UTILITIES ELEMENT

Purpose

The State of Washington Growth Management Act (GMA) requires a city developing or updating its Comprehensive Plan to plan the siting of utilities serving the jurisdiction. Specifically, the element must provide the general location and capacity of all existing and proposed utilities.

The City of West Richland ~~is responsible for providing comprehensive~~ plans for water, wastewater, and stormwater system ~~plans~~services and facilities. Comprehensive electrical, telecommunications, telephone, and cable plans are the responsibility of the applicable service providers under franchise or other agreements.

The policies included in this plan relating to land use, the environment, economic development, and utilities can work together to achieve the community's vision for the future. The availability of utilities is a significant issue considered by developers when deciding where, how and when to build. The availability of adequate and reliable services is also very important to residents, institutions, and businesses located in West Richland.

[inset – use interesting graphic]
Inventory as of 2016:

- *96 Miles of Water Main*
- *4,669 Water Service Connections*
- *16.7 Miles of Stormwater Pipe*
- *66.5 Miles of Sewer Line*
- *3,887 Sewer Service Connections*
- *XX Miles of Industrial Sewer Line*

A. Water System

The City of West Richland provides water service to most areas within the city limits. Private groundwater wells are utilized in very low-density areas, such as properties on Sand Hill ~~and homes along Woodford Lane~~.

The City's water system consists of eight groundwater wells and an inter-tie connection with the City of Richland that provides nearly one billion gallons of drinking water annually. The groundwater wells range in depth from 250 to 1,200 feet. These sources collectively can

Comment [NS1]: *Written comment from a Planning Commissioner*: Name this "Utilities and Services Element"

Comment [NS2]: The Planning Commission has not reviewed this chapter in a workshop. However, an advance copy was provided to the Planning Commission members and some members provided notes which are included.

Comment [NS3]: *Written comment from a Planning Commissioner*: "How to incentivize xeriscaping for areas w/o irrigation?

Comment [NS4]: *Written comment from a Planning Commissioner*: "What percentage is used for irrigation?

produce about 8.4 million gallons of water during peak demand periods. These sources provide water to the city's seven pressure zone areas, at pressures that typically range from 40 to 80 pounds per square inch (psi).

Water from the city's wells is stored in five reservoirs, which range in size from 250,000 to two million gallons with a total capacity of 3.8 million gallons, which protect the availability of water for residential, commercial, institutional, and industrial users throughout the city, and also cover fire protection needs. Other system components include ~~-~~ten pressure reducing vaults, ~~two~~ booster pump stations, and a telemetry system (which controls reservoir levels, ~~and on/off of the wells~~ well operations, and alarms) ~~are other components of the system~~.

The water system also includes over 100 miles of water system piping ranging in sizes from 4" to 24" and there are presently over 4,600 water service connections in the city.

Quad Cities Water Right

The city of West Richland is a party to an agreement reached in 2003 with the cities of Kennewick, Pasco, and Richland as well as the Washington State Department of Ecology Office of Columbia River known as the Quad Cities Water Rights Cooperative Agreement. Under the agreement, water rights are secured for many decades to come, and an additional water supply was obtained. The water rights from the Lake Roosevelt Incremental Release Program are noninterruptible, and so the cities can continue to use the water even during a declared drought.

Comment [NS5]: *Written comment from a Planning Commissioner*: "City buys water from Richland"

(Marked out the paragraph)

Comment [NS6]: *Written comment from a Planning Commissioner*: "Limited in any way?"

B. Irrigation Water Systems

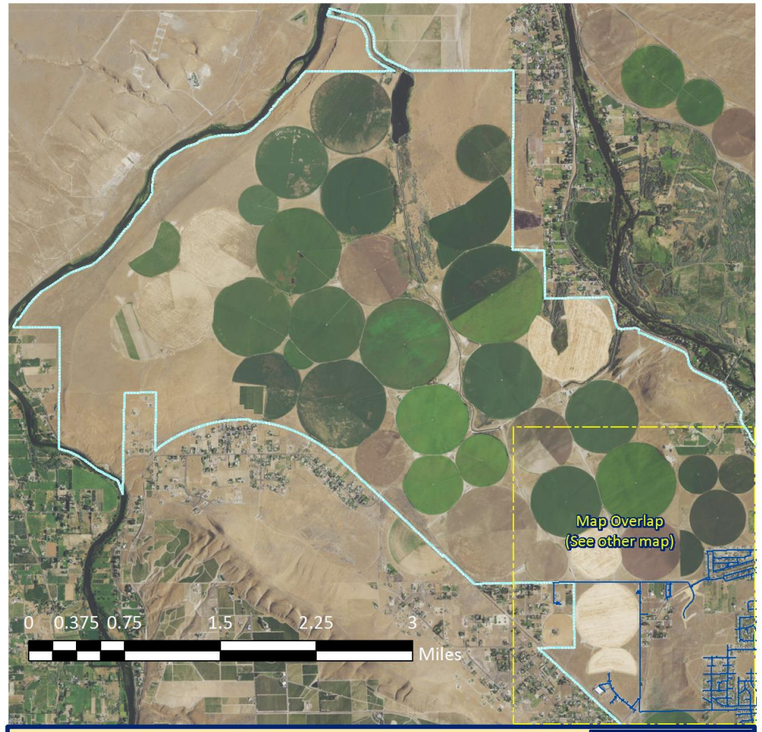
The city is fortunate to have irrigation water available to some neighborhoods and locations, for non-agricultural uses. Irrigation water is provided by the Columbia Irrigation District (CID) and the Kennewick Irrigation District (KID). In addition, the city provides irrigation infrastructure in three areas of town. Agricultural areas in the city, such as the Alexander Ranch and Lewis & Clark Ranch, use wells and surface water for irrigation.

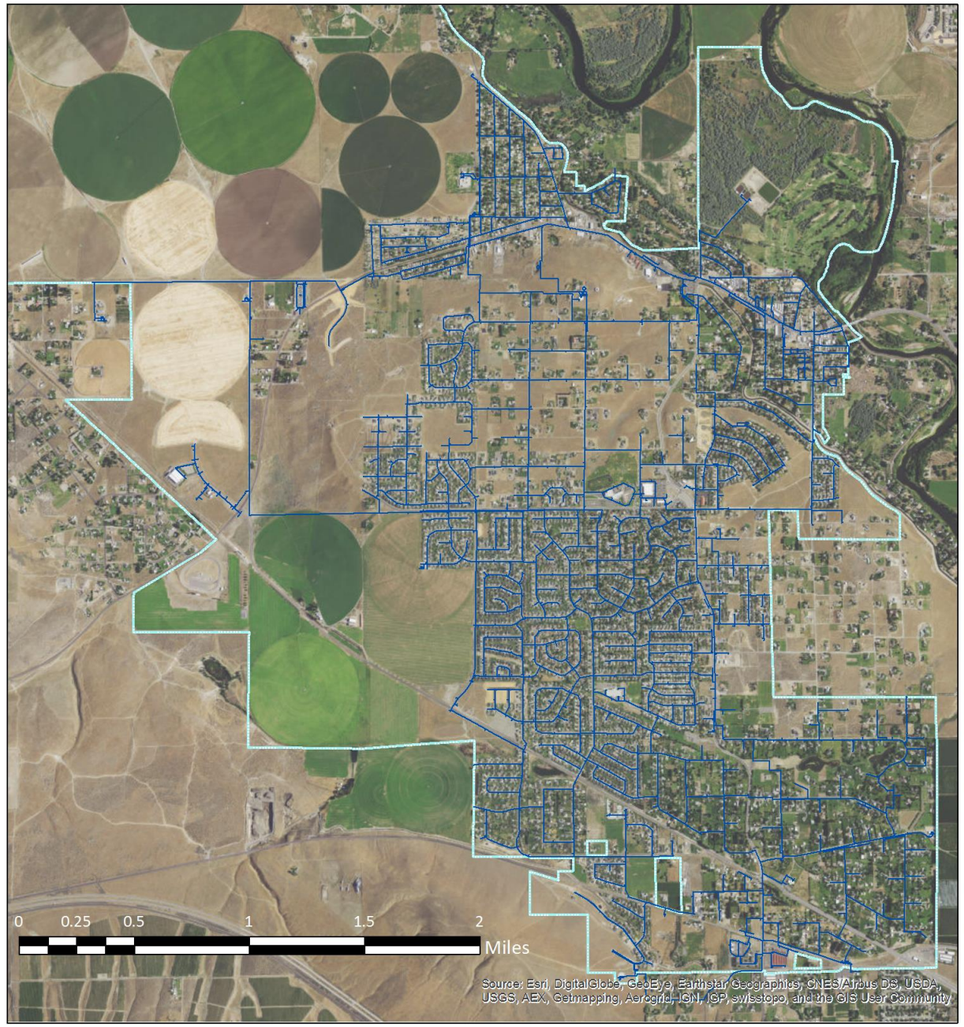
Cross Connections and Back Flow Testing

Cross connections are any potential for the contamination of the City water supply due to the backflow of contaminated water into the pipes that feed into the house or come from the City's water mains. A common type of backflow that can occur is from an irrigation systems. In accordance with State law, backflow prevention assemblies are required to be installed on any irrigation systems that are connected to City water. Additionally, those backflow prevention assemblies are required to be tested annually. The city's public works department implements a Cross-connection control program, and monitors testing of these systems.

Comment [NS7]: *Written comment from a Planning Commissioner*: "By RCW or WAC"

CITY OF WEST RICHLAND: Potable Water System (2016)





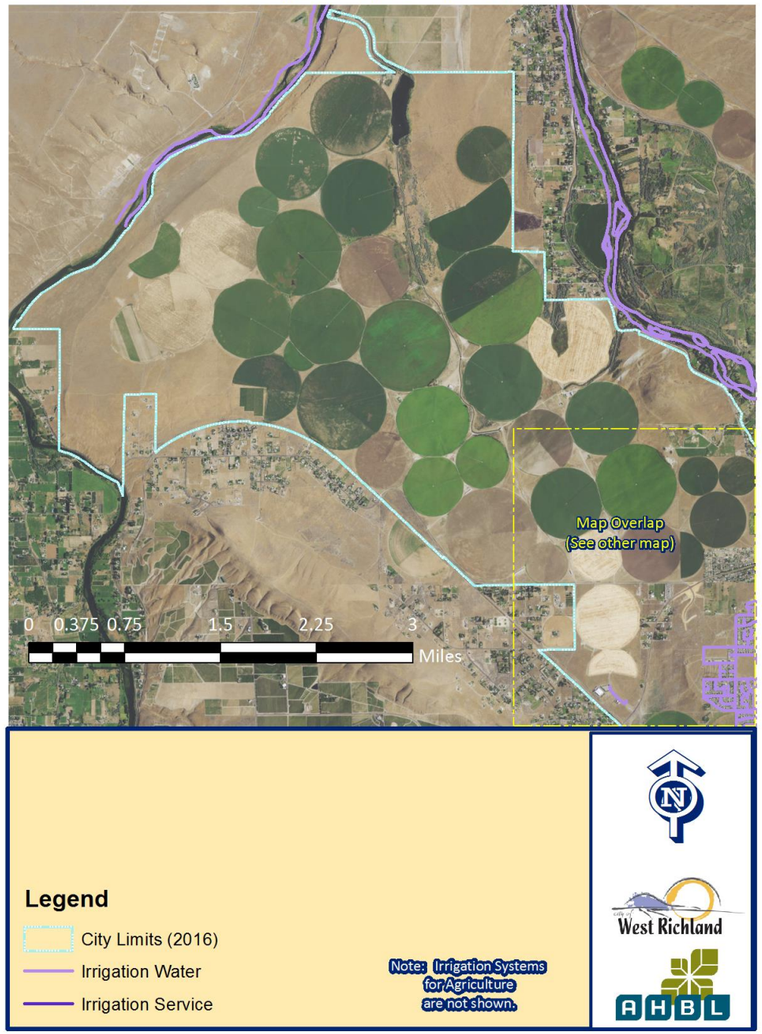
Legend

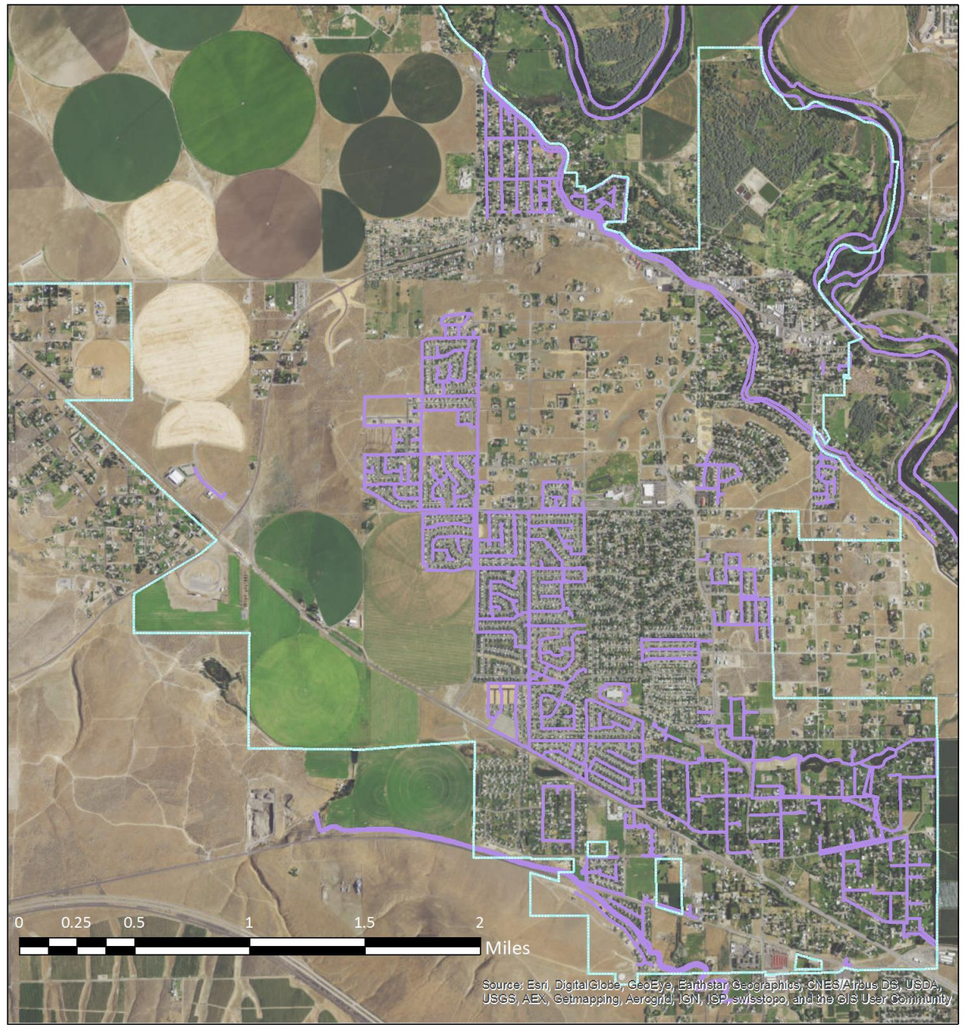
- Potable Water
- City Limits (2016)

West Richland

AHBL

CITY OF WEST RICHLAND: Irrigation System (2016)





C. Wastewater System

The City of West Richland owns, operates, and maintains the sewer system distribution piping consisting of over 65 miles of gravity and pressure sanitary sewer lines ranging in size from 2" to 24." In addition, the city's waste water system utilizes three sanitary sewer lift stations.

The city's municipal sewer system serves fewer properties than the water system. Homes and businesses that are not served by the municipal system utilize private on-site septic systems, to include properties in The Lakes, the Glenbrook, Mountain View and Canal Heights neighborhoods, in addition to properties in some areas of Section 6 and Section 8, and on Sand Hill~~, and Woodford Lane~~.

West Richland's Wastewater Treatment Plant (WWTP) can currently treat up to 1.5 million gallons per day. This treatment site is on fifteen acres, immediately north of the golf course, located at 320 N. 46th Ave. A BIOLAC system process solid waste and telemetry system monitors lift stations and the wastewater treatment plant.

Comment [NS8]: *Written comment from a Planning Commissioner*: "West"

Comment [NS9]: *Written comment from a Planning Commissioner*: "Define?"

Industrial ~~Sewer Effluent Pre-Treatment Facility~~Wastewater Treatment Plant (I-Plant)

In 2016, the City of West Richland completed construction of the I-Plant facility. The city completed the project ~~was pursued~~ to treat unique winery production facility effluent that was using nearly 10 percent of the Waste Water Treatment Plant capacity, and to attract additional processors (wineries, creameries, distilleries, and breweries) to the city. The facility is located at 7655 Van Giesen on a one-acre site.

The facility will initially service some wineries at the 8000 block of Keene Road, with the possibility to service an area over 425 acres zoned for commercial and light industrial development, pending the extension of industrial sewer service lines.

Sewer System Supply and Demand Forecast

Narrative here – describe current deficiencies (or state there are none) and describe future forecasted demand and methodology.

Comment [NS10]: Roscoe said to review studies:

*NWTP Expansion Pre-Design Documents

*South sewer interceptor pre-design documents

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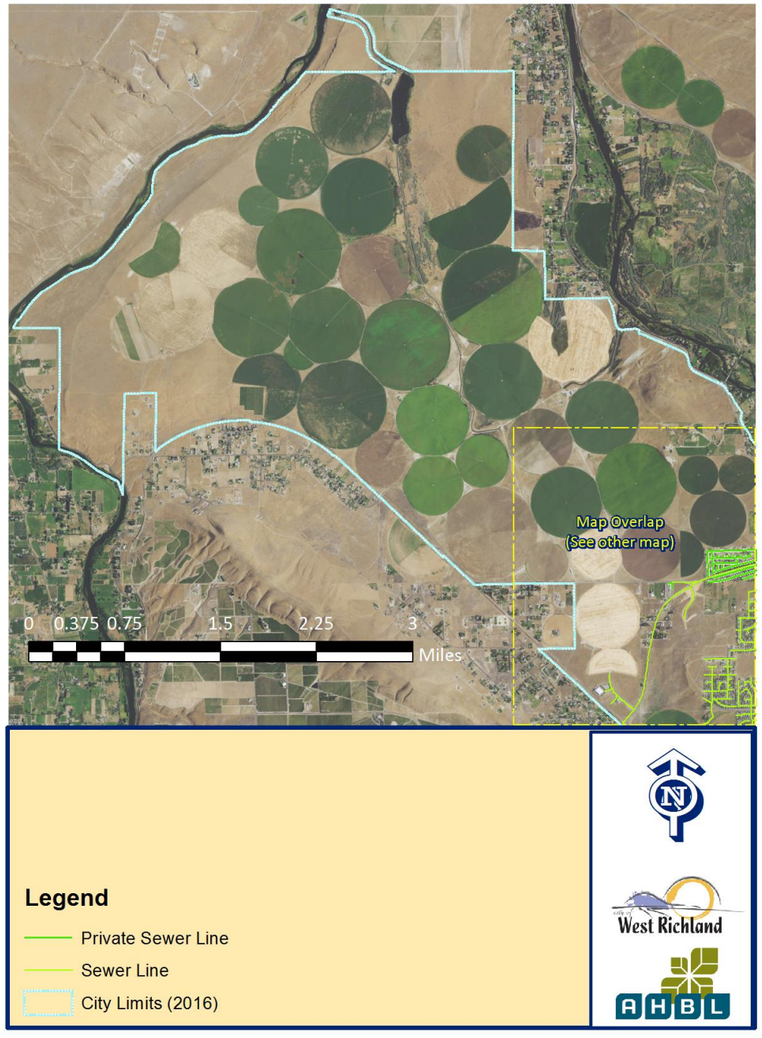
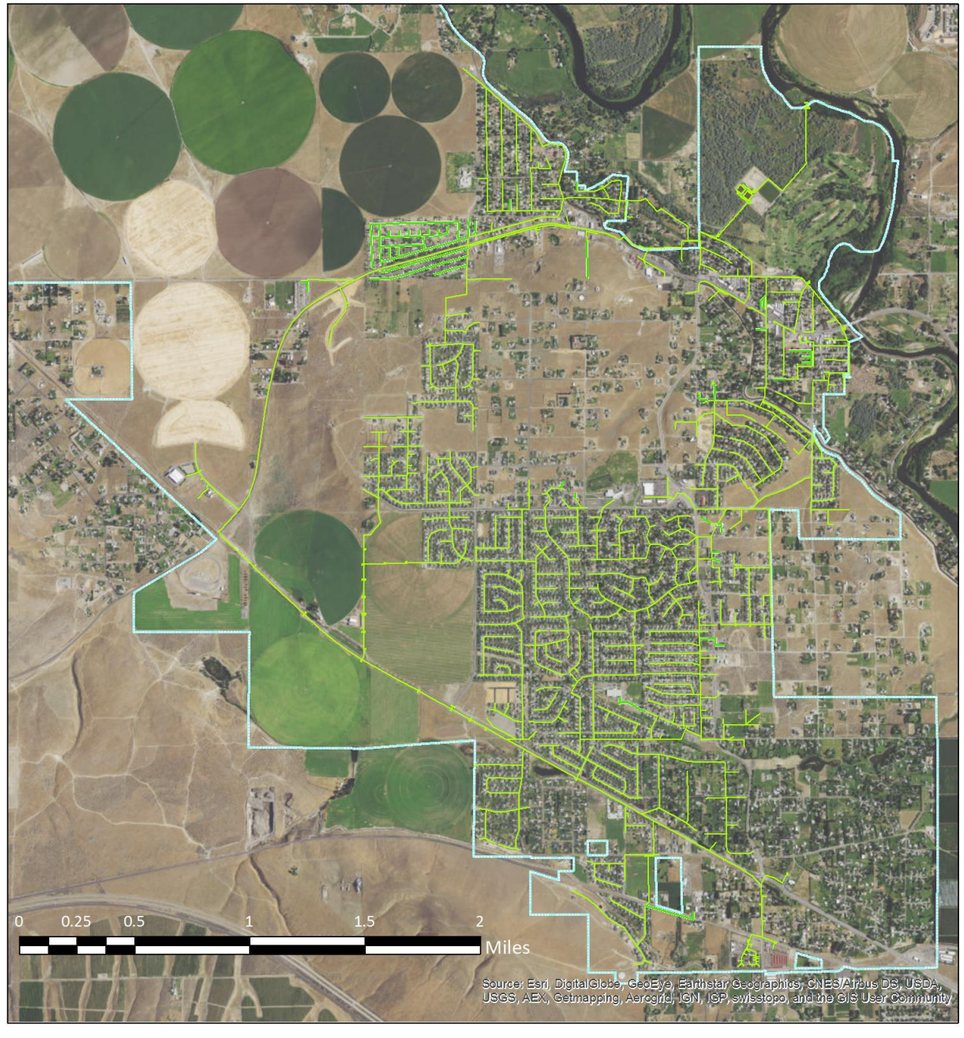
CITY OF WEST RICHLAND: Sewer System (2016)





D. Stormwater System

The stormwater division of the city's public works maintenance department is responsible for the operation and maintenance of stormwater facilities. Stormwater facilities include a street sweeping decant facility, catch basins, drywells, storm drain lines, percolation trenches, and swales. The stormwater utility is also responsible for street sweeping operations and capital improvements to the stormwater system.

The city operates under an Eastern Washington NPDES Phase II Municipal Stormwater Permit and under the permit implements a Stormwater Management Plan (SWMP). Under the program, the city conducts public information programs, detects and eliminates illicit discharges into the city's municipal separate storm sewer systems, reduces stormwater runoff pollutant control, and so forth.

West Richland's municipal code is written to provide standards for controlling storm drainage and preventing off- site run-off. On-site detention systems managed by the property owner assist in the control of storm drainage in the City.

Stormwater Supply and Demand Forecast

Narrative here – describe current deficiencies (or state there are none) and describe future forecasted demand and methodology

E. Energy

Electric

Electrical service is sourced by the Bonneville Power Authority (BPA) and Powerex. Benton Rural Electric Association (Benton REA) provides power service transmitted from BPA and Powerex. BPA provides nearly 95 percent of Benton REA power, which transmits and markets wholesale high-voltage electrical power from multiple sources (hydroelectric and nuclear) throughout the Pacific Northwest. BPA power is nearly carbon free. Powerex markets power from primarily hydroelectric facilities and is carbon free.

Comment [NS11]: *Written comment from a Planning Commissioner*: "WSU study of hydros?"

Benton REA is a membership-based cooperative providing electrical service to the City of West Richland, its residents, businesses, and institutions. Benton REA operates under a franchise agreement granted by the city. The cooperative is a non-profit. As of October 2016, BREA was serving 6,004 connections within West Richland. The average annual residential customer use was ~~XXX~~ 1,248 kWh per month.

The customer portfolio, based on sales, is 93 percent residential, 5.8 percent commercial, and 1.1 percent irrigation. Substations in the city include the Ledbetter Substation (Bombing Range

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Road), Kennedy Substation (South of Keene Road, next to the former Tri-City Raceway) and the L-C Ranch Substation (centrally located on the Lewis and Clark Ranch). Additionally, Benton REA owns undeveloped parcels in the city that could be used for future substations.

In addition, there are approximately 2,001 transformers in the city.

It is the intent of the City that its development policy and regulations encourage the design of facilities intended to conserve energy. The City will accommodate design and development features that conserve energy or use alternative energy resources.

Comment [NS12]: *Written comment from a Planning Commissioner*: "How? Specifics?"

Natural Gas

Comment [NS13]: *Written comment from a Planning Commissioner*: "Is there a desire to increase this utility?"

The Cascade Natural Gas Corporation (CNGC), an investor-owned utility, provides natural gas to the greater area but currently they only serve potions of West Richland. Areas currently served include the Keene Road corridor, south of Paradise Way, and west of Bombing Range Road.

The Northwest Pipeline Corporation and Pacific Gas Transmission Company supply CNGC.

The Pacific Northwest (Washington, Oregon, and Idaho) receives its natural gas from the southwestern United States and Canada via two interstate pipeline systems. Cascade's gas supplies are transported via Williams' Gas Pipelines - West, TransCanada Pipelines, and Duke Energy Company - Westcoast Energy, Inc.

Direct heating by natural gas is more efficient than certain types of electrical heating because there is a loss of energy during production and transmission of electricity, but it is not a carbon-neutral source.

Propane

Some homes throughout the city are equipped with liquid propane gas (LPG) tanks for cooking, water heating, furnaces, fueling barbeques, or gas fireplaces (space heating). The tanks are refilled via local delivery service.

Alternative Energy and Energy Efficiency

Throughout recent years, the city has seen an increase in the number of people who are installing solar panels on their homes or accessory buildings to augment other energy sources. Solar energy is emission free, and therefore does not contribute to climate change.
There are many ways that businesses and residents in West Richland can conserve energy, and use energy more efficiently. Doing so helps the environment, and can reduce costs. Energy conservation practices can include driving eco-friendly cars, reducing vehicle trips, purchasing Energy Star equipment and appliances, using programmable thermostats, using energy-efficient lighting, and so forth.

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Recently, the city partnered with BREA to retrofit the city's streetlight system and convert high-pressure sodium lights to LEDs. The city also invested in a wireless network that controls and monitors the streetlights, allowing the city to adjust brightness levels and save energy.

Comment [NS14]: *Written comment from a Planning Commissioner*: "Fine, but what is ahead?

F. Telecommunications

Frontier Communications (who acquired the Verizon network and its customers), ~~and~~ Charter Communications, LS Networks, Zayo Group, and PocketiNet Communications, Inc. are companies available to provide telecommunication services to residents, institutions, and businesses in West Richland. Services may include the following: high-speed internet, phone ~~and~~ television, and security. In addition, some customers may choose to go wireless and utilize services through a mobile phone provider. Broadband service is available in certain locations via cable and/ or fiber optic lines.

G. Solid Waste

West Richland maintains an interlocal agreement with Benton County for Solid Waste management. Under the agreement, participating jurisdictions work cooperatively to develop a comprehensive solid waste management plan in accordance with state law, which is viable and economically responsible to their citizens. The solid waste management plan ensures that the community has access to safe, reliable, efficient and affordable solid waste handling, and disposal. Ed's Disposal of Pasco, Washington, provides garbage pickup and removal under a franchise agreement with the city.

Recycling

There is currently no curbside recycling ~~pickup~~ service ~~for recyclables,~~ but residents choosing to recycle can deposit items at ~~several~~ designated locations in the city. In addition~~, the city and~~ Benton County sponsors special days for the collection for household hazardous ~~substances~~materials. Special disposal programs for items such as LED light bulbs, tires, and electronics are also available.

Comment [NS15]: *Written comment from a Planning Commissioner*: "Can we lean forward?"

Comment [NS16]: *Written comment from a Planning Commissioner*: "Should this be a goal?"

Comment [NS17]: *Written comment from a Planning Commissioner*: "Where?

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Goals and Policies

The utility system goals, policies, and strategies are provided below.

[inset – use icons]
Additional related goals and policies are located in the Environment Element of this plan and the level of service (LOS) standards and goals and policies related to infrastructure expansions are included in the Capital Facilities Element of this plan.

Utilities Goals:

1. Coordinate utility, land use, and transportation planning so that utilities are available or can be provided to serve in a manner that is fiscally and environmentally responsible, aesthetically acceptable to the community, and safe for nearby inhabitants.

2. Provide an adequate supply of high quality potable water to residential, commercial, and industrial users.

3. Provide an adequate supply of irrigation water to residential, commercial, and industrial users.

4. Operate and maintain an efficient wastewater treatment facility.

5. Provide stormwater collection, treatment, and filtration facilities to control the discharge of pollutants into the environment.

6. Coordinate development of electric services within the Urban Growth Area.

7. Promote the extension of natural gas service to West Richland.

8. Coordinate development of communication systems within the Urban Growth Area.

Comment [NS18]: *Written comment from a Planning Commissioner*: "What are the strategies to promote service growth?"

Utilities Policies and Strategies:

A. Provide existing levels of service to current customers and establish policies to extend utilities systems to meet new development requirements.

B. Promote the efficient use of land, and minimize disturbance to the environment, by requiring that facilities of various utilities be co-located whenever possible.

C. Establish public outreach programs to promote the conservation of resources and to provide the public with information on the benefits of conservation.

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D. Develop utility guidelines and procedures to support the Land Use and Economic Development Elements and associated objectives.

E. Ensure that public facilities and services necessary to support development are sized and constructed to support new development.

F. Work with purveyors of public services to provide facilities and services concurrent with development.

G. Encourage water conservation through a variety of programs and incentives for residential, commercial, and industrial users.
   - Govern the acceptable level of service for the domestic water system by the fire flow requirements established in the Comprehensive Water Plan.
   - Maintain average water usage per Equivalent Residential Unit (ERU) at or below 460 gallons per day per ERU through 2022.
   - Maintain unaccounted for water (loss) from the water distribution system at ten percent or less.

Comment [NS19]: These are based on Res 8-16 (water use efficiency goals)

H. Require new residential, commercial, or industrial development provide an on-site water system to meet the city's Comprehensive Water Plan, and municipal and fire district standards.
   - Require minimum fire flow standards be consistent with Washington State Standards for commercial, industrial, and residential areas.
   - Maintain full metering.

I. Develop new water sources, transmission, and storage close to the areas of growth as the city expands.
   - Collaborate with Kennewick, Richland, and Pasco on updates to the Regional Water Forecast and Conservation Plan.

Comment [NS20]: Based on SFA 3 G4-O6

J. Maximize the benefit of the city's water storage capacity, as related to the water storage requirements of the fire code.
   - Consider adoption of a commercial fire prevention code, in order to reduce the ratio of water storage needed to serve commercial development.

K. Require separate irrigation and potable water systems for new residential, commercial, and industrial development where feasible.
   - ~~Use surface water for irrigation and well water for domestic uses, wherever possible.~~
   - Encourage new development to locate in areas where irrigation water is available.

Comment [NS21]: Roscoe says to delete this.

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L. Collaborate with irrigation districts to expand service areas.

M. Require developers cover additional costs for the provision of sewer interceptors or increased treatment capacity.

~~Require developers to work in accordance with the Comprehensive Sewer Plan.~~

N. Operate the sewer wastewater system according to state and federal guidelines.

O. Operate the industrial sewer wastewater system according to state and federal guidelines.
   - Complete assessment of effluent water re-use from the Industrial Plant.

P. Develop and implement storm water management design standards that ensure an adequate level of containment is both economically reasonable and environmentally responsible.
   - Develop a storm water management program that complies with National Pollution Discharge Elimination standards (NPDES) and the Eastern Washington Stormwater Manual.
   - Implement Best Management Practices (BMPs) to reduce runoff through low-impact development techniques, and erosion and sediment control mechanisms.
   - Design the storm water system to accommodate a 25-year, 24-hour storm episode.

Q. Locate utility lines within existing right-of-way corridors and provide for sufficient easements or rights-of-way in new developments to accommodate anticipated utility improvements.

R. Provide for the location of electrical substations to provide sufficient setbacks from existing uses to reduce conflicts.

S. Maintain consistency of the electrical utility franchises.

T. Ensure compatibility of local utility installations and development with adjacent land uses.

U. Encourage all new utility distribution and service lines serving new subdivisions and developments to be located underground.

V. Coordinate with utility providers operating within the City's urban growth area to work with the City on major road realignment or construction projects for the installation of conduits or service lines for placing underground aerial feeder and service lines.

W. Require shared trenches for new public and private utility lines.

Comment [NS22]: Roscoe says this does not exist

Comment [NS23]: Newly added by AHBL 10/27/2016 **(after Roscoe's Review)**

Comment [NS24]: Newly added by AHBL 10/27/2016; **(after Roscoe's Review)**based on 201718 proposed budget SFA 2 G2 O4

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X. Ensure substation sites are screened and landscaped to provide buffers between them and adjoining dissimilar uses.

Y. Ensure development standards for natural gas construction in street right-of-ways through work and cooperation with the Cascade Natural Gas and Washington Utilities Commissions staff.

Z. Maintain consistency of the telecommunication franchises.

Comment [NS25]: *Written comment from a Planning Commissioner*: "What are the strategies to promote service growth?"

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