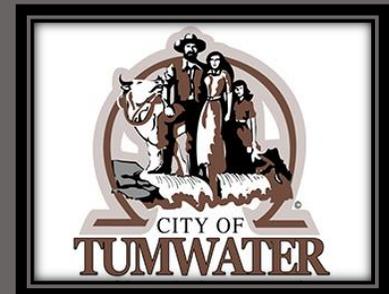


Tumwater City Plan 2035

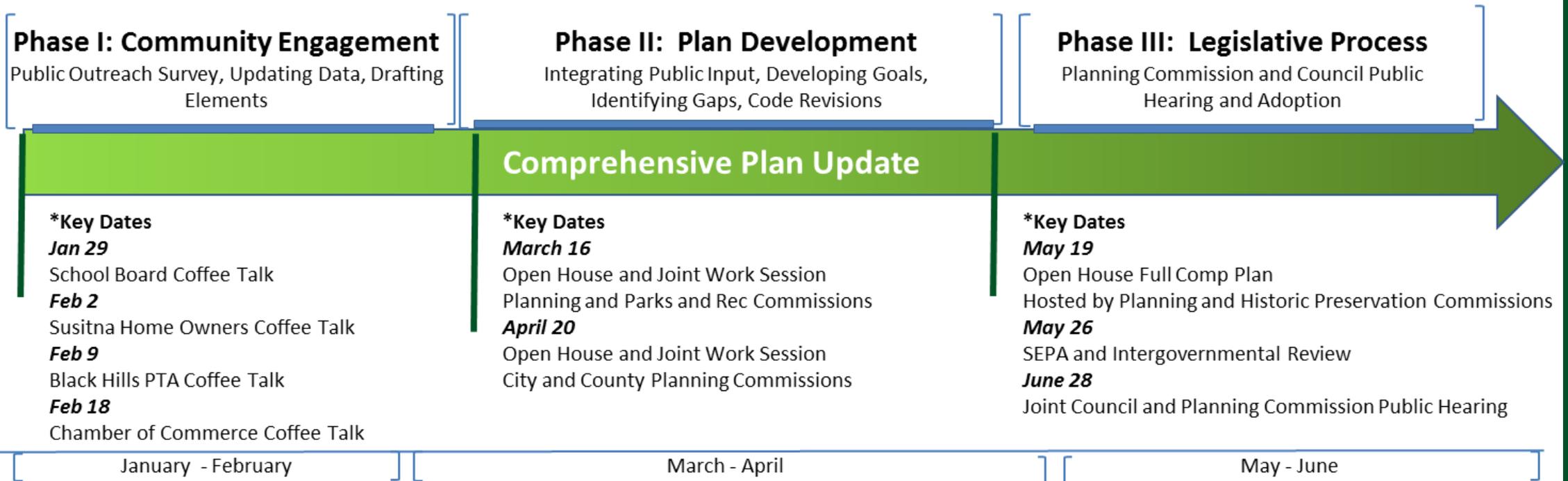
Utility Element

April 26, 2016
Planning Commission



Process Goals

2016 Community Engagement Timeline



Community Outreach – What are we hearing so far?

- **Provide more transportation choices.**

Develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health.

- **Promote equitable, affordable housing.**

Expand location- and energy-efficient housing choices to increase mobility and lower the combined cost of housing and transportation.

- **Enhance economic opportunity.**

Improve economic competitiveness through reliable and timely access to worksites, educational opportunities, services and other basic needs.

- **Value communities and neighborhoods.**

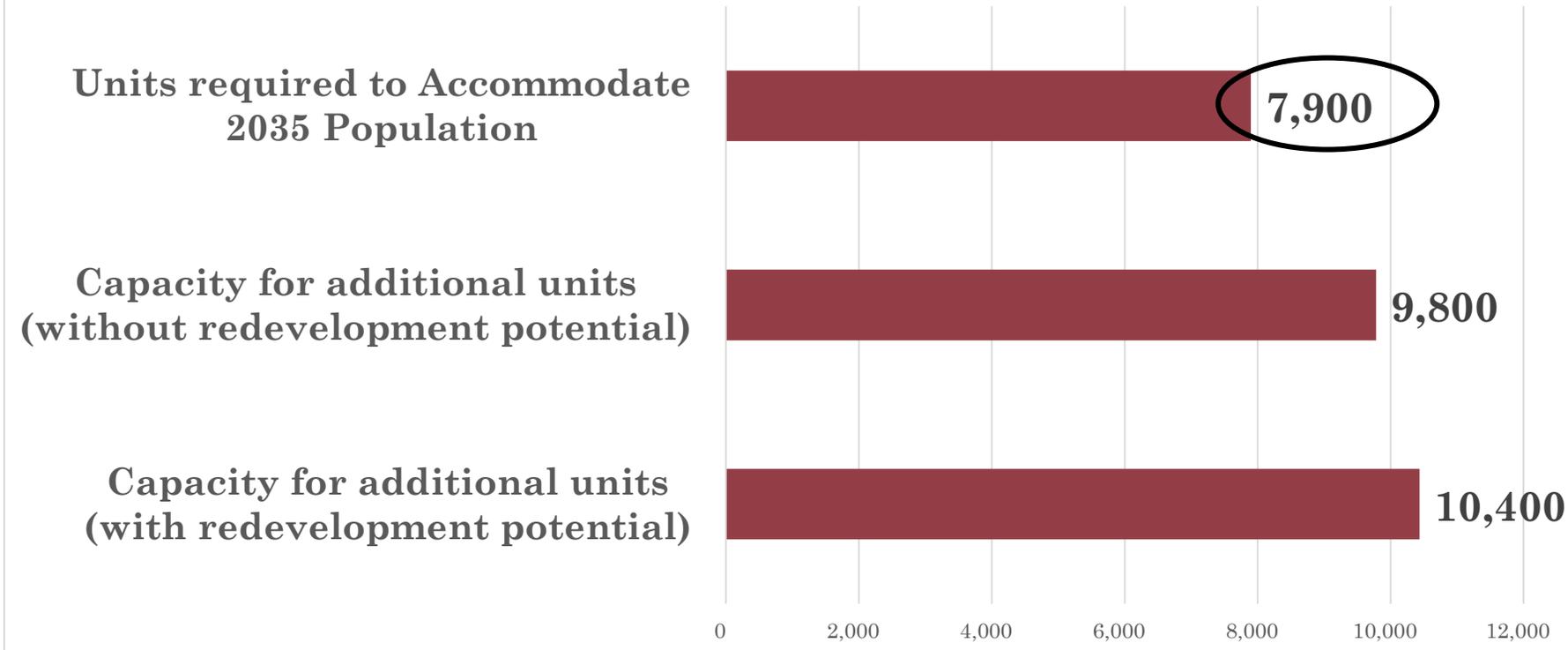
Enhance the unique characteristics of all communities by investing in healthy, safe, and walkable neighborhoods. Employ strategies like mixed-use development and land recycling—to increase community revitalization and the efficiency of infrastructure investments.

Profile of Tumwater

TUMWATER AND URBAN GROWTH AREA 20 YEAR POPULATION FORECAST				
	2015 Population (includes annexed areas)	2035 Population	Population Increase	% Increase 2015-2035
Tumwater	21,940	34,680	12,740	58%
Urban Growth Area	3,250	8,200	4,950	152%
Combined areas	25,190	42,880	17,690	70%

Demand Analysis

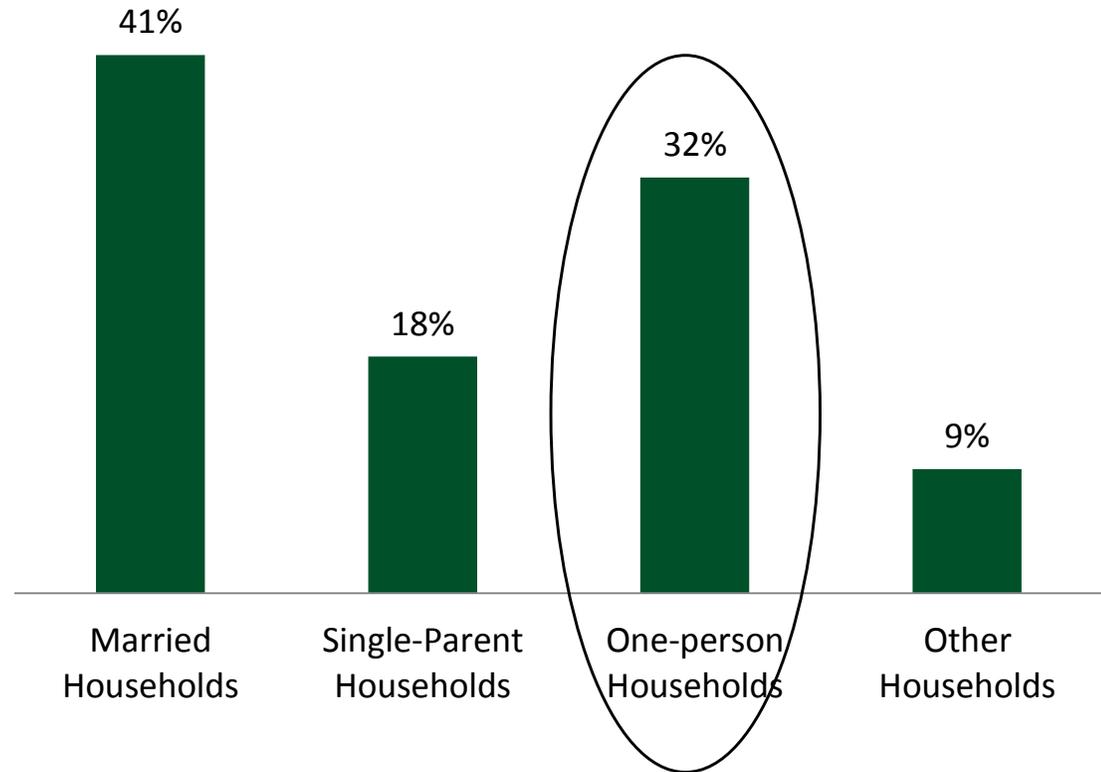
Land Use Plan Potential New Dwelling Units
20 Year Planning Period (2015-2035)



Housing Patterns & Trends

Household Type

Household Type	Tumwater	Thurston County
Married Households	41%	50%
<i>With Children Under 18 Years of Age</i>	<i>16%</i>	<i>19%</i>
<i>Without Children Under 18 Years of Age</i>	<i>25%</i>	<i>30%</i>
Single Parent Households	18%	15%
<i>With Children Under 18 Years of Age</i>	<i>11%</i>	<i>10%</i>
<i>Without Children Under 18 Years of Age</i>	<i>7%</i>	<i>6%</i>
One-person Households	32%	26%
Other Households	9%	8%
% Households with Children	27%	29%



Transportation System

Public streets/roads: 140 miles citywide

Tumwater owns: 100 miles

Transportation Plan: Adds 15-20 road miles
at a cost of \$160 Million

Bus System: 6 major routes
(12,13,42,43,68,609)

Trails: 5 miles

Sidewalk: 104 miles
“Walkscore” – 38

Bike Lanes: 11.5 miles

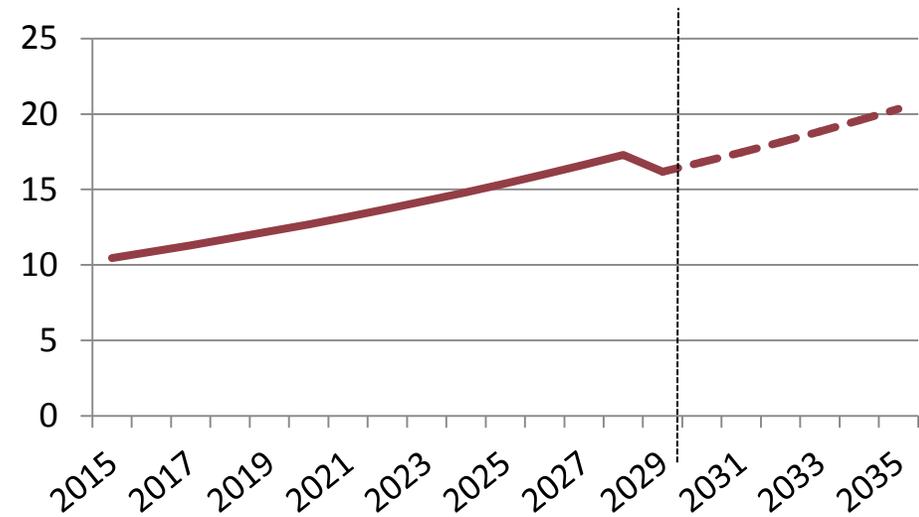
1 Airport (835 Acres)



Water & Wastewater

- Residential development - 2 million gallons of water per day of a total 10 million
- Demand for water - growing at 3-4% annually
- LOTT projections show over an estimated **5,000 new sewer connections by 2035** at an average of 260 per year

Daily Demand – Millions of Gallons Per Day
Based on Population Forecasts and Historic Growth in Demand



Tumwater/LOTT - T Street Reclaimed Water Tank

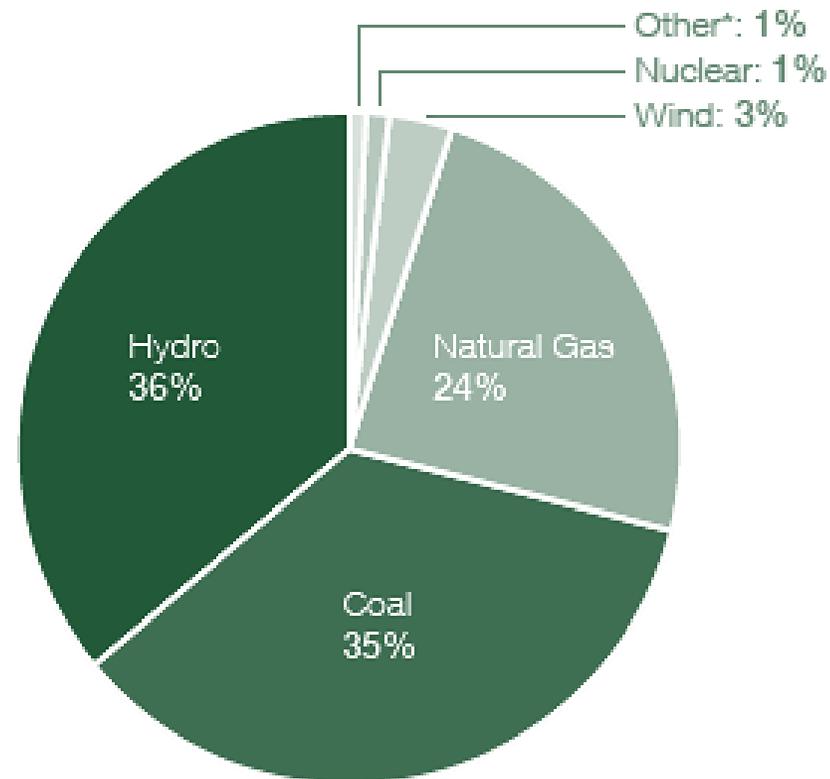
What is the Utility Element?

A utilities element consisting of the **general location, proposed location, and capacity** of all existing and proposed utilities, including, but not limited to, electrical lines, telecommunication lines, and natural gas lines. -RCW 36.70A

- supports the community's vision for the location and amount of growth.
- Utility planning for newly annexed areas and higher growth areas such as Brewery District and the Town Center advances the vision.
- For those utilities provided by private companies, the City has encouraged the necessary and desired services by allowing private companies to use public facilities, ensuring sufficient areas for placement of those facilities, and providing for a reasonable regulatory climate.

Current Fuel Mix for Electricity

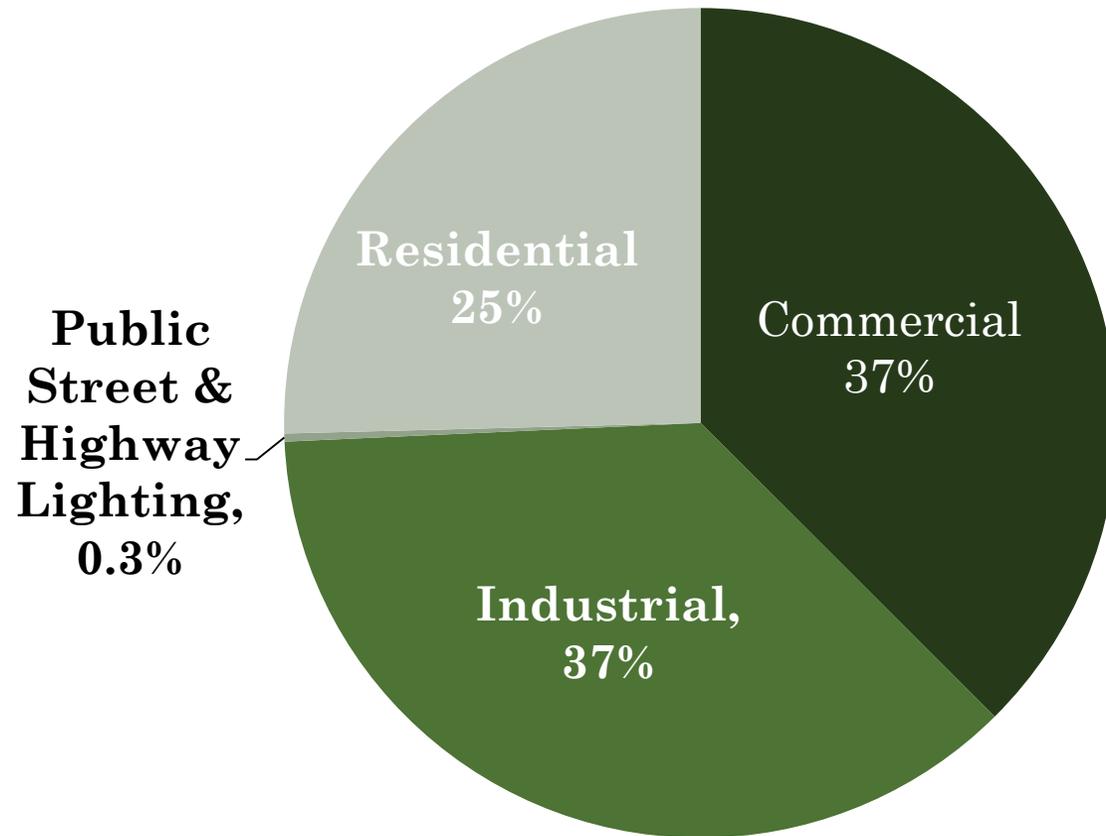
Fuel	Percentage
Coal	35%
Hydroelectric	36%
Natural Gas	24%
Nuclear	1%
Other*	1%
Wind	3%
Total	100%



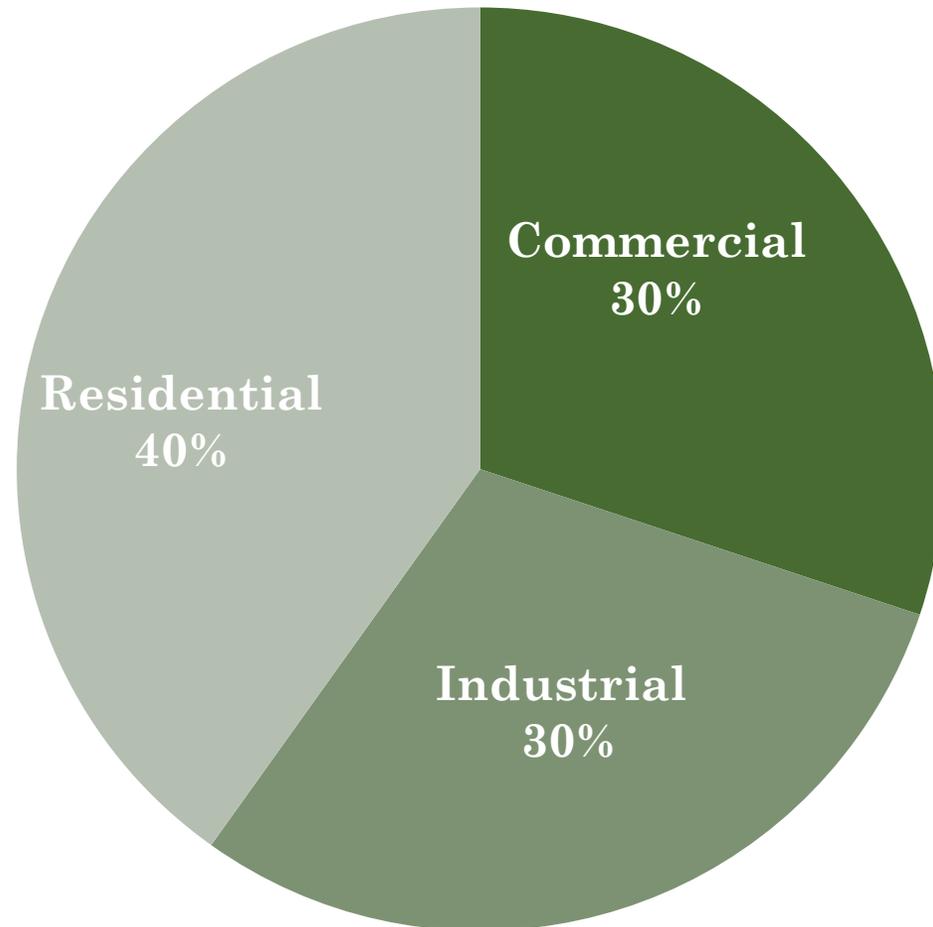
*biofuels, landfill gas, petroleum, and waste

Source: Puget Sound Energy

Tumwater's Electricity Consumption by Sector



Tumwater's Natural Gas Consumption by Sector



Tumwater's Energy Outlook

TUMWATER AND URBAN GROWTH AREA 20 YEAR GROSS ANNUAL ENERGY CONSUMPTION PROJECTION		
	2015 Population	2035 Population
Tumwater	21,939	34,680
*Natural Gas (THM)	6,500,000	10,000,000
**Electricity (kWh)	315,000,000	498,000,000
Urban Growth Area	3,250	8,203
*Natural Gas (THM)	900,000	2,400,000
**Electricity (kWh)	47,000,000	118,000,000
Combined areas	25,188	42,883
*Natural Gas (THM)	7,400,000	12,400,000
**Electricity (kWh)	362,000,000	616,000,000

Source: U.S. Energy Information Administration (EIA) State Energy Data System , Puget Sound Energy, and Thurston Regional Planning Council

Total energy consumed divided by the population.

This per capita indicator is a good measure of energy consumption because decisions by individual consumers have an important effect on overall energy consumption.

Utilities – How do we stack up?

- **Industrial natural gas rate** (\$7.27 per thousand cubic feet) - 115% more than US average
- **Residential natural gas rate** (\$9.15 per thousand cubic feet) - 1.5% less than the US average
- **Commercial electricity rate** (9.5 cents/kWh) - 23% greater than the Washington average and 6% less than the national average.
- **Residential electricity rate** (10 cents/kWh) - 22% greater than the Washington average and 13% less than the national average.

Inventory of Utility Pipelines

Gas Miles	Liquid Miles	Pipeline Operators
119.3	32.29	Puget Sound Energy
		Williams Gas Pipeline
		Olympic Pipe Line Co

Utilities - Some Uncertainties

- Natural variations in weather
- Potential increases or decreases in retail loads due to changes in local, regional, and national economic conditions
- Future local, state, and national policy requirements
- Cost and availability of fuel
- Changes in existing or contracted generating resources
- Availability of new and existing uncommitted regional resources
- Availability and reliability of import/export markets and transmission limits; and
- Future climate change impacts to retail loads, stream flows, and resources.

Telecommunication - Broadband

- 94% of residents have broadband access as defined by FCC
- 85% have download speed of 25Mbps wireline and 14% have 25Mbps wireless (high speed)
- Only 1% of residents have fiber optic internet access
- 131 cities across the US providing municipal high speed broadband – “Next Century Cities”

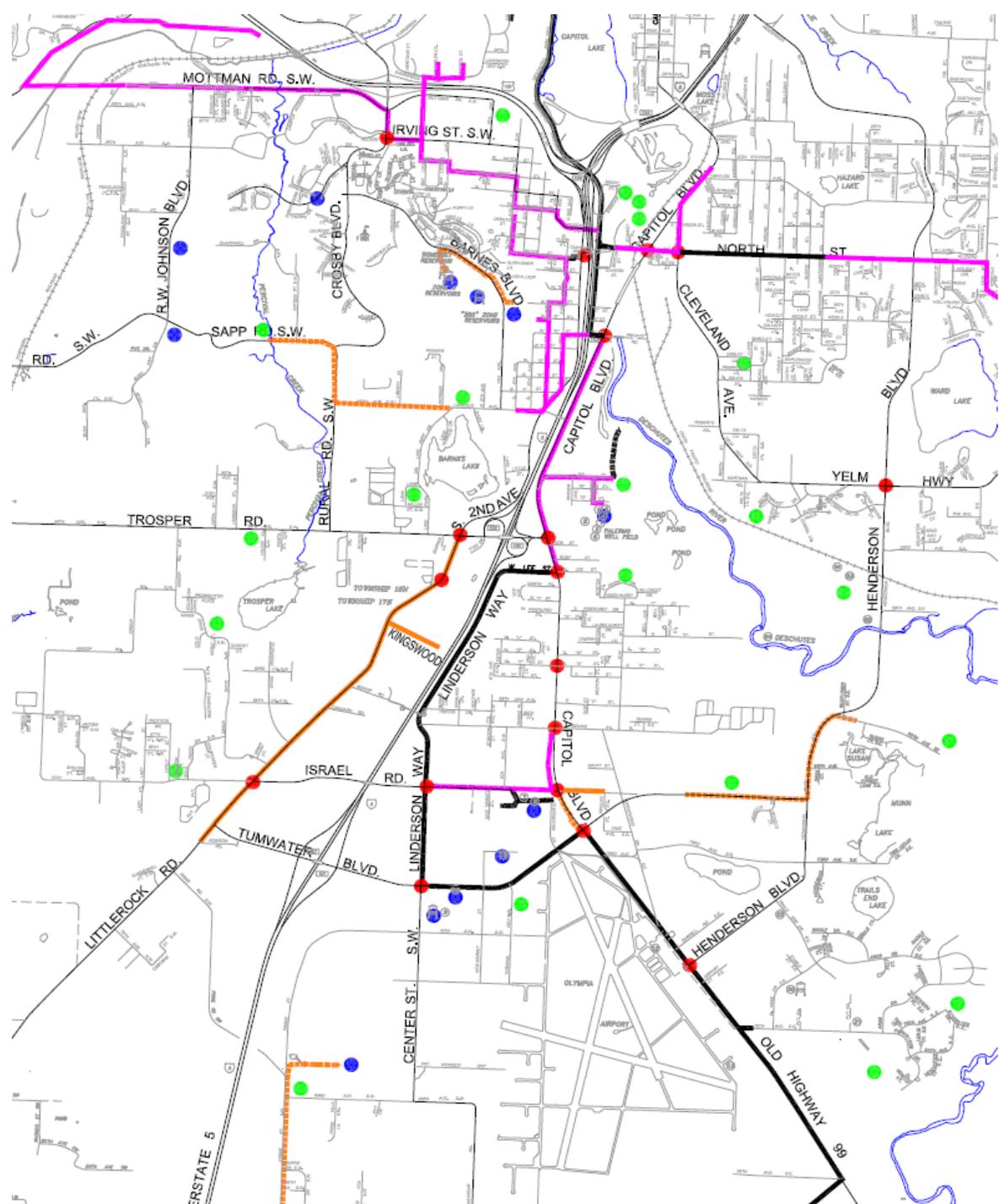
Tumwater's Fiber Optic Network

- EXISTING UNDERGROUND FIBER OPTIC CABLE *
- EXISTING AERIAL FIBER OPTIC CABLE
- EXISTING CONDUIT FOR FIBER OPTIC CABLE *

* SOLID LINE = 4" CONDUIT, DASHED LINE = 2" CONDUIT

- TRAFFIC SIGNALS
- WATER UTILITIES
- SEWER LIFT STATIONS

SCALE: 1" = 3000'



What's Next?

- **May 19th** – Special Joint Meeting with Historic Preservation Commission
- **May 24th** – Work Session #2 Transportation Element and other Comp Plan Elements

Please send comments on all draft Comp Plan Elements
by **Monday, June 6th**