property, provided that retroactive mitigation is required to restore a site to a pre-emergency response condition to ensure no net loss of ecological functions;
- G. Prior to the effective date of the ordinance codified in this chapter any of the following activities that have met all conditions of approval in a timely manner and are consistent with the reasonable use provisions of this chapter:

1. Complete applications as defined by the appropriate ordinance;
 2. Approved preliminary plats; and
 3. Development of legally created lots which have been recorded with Benton County;
- H. Minor activities not mentioned above and determined by the community and development services group to pose minimal risk to the public health, safety, and general welfare.

22.10.370 Permit process and application requirements.

A. Preapplication Conference. All applicants are encouraged to meet with the ~~planning and development services manager of the city of Richland or his or her representative~~ administrator prior to submitting an application subject to these regulations. The purpose of this meeting shall be to discuss the city of Richland's sensitive critical areas requirements, processes, and procedures; to review any conceptual site plans prepared by the applicant; to discuss appropriate investigative techniques and methodology; to identify potential impacts and mitigation measures; and to familiarize the applicant with state and federal programs, particularly those pertaining to wetlands. Such conference shall be for the convenience of the applicant and any recommendations shall not be binding on the applicant or the city of Richland.

B. Application Requirements. The information required by this section should be coordinated with reporting requirements required by this section for any other sensitive critical area located on the site.

1. Prior to the issuance of a SEPA threshold determination for a proposal, a wetland determination, wetland delineation report, fish and wildlife habitat report, ~~or geologic hazard report~~ or critical aquifer recharge area report must be submitted to the city of Richland administrator for review ~~upon request of the planning and development services manager~~ if such sensitive critical areas are indicated on any portion of the site. The purpose of the reports is to determine the extent and function of ~~wetlands, and the extent, type, function and value of wildlife habitat on any site~~ sensitive critical areas where regulated activities are proposed. The report will also be used by the city of Richland administrator to determine the appropriate ~~wetland rating designation and buffering requirement for the wetland, or the sensitivity and appropriate classification of the habitat, appropriate buffering requirements, and implementation of sensitive critical area regulations and the extent to which~~ potential impacts of proposed activities are addressed by existing regulations that provide environmental analysis and measures that avoid or otherwise mitigate the probable specific adverse environmental impacts of proposed activities.

2. In addition, wetland boundaries must be staked and flagged in the field by a qualified consultant. ~~employing the federal methodology. Field flagging must be distinguishable from other survey flagging on the site. The field flagging must be accompanied by a wetland delineation report.~~

~~3. Applicants for activities within 200 feet of geologic hazard areas shall conduct technical studies and reports which include the following:~~

- ~~a. Review site history and available information;~~
- ~~b. Conduct a surface reconnaissance of the site and adjacent areas;~~

- ~~c. Conduct subsurface exploration suitable to the site and proposal to assess geotechnical geohydrologic conditions;~~
- ~~d. Recommend surface water management controls during construction and operation;~~
- ~~e. Propose construction scheduling;~~
- ~~f. Recommendations for site monitoring and inspection during construction;~~
- ~~g. Conduct a detailed stability analysis of the existing landslide that demonstrates that the proposal will result in a suitable factor of safety during and following site development;~~
- ~~h. Evaluate the presence of geologic conditions giving rise to geologic hazards;~~
- ~~i. Evaluate the safety and appropriateness of the proposed activities;~~
- ~~j. Recommend appropriate construction practices, monitoring programs and other mitigating measures required to ensure achievement of the purpose and intent of these regulations. The format of any required reports shall be determined by the city of Richland;~~
- ~~k. A characterization of soils, geology and drainage;~~
- ~~l. A characterization of ground water conditions including the presence of any public or private wells in the immediate vicinity; and~~
- ~~m. Analysis of proposed clearing, grading and construction activities, including construction scheduling; potential direct and indirect, on-site and off-site, impacts from development; and proposed mitigation measures, including any special construction techniques, monitoring or inspection programs (during and after construction), and surface water management controls.~~

3. The report on any sensitive critical area shall include the following information:

- a. Vicinity map;
- b. A map showing:
 - i. Site boundary, property lines and roads;
 - ii. Internal property lines, rights-of-way, easements, etc.;
 - iii. Existing physical features of the site including buildings, fences, and other structures, roads, parking lots, utilities, water bodies, etc.;
 - iv. Contours at the smallest readily available intervals, preferably at five-foot intervals; and
 - v. For large (50 acres or larger) or complex projects with wetlands or habitat areas, an aerial photo with overlays displaying the site boundaries and wetland delineation or habitat area(s) may be required. Generally, an orthophotograph at a scale of one inch equals 400 feet or greater (such as one inch equals 200 feet) should be used. If an orthophotograph is not available, the center of a small scale (e.g., one inch equals 2,000 feet) aerial enlarged to one inch equals 400 feet may be used;
- ~~c. The report for any sensitive critical area must describe:~~

- vi. Locational information including legal description and address;
- vii. All natural and manmade features within 150 feet of the site boundary;
- viii. General site conditions including topography, acreage, and water bodies or wetlands; and
- ix. Identification of any areas that have previously been disturbed or degraded by human activity or natural processes.

5. 4. In addition to the general report requirements, a report on wetlands shall include the following information:

- a. Delineated wetland boundary;
- b. The wetland boundary must be accurately drawn at an appropriate engineering scale such that information shown is not cramped or illegible. The drawing shall be prepared by a surveyor. Generally, a scale of one inch equals 40 feet or greater (such as one inch equals 20 feet) should be used. Existing features must be distinguished from proposed features;
- c. Site designated on the wetlands areas maps described in RMC 22.10.090;
- d. Hydrologic mapping showing patterns of water movement into, through, and out of the site area;
- e. Location of all test holes and vegetation sample sites, numbered to correspond with flagging in the field and field data sheets;
- f. Field data sheets from the Federal Manual, numbered to correspond with sample site locations as staked and flagged in the field; and describe:
- i. Specific descriptions of plant communities, soils, and hydrology;
- ii. A summary of existing wetland function and value; and
- iii. A summary of proposed wetland and buffer alterations, impacts, and the need for the alterations as proposed. Potential impacts may include but are not limited to loss of flood storage potential, loss of wildlife habitat, expected decreases in species diversity or quantity, changes in water quality, increases in human intrusion, and impacts on associated wetland or water resources. If alteration of a Category I, II, III or IV wetland is proposed, a wetland mitigation plan is required according to the standards of RMC 22.10.140.

6. 5. In addition to the general report requirements, a report on fish and wildlife habitats shall include the following information. (The level of detail contained in the report shall generally reflect the size and complexity of the proposal and the function and value of the habitat. The ~~department~~ [administrator](#) may require field studies at the applicant's expense in appropriate cases.):

- a. A map of vegetative cover types, reflecting the general boundaries of different plant communities on the site;
- b. A description of the species typically associated with the cover types, including an identification of any critical wildlife species expected to be found;

- c. The results of searches of Washington State Department of Natural Resource's Natural Heritage and Washington State Department of Wildlife's nongame data system databases, if available; and
 - d. Additional information on species occurrence available from the city of Richland or Benton County or [the Washington State Department of Fish and Wildlife](#);
 - e. **And describe** Include the following descriptions:
 - i. The layers, diversity and variety of habitat found on the site;
 - ii. Identification of edges between habitat types and any species commonly associated with that habitat;
 - iii. The location of any migration or movement corridors;
 - iv. A narrative summary of existing habitat functions and values; and
 - v. A summary of proposed habitat and buffer alterations, impacts, and mitigation. Potential impacts may include but are not limited to clearing of vegetation, fragmentation of wildlife habitat, expected decreases in species diversity or quantity, changes in water quality, increases in human intrusion, and impacts on wetlands or water resources.
 - vi. [Describe how mitigation meets the criteria of RMC 22.10.220 including the specified mitigation sequence.](#)
- [6. In addition to the general report requirements, applicants for activities within 200 feet of geologic hazard areas shall conduct technical studies and reports which include the following:](#)
- a. [Review site history and available information;](#)
 - b. [Conduct a surface reconnaissance of the site and adjacent areas;](#)
 - c. [Conduct subsurface exploration suitable to the site and proposal to assess geotechnical geohydrologic conditions;](#)
 - d. [Conduct a detailed stability analysis of the existing landslide that demonstrates that the proposal will result in a suitable factor of safety during and following site development;](#)
 - e. [Characterize soils, geology and drainage;](#)
 - f. [Characterize ground water conditions including the presence of any public or private wells in the immediate vicinity; and](#)
 - g. [Analyze proposed clearing, grading and construction activities, including construction scheduling; potential direct and indirect, on-site and off-site, impacts from development; and proposed mitigation measures, including any special construction techniques, monitoring or inspection programs \(during and after construction\), and surface water management controls.](#)
 - h. [Evaluate the presence of geologic conditions giving rise to geologic hazards;](#)
 - i. [Evaluate the safety and appropriateness of the proposed activities;](#)

- j. Recommend appropriate construction practices, monitoring programs and other mitigating measures required to ensure achievement of the purpose and intent of these regulations. The format of any required reports shall be determined by the administrator;
- k. Recommend surface water management controls during construction and operation;
- l. Propose construction scheduling;
- m. Recommend site monitoring and inspection during construction;

7. In addition to the general report requirements, a report for Critical Aquifer Recharge Areas must meet the following requirements:

- a. Available information regarding geologic and hydrogeologic characteristics of the site including the surface location of all CARAs located on site or immediately adjacent to the site, and permeability of the unsaturated zone;
 - b. Ground water depth, flow direction, and gradient based on available information;
 - c. Currently available data on wells and springs within one thousand feet of the project area;
 - d. Location of other sensitive critical areas, including surface waters, within one thousand feet of the project area;
 - e. Available historic water quality data for the area to be affected by the proposed activity; and
 - f. Evaluation of the potential impact of the proposed development on groundwater quality, both short and long term, based on an assessment of the cumulative impacts of the proposal in combination with existing and potential future land use activities; and
 - g. A proposed mitigation plan, as applicable. Applicants must demonstrate how they will integrate necessary and appropriate best management practices to prevent degradation of groundwater.
- 8 In addition to the general report requirements, a report on floodplain development shall include the information required by RMC 23.34.100 Floodplain district – Development permit.

C. Permit Process. This section is not intended to create a separate permit process for development proposals. To the extent possible, the city of Richland administrator shall consolidate and integrate the review and processing of sensitive critical area-related aspects of proposals with other land use and environmental considerations and approvals.

22.10.380 Requirements of qualified consultants.

All reports or studies are to be performed by a professional, licensed or qualified as a consultant, in the sensitive critical area at issue. The city of Richland administrator shall determine whether a person is a qualified consultant based on the criteria established in WAC 365-195-905(4).

22.10.390 Land divisions.

All proposed divisions of land which include regulated [sensitive critical](#) areas shall comply with the following procedure and development standard:

- A. New lots shall contain at least one building site, including access that is suitable for development and is not within the regulated [sensitive critical](#) area or its associated buffer or setback [in which a restriction of prohibition on alteration is provided by this program.](#)

22.10.400 On-site density transfer for [sensitive critical](#) areas.

A. An owner of a residential site or property containing [sensitive critical](#) areas may be permitted to transfer the density attributable to the [sensitive critical](#) area and associated buffer area or setback to another nonsensitive portion of the same site or property, subject to the limitations of this section and other applicable regulations.

B. Density can be transferred from the [sensitive critical](#) portion and associated buffer area or setback to the nonsensitive portion of the residential site subject to the following conditions:

1. The basis for the density transfer will be an actual site plan for the site or property as if it did not have the [sensitive critical](#) area, subject to the provisions of the underlying zoning classification, applicable setbacks, and other standards of the city code or other land development regulations.
2. Based on the above site plan, a portion of the density that could be achieved on the [sensitive critical](#) portion and associated buffer or setback of the site can be transferred to the nonsensitive portion of the site. The following chart indicates the amount of density that can be transferred, based on the degree of sensitivity of the [sensitive critical](#) area:

CATEGORY OF SENSITIVE CRITICAL AREA	PERCENT OF DENSITY ON SENSITIVE CRITICAL AREA THAT MAY BE TRANSFERRED ON SITE
Category I and II Wetlands	25%
Critical Habitat	
High and Very High Geologic Hazard	
Seismic Hazard	
Category III and IV Wetlands	100%
Secondary Habitat	
Low and Medium Geologic Hazard	

3. In transferring the density from the [sensitive critical](#) portion of the site and its associated buffer or setback to the nonsensitive portion of the site the density of the nonsensitive portion of the site may be increased up to the equivalent next density classification. However, in the case of the highest density multifamily zoning classifications, the density may not be increased beyond the current density.

4. The nonwetland portion of the site is not constrained by another environmentally ~~sensitive~~ critical or geologic hazard area regulated by this code.

5. The nonwetland portion of the site is subject to the density limitations of the new density zoning classification, and to applicable setbacks, and other standards of the city code or other land development regulations.

C. An on-site density transfer shall meet the requirements and follow the procedures of:

1. Planned unit development, RMC 23.50.010;

2. Plats and subdivisions, RMC Title 24.

D. The fact that development rights have been sold or received, and all related conditions, will be recorded, in a form acceptable to the city attorney, to become a part of the deed of the “sending” and “receiving” properties.

22.10.410 General procedural provisions.

A. Interpretations and Conflicts. Any question regarding interpretation of these regulations shall be resolved pursuant to the procedures set forth in RMC 23.70.070.

B. Penalties and Enforcement. Any person who has violated any provision of this chapter shall have committed a civil infraction subject to a civil penalty as set forth in RMC 10.02.050(E).

Provided, if the same violator has been found to have committed an infraction violation for the same or similar conduct two separate times, with the violations occurring at the same location and involving the same or similar sections of the Richland Municipal Code or other similar codes, the third or subsequent violation shall constitute a misdemeanor, punishable as provided in RMC 1.30.010 for criminal offenses.

C. Appeals from permit decisions shall be governed by the procedures set forth in Chapter 19.70 of the Richland Municipal Code.

22.10.420 General savings provision – Reasonable use.

A. The standards and regulations of this chapter are not intended, and shall not be construed or applied in a manner, to deny all reasonable economic use of private property. If an applicant demonstrates to the satisfaction of the city of Richland administrator that strict application of these standards and the utilization of cluster techniques, planned unit development, and transfer of development rights would deny all reasonable economic use of its property, development may be permitted subject to appropriate conditions, derived from this chapter as determined by the ~~deputy city manager~~, community and development services director, and after all variance requests from the ~~board of adjustment~~ hearing examiner have been denied.

B. An applicant for relief from strict application of these standards shall demonstrate the following:

1. That no reasonable use with less impact on the critical habitat and/or hazard area and buffer is feasible and reasonable;

2. That there is no feasible and reasonable on-site alternative to the activities proposed, considering possible changes in site layout, reductions in density and similar factors;
3. That the proposed activities, as conditioned, will result in the minimum possible impacts to wetlands and buffers;
4. That all reasonable mitigation measures have been implemented or assured;
5. That all provisions of the city's regulations allowing density transfer on site and off site have been considered.

22.10.430 No special duty created.

It is the purpose of this chapter to provide for the health, welfare, and safety of the general public, and not to create or otherwise establish or designate any particular class or group of persons who will or should be especially protected or benefited by the terms of this chapter. No provision or term used in this chapter is intended to impose any duty whatsoever upon the city or any of its officers, agents, or employees for whom the implementation or enforcement of this chapter shall be discretionary and not mandatory.

Nothing contained in this chapter is intended to be, nor shall be construed to create or form the basis for any liability on the part of the city or its officers, agents, and employees for any injury or damage resulting from the failure of any premises to abate a nuisance or to comply with the provisions of this chapter or be a reason or a consequence of any inspector, notice, or order, in connection with the implementation or enforcement of this chapter, or by reason of any action of the city related in any manner to enforcement of this chapter by its officers, agents or employees. [Ord. 48-93].

22.10.440 Severability.

The provisions of this chapter are declared to be separate and severable. The invalidity of any clause, sentence, paragraph, subdivision, section or portion of this chapter to any person or circumstance shall not affect the validity of the remainder of this chapter or the validity of its application to other persons or circumstances.