# Utilities and Capital Facilities Element

1/3/2018

## UTILITIES AND CAPITAL FACILITIES ELEMENT

This Utilities and Capital Facilities Element has been developed in accordance with Section 36.70A.070 of the Growth Management Act and with the Island County Wide Planning Policies to address the capital facilities and utilities needs in the city of Langley Urban Growth Area. It also provides a link between the land use planning policies of the city and the development activities of utility providers, and describes how the various utilities plan to accommodate forecasted growth over the next 20 years.

The element specifically defines capital facilities and identifies facilities and services included which are necessary to support development. It evaluates the city's fiscal capability to provide the capital/public facilities necessary to support the other comprehensive plan elements. The policies and objectives in this plan will guide public decisions on the use of capital funds and indirectly guide private development decisions by providing a strategy of planning public capital expenditures.

The Capital Facilities and Utilities Element assists the City in coordinating its physical and fiscal planning. The Capital Facilities and Utilities Element promotes efficiency by requiring the city to prioritize capital improvements for a longer period of time than the single budget year. Long range financial planning presents the opportunity to schedule projects so that the various steps in development logically follow one another, with regard to relative urgency, economic desirability, and community benefit. In addition, the identification of adequate funding sources results in the prioritization of needs, and allows the trade-offs between projects to be evaluated explicitly. The outcome of proper planning can be better implementation of the adopted community vision.

The Capital Facilities and Utilities Elements were combined into one element for this plan due to the size of the city and its capital/public facilities as well as the amount of overlap between the two elements that existed in the previous plan.

## CAPITAL FACILITIES PROGRAM

The Capital Facilities Program within this element is a six-year financing plan for capital expenditures to be incurred each year. It sets forth each capital project which the jurisdiction plans to undertake and presents estimates of the resources needed to finance the project. The first year (2018) of the Capital Facilities Program will be converted to the annual capital budget that is adopted by Council, while the remaining five-year program for 2018 to 2030 outlines long-term project planning. Only the expenditures and appropriations in the annual budget are binding financial commitments. The projections for the remaining five years are not binding, and the capital projects recommended for future development may be altered or not developed due to costs or changing circumstances. The Capital Facilities Program is a six-year rolling plan that will be revised and extended annually to reflect changing circumstances.

Capital Facilities are not specifically defined by the GMA, however it does define public facilities to include “streets, roads, highways, sidewalks, street and road lighting systems, traffic signals, domestic water systems, storm and sanitary sewer systems, park and recreational facilities and schools.” The GMA also defines public services to include “fire

protection and suppression, law enforcement, public health, education, recreation, environmental protection and other governmental services."

Utilities are defined for this plan to include third party utilities such as electrical and telecommunication facilities (including telephone, cellular phone, and cable television services).

**Capital Improvements**
This Element identifies those capital/public facilities that require repairs, upgrading, and replacement, as well as new facilities that need to developed to accommodate projected growth. The project may also include design, pre-engineering, permitting, environmental analysis, land acquisition, construction, major maintenance, site improvements, landscaping, initial furnishings, and equipment.

These are for facilities that are large scale, generally non-recurring high cost, and may require multi-year financing. This does not include capital outlay items such as equipment. Minor projects, activities or maintenance that cost less than $5,000 are considered minor maintenance and are not capital improvements.

**Capital Improvement Program**
The city's six-year and twenty-year capital improvement program is identified in Table C-1, which is hereby incorporated by reference. Table C-1 provides a brief description of each of the capital improvements projects, and provides an estimate of the total project costs. Capital improvement projects have been identified for transportation, parks and recreation, wastewater, potable water, stormwater drainage facility improvements, and other public facilities.

## MECHANISMS TO FUND CAPITAL FACILITIES

In order to realistically project available revenues and expected expenditures on capital facilities, the city must consider all current policies that influence decisions about the funding mechanisms, as well as policies affecting the city's obligation for public facilities. The most relevant of these are described below.

**General Taxes:** This is the most common revenue source for capital facilities and include property tax, sales tax, utility tax, and real-estate excise tax. General taxes are flexible but fund numerous municipal activities.

**Debt Service Funds:** Langley currently has minimal long-term debt obligations. Annual bond payments for the Second Street project undertaken in 2014 total approximately $35,000 and will be paid off in 2028. The city has the ability to issue general obligation bonds without voter approval, but must have the available revenue to pay the bond payments over time. In 2012 the city adopted updated budget policies to guide future bond proposals. The city currently has ample debt capacity, but there is limited ability under the existing budget to pay the costs of long-term bonds.

**Grants and Loans:** Different state departments offer grants and low-interest loans for

different utilities: Department of Ecology for the Centennial Clean Water Fund and Clean Water SRF and the Department of Commerce for the Public Works Trust Fund (PWTF), and the Department of Ecology Clean Water SRF loan. The city has had success with some of these programs in the past. Island County has an Economic Development grant program that is funded by $0.09 rural county sales tax that can also be utilized for capital projects.

**Mandatory Dedications or Fees in Lieu of:** The city may require, as a condition of development approval, that proponents dedicate a certain portion of the land in the development to be used for public purposes, such as roads or parks. Dedication may be made to the local government or to a private group, but must be proportional to the impact of the project. When a development is too small or because of topographical conditions a land dedication cannot reasonably be accommodated, the city may accept a voluntary fee in lieu of providing the needed improvement. Developers are responsible for providing all needed public facilities to accommodate a proposed development if existing facilities are lacking. The city may decide, at its discretion, to participate in the development of infrastructure to accommodate a development project to meet city goals such as economic development or affordable housing.

**Impact Fees:** Impact fees are one-time charges that can be assessed by a local government against a new project to help pay for new or expanded public facilities that will directly address the increased demand created by that development. Impact fees may only be used for capital facilities that are reasonably related to the new development, will directly benefit the new development, and will also serve the community at large. Impact fees can only be imposed for public streets, publicly owned parks, open space and recreation facilities, school facilities and fire protection facilities. Impact fees may not be used to correct existing deficiencies. The city does not collect impact fees due to the slow growth rate of development, the restricted use of funds and relatively short timelines permitted by the State to use the funds. (RCW 82.02.050-.110 and WAC 365-196-850)

**Utility Fees and Permit Fees**: Utility fees are user fees paid by the end user of the service and are typically comprised of inspection fees, bi-monthly utility charges, late fees, application and connection fees, and the like. The city has three utility funds: Water, Sewer and Stormwater. The fees collected for each specific utility are used for the day to day operation of that utility and include staff wages and related expenses, regular operating and maintenance costs, engineering, sampling, reporting, etc. There are also transfers from each Utility Fund to the General Fund and Capital Reserve Fund for the specific utility and to the Vehicle/Equipment Reserve Fund.

**Capital Reserve Funds:** Each of the utilities has a Capital Reserve Fund that is comprised of the transfer of funds from each of the Utility Funds outlined above. These funds are used for capital improvements and to pay for any debt service on these improvements. The reserve funds for water and sewer have existed since the early 90's. Until 2007, stormwater was a part of the street fund. The stormwater utility was created in 2007 and its reserve in 2013.

**Latecomer Agreements** Latecomer agreements, also referred to as recovery contracts or reimbursement agreements, allow a property owner who has installed street or utility improvements to recover a portion of the costs of those improvements from other property owners who later develop property in the vicinity and use the improvements. Latecomer Agreements are allowed for sewer and water and roads. Chapter 35.72 RCW authorizes cities and counties to contract with a developer for the construction or improvement of street projects, and it authorizes, for a 15-year period, reimbursement of the developer by other property owners who subsequently develop their property and who meet certain criteria. RCW 35.91.020 authorizes contracts between a city or a county and a developer for construction of water and sewer facilities, and it authorizes, for a 15-year period, reimbursement of a developer by other property owners who did not contribute to the original cost of the facilities and who subsequently tap into or use the facilities.

**Local Improvement Districts** Local Improvement Districts (LIDs) are a means of assisting property owners in financing needed capital improvements through the formation of special assessment districts. Special assessment districts allow improvements to be financed and paid for over a period of time through assessments on the benefiting properties. The city has one LID, ULID 8 Commercial Surcharge, that was created in 1993 to construct Pump Station Nos. 1 and 2, as well as force main, outfall and some collection system improvements. ULID 8 was paid off in 2002. The commercial sewer surcharge was, however, made permanent at that time. The city has had several different LID's in the past, although none are active.

RCW Chapters 35.43 through 35.56 authorize and establish the mechanisms for cities to carry out a wide range of public improvements including streets, parking facilities, water and sewer systems, parks and recreational facilities, underground utilities and transportation facilities, and to assess benefited property owners for the costs of such improvements.

**Subdivision Extractions** Under chapter 58.17 RCW, the state subdivision law, cities or counties may require that developers install, at their expense, the improvements necessary for a full range of urban services in new subdivisions. Such improvements usually include streets, curbs and gutters, sidewalks, water systems, fire hydrants, sewer and drainage lines, and, in some instances, transit stops, parks and recreation facilities and sites for schools. Installation of these improvements is usually required as a condition of subdivision approval. Also, a performance bond or similar obligation is generally required to ensure that improvements will be installed in accordance with city or county requirements. If a proposed plat does not make "appropriate provisions" for the public health, safety, and general welfare, including such needed improvements, the legislative body must deny the proposed plat.

## OBLIGATION TO PROVIDE CAPITAL FACILITIES

**Coordination with Other Public Service Providers:** Local goals and policies as described in the other comprehensive plan elements are used to guide the location and timing of development. However, state agencies, special management districts, and utilities that provide public facilities within the city influence many local decisions. The

planned capacity of public facilities operated by other jurisdictions must be considered when making development decisions. Coordination with other entities is essential not only for the location and timing of public services, but also in the financing of such services.

Other public service providers such as the school and port districts, Island Transit and Island County are important agencies to the city. The city's policy is to exchange information with these entities and to provide them with the assistance they need to ensure that public services are available and that the quality of the service is maintained.

**Urban Growth Area Boundaries:** The Urban Growth Area Boundary was established in order to ensure that urban services will be available to all development. The location of the boundary was based on the following: amount of un and under-developed land, environmental constraints, the concentrations of existing development, and the existing infrastructure and services.

## PLAN IMPLEMENTATION AND MONITORING

### Implementation

Outlined below are lists of the capital improvement projects by facility type, indicating which projects are needed to correct existing deficiencies. The lists provide estimates of project costs by year. Figures UCF-1 through 7 show the location of capital facilities in the City. The distribution among years matches the years in which capital improvement work is planned to achieve or maintain the adopted Level of Service standards and measurable objectives for various public facilities.

Top priority is generally given to projects which correct existing deficiencies, followed by those required for facility replacement and those needed for future growth. A further consideration is the economic and social benefits of capital projects.

### Monitoring and Evaluation

Monitoring and evaluation are essential in ensuring the effectiveness of the Capital Facilities Plan Element. Capital Improvements are reviewed annually and amended to verify that fiscal resources are available to provide public facilities needed to support this element and the goals of the comprehensive plan.

### Asset Management

Asset management (sometimes used interchangeably with infrastructure management) is a relatively young and evolving discipline, with the potential to inform decisions that will yield the best possible long-term social, economic and environmental value for a community. Asset management is a continuous quality improvement process. This ongoing process is incremental and scalable. It involves assessing capacity, demand and result, planning what needs to be done and implementing the plans. This continually informs how to enhance and expand the process. Asset Management Plans are integral to a robust Long-Term Financial Plan and support Sustainable Service Delivery. This integration identifies gaps between long-term costs and available funding. The financial planning process identifies opportunities to close the gap through adjusting service levels (reducing costs) and/or increasing funding (raising revenue).

## CAPITAL FACILITIES INVENTORY

### Water (ID# 45950W)

The Langley water system service area is approximately 2.5 square miles. The city served approximately 959 Equivalent Residential Units and 804 connections in 2016. According to the City's Water System Plan, adopted in 2012, future growth projections indicate that the City will ultimately serve approximately 1,300 by the year 2030.

The City is currently permitted for 301 acre-feet a year and future planning projections through 2030 predict that withdrawals will remain below permitted amount, with the demand estimated at 188.57 acre-feet in 2030.

The city's water system was mainly constructed during the 1960s. The city depends solely on ground water for its source. The city draws its water from the wells listed below:

**Table UCF-1 City Wells**

| Well | Year Drilled | Depth | Size of Casing | Installed Capacity (gpd) |
|---|---|---|---|---|
| NO. 1 | 1987 | 281' | 12" | 518,400 |
| NO. 2 | Abandoned | 7/22/97 | | |
| NO. 3 | 1962 | 42' | 8" | 129,600 |
| NO. 5* | 1971 | 238' | 8" | 360,00 |
| NO. 6 | 1996 | 51' | 8" | 108,000 |

*Emergency Use Only

The city currently uses wells number 1, 3, and 6, which are located in its watershed area well field relatively close to its 650,000-gallon storage facility. Well number 5 has not been used as a source since Well number 1 was developed in 1987, due to the amounts of iron and manganese present in its water. Well No. 2 was abandoned due to well casing failure in 1997 and Well No. 6 was drilled as a replacement.

The three production wells have a mechanical capacity of 500 gpm or 720,000 gallons per day. The estimated current usage by the City is 134,807 gallons per day as shown in Table UCF-2.

The City's storage facility consists of one covered steel tank with a capacity of 650,000 gallons. This tank was constructed in 1996 as a part of an improvement project listed as Phase I Water System improvements.

The distribution system is approximately 45,000 linear feet of water main and consists of

older asbestos cement, and newer C-900 PVC or ductile iron pipe.

Langley's water service planning area is approximately 1,375 acres and is divided into High and Low-Pressure Zones. (See Figure UCF-3) The High-Pressure Zone is gravity fed by the reservoir, serves approximately 557 acres and has a 263.5 foot Hydraulic Grade Line (HGL). The Low-Pressure Zone (380 ft HGL) encompasses approximately 817 acres and is currently serviced by two separate booster pumping stations.
The Low-Pressure Zone contains the neighborhoods of the Cedars and Woodside, the Highlands, Upper Langley, Northview Terrace and houses off Al Anderson Road south of Louisa Street.

The High-Pressure Zone includes the distribution system in the town core (north of 6th Street) out to the west end (Saratoga Road, 3rd Street and Coles Road to the treatment plant), Louisa Street and Groom Lane, Sandy Point Road and east along Edgecliff Drive including Camano, Decker, and Furman Avenues.

**Existing Water Quality**
The City's well water sources are properly monitored in accordance with the Washington State Department of Health monitoring schedule for contamination, Well 1 (SO4) produces 75% of the total system demand, but contains high levels of manganese and iron. The arsenic level for this source averaged 8.9 ppb between 2015 and 2017 with 34 different tests taken. This level of arsenic is only 1.1 ppb below the Maximum Containment Limit (MCL). Wells 3 and 6 are a combined source (SO5), and produce 25% of the total system demand. Water from these wells is relatively acidic with a lower average arsenic level of 3.0 ppb. The wells pump simultaneously to provide optimal water quality tests indicate that the water meets the Washington State Department of Health standards.

**Treatment**
The Safe Drinking Water Act amendments passed by the U.S. Congress in 1986 require disinfection of potable water supplies, including ground water.
Wells #1, #3, and #6 are disinfected at the source with chlorine tablets and a contact time (CT) of 6 and provide free chlorine residuals throughout the system. Chlorine gas disinfection was replaced with a chlorine tablet system in 2010. A Corrosion control aeration manifold was installed in the storage tank in 2005 as a result of elevated copper levels in the distribution system.

**Ground Water Characteristics**
Ground water on Whidbey Island exists in three general aquifers. The "perched aquifer" is the nearest aquifer to the surface. It is limited to local areas and is not generally used for potable water.

The "water table aquifer," the next aquifer encountered, is the aquifer tapped by wells number 2 and number 3. The "sea level aquifer" occurs from 30 feet above to 200 feet below sea level.

In 1982 all ground waters beneath Whidbey Island were designated a "sole source aquifer" by the Federal Environmental Protection Agency (EPA). The designation was based on the

fact that ground water is the principal source of drinking water on the Island and on the aquifer's vulnerability to contamination from industrial sources, subsurface sewage disposal and seawater intrusion. The designation requires that federally funded projects be designed to ensure that ground water contamination will not occur. The United States Geological Society, DOE, DOH, and Island County Health and Planning Departments have done numerous investigations on ground water conditions in Island County. The studies indicate the need for increased management of ground water resources throughout the county in order to adequately protect the resource, which the City currently continues to address.

**Water System Connections**

The city's 2016 water system connections as defined by their use is estimated as follows:

**Table UCF - 2**
**Water Connections**

| | |
|---|---|
| Single-Family | 639 |
| Multi-Family | 184 |
| Commercial/Governmental/Industrial | 136 |
| Agricultural | 0 |
| Total | 959 |

**Projected Demands**

Future demand can be projected based on the estimated future population to be served by the water system. The projected population is multiplied by the historical values for maximum day demand and average day demand. Average daily usage (residential and commercial) is estimated as 146 gallons per person per day.

**Table UCF – 3**
**Projected Demand in Gallons**

| Year | Population of Service Area* | Number of Connections** | Average Daily Demand (GPD) | Maximum Daily Demand (GPD) |
|---|---|---|---|---|
| 2016 | 1,138 | 959 | 134,807 | 360,000 |
| 2030 | 1,421 | 1,346 | 168,355 | 450,000 |

** Population projections based on trend of 3.5% growth*
*** Future connections based on past trend of 2.3% growth*

The city currently has a water rights permit from the Department of Ecology for 301 acre-feet (Water Right No. G1-28188). This 301 acre-feet converts to 98,081,151 gallons used

annually. The projected 2030 annual demand is 61,449,575 gallons, well within the permit limits.

**Summary of Proposed Improvements**

Water system improvements are classified into either a 6 year or 20-year planning period. Each Capital Improvement Program (CIP) project is prioritized to meet the requirements set forth by the Washington State Department of Health, to improve system deficiencies, and to meet the present and future supply needs of the city to their 20-year planning period and beyond. From this, four general categories of water system improvements are identified in the CIP.

- Distribution system main replacement and improvements required to meet minimum standards.
- Major facility replacement and improvements: tanks, pumps, water quality, emergency power, and corrosion control.
- Policy initiatives: to implement water conservation and future planning efforts.
- System extensions: new water mains to provide service to undeveloped portions of the city's water service area, improve reliability and performance of the existing system, as well as provide guidance for system expansion.

Capital improvements for the 6-year period are scheduled for ratemaking and cash flow purposes. The projects are shown in Table UCF-8 and represent water main replacement projects. The 6 year CIP activities have been phased and timed to achieve a relative constant rate of expenditures. The CIP was developed in the 2012 Water System Plan and the CIP numbers, shown in Table UCF-8 are consistent with those numbers in that plan.

**Wellhead Protection**

The City of Langley's Wellhead Protection Plan (WHP) was adopted in June 2008. The purpose of the WHP is to provide an organized approach to effectively protect drinking water supplies from contamination. The WHP includes the following elements:

- A completed susceptibility assessment.
- Identification of the WHP zones.
- An inventory of potential contaminant sources and land use activities.
- A discussion of the management strategy.
- Contingency and emergency response planning.
- Supporting information and documentation.

The wellhead protection area is the surface and subsurface area surrounding a well that supplies a public water system through which contaminants are likely to pass and eventually reach the water well. The most straightforward method accepted by the state for determining the area is a calculated fixed radius CFR. This method determines a 0.5, 1, 5 and 10 year time of travel zone for contaminants. The CFR method is a very simple ground water model, which may not accurately predict the actual zone of contribution to the city's

wells. The method is based on the well pumping rate, soil porosity and well screen interval. The wellhead protection zones for each well (#1, #3, and #6) were determined.

## SANITARY SEWER (NPDES Permit # WA-002070-2)

### Sewer Collection System

The sewer service area includes approximately 650 acres of land within the current City of Langley City Limits. The sewer system serves approximately 60% of the population and essentially all of the businesses, the middle school, and the fairgrounds (2013 City Comprehensive Plan). Currently, no properties outside the City is served by the existing sanitary sewer system.

The existing sewer collection system has approximately 6.87 miles of sewer piping with diameters ranging from 2-inch to 4-inch for grinder pump mains and from 6-inch to 12-inch pipe for gravity sewers. The basic sewer system was constructed between 1960 and 1968 as part of six local improvement districts (LID). Since completion of the basic system, private developers have added extensions to serve new developments. All of the existing sewers are concrete pipe with rubber gasket joints and PVC pipe.

### On-Site Systems

Approximately 60% of the City is served by the sewer system and the rest is served by on-site septic systems. Island County is responsible for permitting septic systems and requires annual inspections. Individual property owners can receive training from the County and self-inspect their systems.

### Grinder Pump Collection Systems

Low pressure sewer developments have been constructed within the City. Approximately 1,444 feet of 2-inch, 2,090 of 3-inch, and 2,678 of 4-inch low pressure sewers were have been installed since 2006. The largest development is the Highlands at Langley with approximately 3,123 feet of low pressure sewers.

### Existing Sewage Flows

The average annual flow for 2009 to 2014 was 72,000gd and the maximum monthly average daily flow was 90,000gd. Both are below the permit limits for the wastewater treatment plan; average annual month design flow for the treatment plant is 135,000gd and the maximum month design flow for the plant is 150,000gd. The annual maximum month flow is about 53% of the maximum month design flow.

### Projected Sewer Flow

Sanitary sewer flow projections are comprised of four separate components defined as follows:

- Base Flows are a simple calculation of average flow rates without consideration of infiltration and inflow (I&I). Base flows have been determined by applying average flows per capita (as indicated in Table U-6) to the population and employment data.

- Peak Flows are used to estimate domestic flows at peak periods (typically early morning and evenings) and do not take infiltration and inflow into account. A peaking factor of 4.0 has been applied to base flows to estimate the peak flows indicated in Table U-6 (Base Flow x 4.0 = Peak Base Flow).
- Infiltration and Inflow (I&I) is groundwater entering sanitary sewer through defective pipe joints, or broken pipes and water entering through inappropriate connections such as roof drains. I&I is calculated at a City-wide rate of 1,100 gallons per acre per day (gpad) assuming approximately 140 acres contribute to Infiltration and Inflow into the system.
- Total System Flows or peak flows plus I&I have been determined by adding the aforementioned I&I rate to the peak base flows. No peaking of I&I has been assumed.

The projected flows shown in Tables UCF 4 are provided for the Sanitary Sewer Service Area (City Limits).

**Table UCF - 4**
**Projected Flows within City Limits**

| Year | % Population Served [a] | Base Flow (gpd) | Peak Flow (gpd) [b] | Peak Flow (gpm) | I&I Flow (gpm) [c] | Total System Flows |
|---|---|---|---|---|---|---|
| 2014 | 60% | 76,100 | 304,520 | 211 | 110 | 320 |
| 2024 | 65% | 84,800 | 339,300 | 236 | 120 | 360 |
| 2034 | 70% | 94,290 | 377,150 | 262 | 130 | 390 |

**Sewer Main Extensions**

Sewer expansion improvements to serve currently unsewered areas are to be funded primarily by developers or through other charges not incurred by the City and therefore are not included in the Capital Improvement Program. The expansion projects shown on the sewer CIP map are conceptual and will require an engineering design. It is unknown at what level and location of new development that will occur and therefore projects will be constructed in a variety of intensity and order.

**Sewage Treatment System**

The wastewater treatment plant is operating well and consistently produces an effluent that is well within permit limits. The maximum month average daily flow for 2012 through 2013 has been 0.095 mgd, which is 63% of the plant design capacity. Based on flow, the plant will not exceed its design hydraulic capacity during the next five (5) years and will not be exceeded during the 20-year planning horizon for the sewer planning period.

**Sewer Capital Improvement Program**
The established priorities for the sewer system are provided in Table UCF-9. Individual projects may change based on an increase or change in problems, development, or opportunities for additional funding. Implementing the CIP will reduce flow by approximately 10%. The City will need to periodically review project priorities, on an annual basis at a minimum, and change them as appropriate.

**Stormwater Management:** The City's storm drainage system was first installed in the 1960's. Due to the bowl-shaped nature of the central area, most of the stormwater runoff converges at the storm drains on Anthes Avenue. This concentration of flow through the downtown commercial area has contributed to drainage problems within the downtown area. The infrastructure consists of open ditches, storm drains, detention ponds, and infiltration systems. A complete description of the City's stormwater management can be found in the adopted 2009 Comprehensive Stormwater Management Plan.

**Existing Stormwater System**
The existing system consists of open ditches, storm drains along some major arterials, and mainly privately owned detention and infiltration systems. In addition, the natural drainage system includes three small creeks that flow through the city and wetland areas. Common names of the three creeks are Saratoga Creek (west of DeBruyn Avenue), Brookhaven Creek (through the center of town), and Noble Creek (east of Camano Avenue). None of the three creeks has a native fish population though Brookhaven Creek has been used in the past for salmon rearing. Protection of the wetland areas is important in the management of stormwater runoff since they act as natural stormwater detention and water quality treatment facilities and minimize the need for artificial stormwater facilities.

**Table UCF-5**
**Storm Drain Inventory**

| Pipe Size | Approximate Length |
|---|---|
| (inches) | (feet) |
| 48" | 100 |
| 42" | 90 |
| 36" | 40 |
| 24" | 380 |
| 18" | 1,350 |
| 15" | 1,610 |
| 12" | 11,550 |
| 10" | 740 |

| | |
|---|---|
| 8” | 4,450 |
| 6” | 1,720 |
| 4” | 250 |

The city was divided into the 10 drainage sub-basins to develop a computer simulation of runoff flow rates. These sub-basins are part of four main basins, which drain to Noble Creek, Saratoga Creek and Brookhaven Creek/Anthes Avenue plus four basins located east of Noble Creek. The city's drainage discharges to the Sound through an 18-inch outfall on Anthes Avenue, a 12-inch outfall on Park Avenue, a 12-inch outfall on Camano Avenue and from Noble and Saratoga Creeks.

An inventory of the storm drains and detention/infiltration facilities within the City are presented in Tables UCF-6. Of the detention and infiltration facilities, only the Cedars infiltration ponds are owned and maintained by the City.

**Table UCF-6**
**Detention/Retention and Infiltration Facilities**

| Facility | Capacity |
|---|---|
| Northview Pond | 25,600 cf |
| Cedars Infiltration Ponds | 29,689 sf |
| Saratoga Terrace Infiltration Trenches | 1,842 cf |
| Creekside Terrace Retention Pond | 2,000 cf |
| 4th Street Condos Detention Pipe | Unknown |
| Glenhaven Condos Detention Pipe | 605 cf |
| Martin Short Plat Infiltration Pond | 400 sf |
| Second Street – Langley Village Det. Pipe | 2,700 cf |
| Harrison House Detention Pipe | 115 cf |

**Proposed Stormwater**

The City’s stormwater management plan provides recommendations for structural and non-structural improvements to existing storm drainage facilities. The facilities include pipe and ditch conveyance, detention and infiltration systems and natural stream and wetland drainage systems. Management of stormwater runoff has become a requirement for local jurisdictions with federal and state regulations concerning protection of water quality and sensitive areas. Besides structural improvements, the stormwater plan includes non-structural management recommendations including public education, policies and ordinances governing future development, operation and maintenance and record keeping.

The structural and non-structural solutions developed in the stormwater plan are consistent with federal and state regulations.

The following are general non-structural policy recommendations which are intended to be implemented by the City.

- Revision of the Land Development Standards
- Adopt a drainage ordinance to enforce the standards.
- Inspection and maintenance of stormwater facilities.
- Record Keeping
- Public Education
- Protection of sensitive areas.
- Preference for Infiltration BMPs.

The Stormwater Plan which was approved in 2009 recommended structural improvements that include the collection, conveyance, and water quality improvements listed in Table U-12. The priority conveyance improvements are an improved ditch and culverts on 3rd Street from DeBruyn Avenue to Anthes Avenue, a 12-inch storm drain on 2nd Street from Park Avenue to Anthes Avenue, a storm drain on Park Avenue, and a grass lined ditch on Brooks Hill Road. The Plan also includes a section on stream conditions and proposed improvements on Brookhaven Creek that would provide better habitat for future fish rearing projects.

## NON-CITY OWNED UTILITIES

### Puget Sound Energy

Puget Sound Energy (PSE) is a private utility providing electric and natural gas service to homes and businesses in the Puget Sound region and portions of Eastern Washington, covering 10 counties and approximately 6,000 square miles. PSE's regional and local electric and natural gas planning efforts are integrated and centered on providing safe, dependable, and efficient energy service. PSE provides electrical power to more than 1.2 million electric customers throughout 10 counties.

PSE currently has about 3,000 megawatts of power-generating capacity, and purchases the rest of its power supply from a variety of other utilities, independent power producers and energy marketers across the western United States and Canada.

### Existing Facilities

Whidbey Island is served exclusively by PSE and provides all the power to the City of Langley. Power for Whidbey Island is generated by Columbia River hydroelectric projects in Eastern Washington and British Columbia, along with other facilities in Whatcom and Skagit Counties, including gas-fired combustion turbines at the Texaco refinery near March Point on Fidalgo Island.

From the March Point substation, two 115 kV lines cross Deception Pass and terminate at the Whidbey Substation in Oak Harbor. From this substation, two 115 kV lines run to the South Whidbey Substation near Langley. Lines run from these three transmission substations to nine distribution substations.

PSE serves approximately 37,000 commercial and residential locations within Island County and operates and maintains approximately 600 miles of overhead facilities and 500 miles of underground cables.

**Future Demand and System Improvements**

PSE has plans to systematically deploy smart grid technology at each level of infrastructure to enhance and automate monitoring, analysis, control and communications capabilities along its entire grid. Smart grid technologies can impact the electricity delivery chain from a power generating facility all the way to the end-use application of electrical energy inside a residence or place of business. The ultimate goals of smart grid are to enable PSE to offer more reliable and efficient energy service, and to provide customers with more control over their energy usage.

To meet local electric demand, new transmission lines and substations may need to be constructed. In addition, existing facilities will need to be maintained and possibly rebuilt to serve current and future demand. The system responds differently year to year and PSE is constantly adding or modifying infrastructure to meet electrical demands.

In 2016, PSE added a new transmission/distribution substation near Maxwelton Road, increasing reliability in and around the Langley and South Whidbey area.

With that said, potential major construction and rebuilding/ maintenance activities affecting the City of Langley that are anticipated in the next 10 to 20 years include:

- Adding a potential third 115 kV transmission line to the Island. This will improve reliability on the Island on a day to day basis as well as during storm events. It will also add transmission capacity to serve future growth.
- Adding a potential new transmission substation in the Central Whidbey area, increasing transmission line reliability throughout the Island.

PSE will continue its current increased vegetation management and key rights-of-way (ROW) expansion on the Island along the existing 115 kV transmission lines. This ongoing vegetation management and key ROW maintenance and acquisition program has increased reliability on the Island dramatically over the last 8 years and will continue to do so into the future.

## TELECOMMUNICATIONS

Telecommunications encompasses both one-way (Radio/TV) and two-way (Telephone/Internet) services. Such services are available through wires (terrestrial), over the air (aerial), and via satellite (celestial). Langley has choice when it comes to the various forms of telecommunication available to its residents. Langley is also served by celestial services for Television, Internet, Telephone, and Radio, including all of the services available within the United States, provided visual contact to the appropriate satellites is available.

**Terrestrial**

Langley is served by two terrestrial companies, one an independent local telephone

company and Incumbent Local Exchange Carrier, and the other a national cable company and Competitive Local Exchange Carrier. All residents within the city are part of the service area of both companies.

Whidbey Telecom is the local telephone company, and provides Telephone, Television, and Internet services through their underground telephone infrastructure. Internet and Television services are provided via DSL technology over exiting telephone infrastructure. The services utilize ADS2+ and VDSL2 technology packages to provide hi-speed Internet throughout the city. Television services are provided over the same infrastructure and technology, utilizing IPTV technology developed by Microsoft and currently provided by Ericsson. There are two distribution nodes within the city, one on Third Street near DeBryun, which is a major distribution center for South Whidbey serving most of the city, with the exception of the eastern portion. A second, smaller distribution center is located within the right-of-way of Sandy Point Rd., near Cedar Circle and serves eastern Langley and points south and east. Whidbey Telecom's TV service does include a local TV channel with local events and locally produced content.

Comcast operates their Xfinity service within Langley. Xfinity utilizes coaxial cabling to provide Telephone, Television, and Internet service on lines suspended from power poles, strung throughout the city. Some neighborhoods have the same infrastructure located in underground cable runs. Internet services are provided via DOCCIS technology, distributed via fiber to local neighborhood nodes, before being distributed through shared infrastructure to homes in the neighborhood. Telephone services are provided via VoIP technology on the existing Internet services. Television services are provided through Digital Cable QAM technology. A channel is provided for local access, however Langley is only provided the channel as available from Oak Harbor.

**Aerial**

The major post-paid cellular carriers have a presence within the city, however coverage varies depending on devices used and geographic locations, the pre-paid service companies are also served, with the same device and geographic limitations applied to the post-paid carriers.

The city is largely blanketed with aerial signals for cellular telephone, with notable dead spots that change regularly due to equipment and environmental activity. Aerial television service is extremely limited due to technical limitation of Digital Television transmissions, geographic limitations, and the shutdown of many local repeaters due to low demand. Few in Langley can receive Over-The-Air (OTA) television, and much of that is limited to Canadian Stations (CBUT, CHEK, CHAN, CBUTF), PBS (KBTC), or non-major networks/independent stations (KVOS). Langley is largely served by the Seattle Radio Market, with marginal exposure to the Vancouver/Victoria radio market. There is also a Low Power AM station, operating at 1610 kHz, that broadcasts from just outside of the city limits, and currently broadcasts city council meetings, as well as various local programming.

At the Federal level, cellular phone facilities are regulated by the Federal Communications

Commission (FCC), which has jurisdiction over the public airwaves, assigning frequencies and licensing operators. The FCC requires that transmitting towers be located such that transmission of signals is unobstructed. Local jurisdictions can regulate tower siting to the extent that a Federally-licensed use is not impeded.

Thus, a local jurisdiction can deny approval of a tower at a particular site, but cannot impose an outright ban on towers within its jurisdiction. The Federal Aviation Administration (FAA) and WSDOT Aviation Division also review proposed towers when they exceed 200 feet in height (above ground level) or when the proposed location is within 20,000 feet of a major airport (serving military and commercial aircraft) or within 10,000 feet of a smaller airport. While not having the authority to deny potential sites, the FAA coordinates its review process with the FCC, who may deny a particular site if the FAA objects

**Celestial**

Even given Langley relatively high latitude, all celestial services are available that otherwise cover the US and southern Canada. This includes DirecTV and Dish Network for Television, SirusXM for Radio, Hughes Net and WildBlue for Internet, and the various companies that provide satellite telephone services around the world.

**Future Demand and Proposed Facilities**

Existing telephone facilities and some minor upgrades, mainly at the distribution level, will adequately serve the County's needs over the next 20 years.

Frontier and Comcast are the main cable providers in Island County. Cable companies and cable service change often, and require relatively minor facilities. No new major facilities are expected in order to meet anticipated growth in Island County.

Whidbey Telecom also provides internet, telephone, and telephone services over a fiber optic network. It is in the process of expanding this network to be available to all residents of Langley

## CAPITAL FACILITIES

**Seawall**

The Seawall north of First Street at Seawall Park was built in 1976. It is a reinforced concrete seawall that is 1,032 feet long. It created a level separation from the beach and the slope, thus giving the City what is now known as Seawall Park. There is deterioration of the wooden posts and the concrete is starting to deteriorate. Due to its age and harsh environment an assessment of the seawall is warranted. In 2016 an Ad-hoc Committee was established by Council to guide improvements to Seawall Park.

**Cemetery**

The Langley-Woodmen Cemetery is located south of the central business district on Al Anderson Avenue. It was established in 1902 by the Woodmen's Lodge and they maintained it until the City was incorporated. In September of 1913 the Woodmen donated the Cemetery to the City of Langley. The Cemetery is approximately 5 acres, and currently has 2803 plots and an ash garden. The City has a very active cemetery board that plans policy, budget, development and landscaping. In 1995, the Friends of the Langley Woodmen Cemetery (a non-profit organization) was founded to assist the city with the maintenance and care of the cemetery.

**Parks, Open Space and Trails**
For an inventory and description of the city's parks, open space, and trails refer to the Parks and Open Space Element in this Comprehensive Plan. It also describes natural areas and parks in the surrounding area outside the City limits.

**Transportation**
Refer to the Transportation element for an inventory and description of the transportation system in Langley, along with level of service standards for roads, the transportation improvement plan and the goals and policies for Langley's multi-modal transportation program.

**Buildings (Non-Utility)**
104 2nd Street – Library: The city remodeled the library (and City Hall) in 1994 with non-taxable municipal bonds, a federal grant and a generous contribution from the Friends of Langley Library Association. The city is currently responsible for the maintenance of the grounds and the capital improvements to the building. The library became part of the Sno-Isle Regional Library System in January of 2012.

115 2nd Street – Post Office: The city outgrew the original post office and did not have enough space to expand, so in 1998 the city partnered with D & L Constructors. The city gave D & L a long-term ground lease which was paid for in a lump sum payment that allowed the city to purchase adjoining property. With the additional square footage, D & L was able to construct the new postal facility and sub-lease it to the Postal Service. The Postal Service is responsible for all building and property maintenance, including capital improvements. The contract expires in 2026.

112 2nd Street – City Hall: City Hall was formerly the Masonic Lodge building and the city remodeled it in 1994. The city is responsible for the grounds, the building, and all capital improvements.

179 2nd Street – Old Fire Hall: South Whidbey Fire District rented the fire hall until they built a new building in Langley on Camano Avenue in 2008. At that time the city decided to continue to rent out the building rather than sell the property. The city is responsible for the capital improvements to the building.

208 Anthes Avenue – Langley Visitor's Information Center and Public Restrooms: The city currently rents the VIC to the Langley Chamber of Commerce. The city is responsible for the capital improvements to the restroom building, the VIC and the storage shed.

999 Coles Road – Public Works Shop: The Public Works shop was originally located at the northwest corner of Saratoga Road and Debruyn Avenue (now lift station #2/ Generation Park). It was relocated to the current location after the Wastewater Treatment Plant was built and the city needed a convenient location for the temporary post office while the new one was being constructed at 115 2nd Street. The utilities share the responsibility, along with the city capital fund, of any capital improvements to the public works shop.

## CAPITAL IMPROVEMENT PROGRAM

**Table UCF - 7**

| Transportation Improvement Program 2017-2022 | | | | |
|---|---|---|---|---|
| **Project** | **Fiscal Year** | **Funding Source** | **Local Match** | **Total Cost** |
| Overlay Second Street (Anthes to DeBruyn)<br>• Separated walkway extruded curb | 2017 | STP Grant<br>*applied 9/30/16 | $77,625 | $575,000 |
| De Bruyn Avenue and First Street sidewalk | 2017 | TIB SCSP Grant and TA Grant<br>*applied 9/30/16 | $24,500 | $245,000 |
| First Street (Wharf to DeBruyn Ave)<br>• Milling, Overlay, Sidewalk and ADA improvements<br>Not eligible for STP grant | 2018 | TIB complete Streets grant possibility<br>Not STP Grant Eligible | | $575,000 |
| DeBruyn Street Overlay (2nd Street to 3rd Street) | 2018 | STP Grant Eligible | $175,000 | $23,625 |
| Anthes Reconstruction (1st Street to 2nd Street) | 2019 | Not STP Grant Eligible | | $600,000 |
| Park Avenue milling and overlay (3rd Street to 4th Street) | 2020 | STP Grant Eligible | $60,750 | $200,000 |
| Third Street Overlay (Debruyn to Brooks Hill Road) | 2021 | STP Grant Eligible | $60,750 | $450,000 |
| Edgecliff Reconstruction and Widening (Decker to Camano) | 2022 | | | $880,000 |
| Saratoga Road Reconstruction<br>• guardrail and widening | Future | | | $1,250,000 |
| Sandy Point Reconstruction and Widening | Future | | | $1,200,000 |
| Edgecliff Reconstruction and Widening<br>• Decker to City Limits | Future | | | $500,000 |
| Trail System Improvements<br>• Noble Creek, Middle School, Highlands to 6th Street | Future | | | $500,000 |

**Table UCF-8**

| Water Capital Improvement Plan / Water Main Replacements | | |
|---|---|---|
| **Project** | **Fiscal Year** | **Total Cost** |
| Northview Pressure Zone Transfer Project transfers some of the lower lying homes in Northview | 2018 | $300,000 |

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|---|---|---|
| From the upper pressure zone to the lower pressure zone served<br>By gravity off the reservoir and creates a loop between the City<br>Center and reservoir. Raises fire flow reliability to the central<br>Business district | | |
| Water Comp Plan Update | 2018 | $70,000 |
| Island View Drive | 2019 | $180,000 |
| Sandy Point Road (Furman to Wilkinson) | 2020 | $800,000 |
| Park Avenue (6th Street to 4th Street) | 2021 | $260,000 |
| Sixth Street (Park to Anthes) | 2022 | $270,000 |

**Table UCF-9**

| **Sewer Capital Improvements** | | |
|---|---|---|
| **Project** | **Fiscal Year** | **Total Cost** |
| Sunrise Pump Station Upgrade<br>Upgrade pumps, telemetry, and replace electrical controls<br>New generator | 2018 | $300,000 |
| Investigate, replace or rehab sections of main (per comp plan) | 2018 | $75,000 |
| Replace emergency generator at WWTP | 2019 | $195,000 |
| Replace or rehab sections of main (per comp plan) | 2019 | $75,000 |
| Pump Station #1 Upgrade | 2020 | $130,000 |
| Replace or rehab sections of main (per comp plan) | 2020 | $75,000 |
| WWTP Improvements per comp plan | 2021 | $100,000 |
| Replace or rehab sections of main (per comp plan) | 2021 | $75,000 |

**Table UCF-10**

| **Stormwater Capital Improvements** | | |
|---|---|---|
| **Project** | **Fiscal Year** | **Total Cost** |
| Minor Improvements | 2018 | $10,000 |
| Melsen Alley (4th Street to 6th Street) | 2019 | $165,000 |
| Edgecliff Drive (Camano to Furman) | 2020 | $340,000 |
| Furman and Decker Avenues | 2021 | $590,000 |
| Stormwater Plan Update | 2021 | $50,0000 |
| Sixth Street (Anthes to Brookhaven Creek) | 2022 | $250,000 |

**Table UCF-11**

| Facilities Capital Projects | | |
|---|---|---|
| **Project** | **Fiscal Year** | **Total Cost** |
| Library back up generator | 2017 | $20,000 |
| Municipal Building | 2017 | $5,000 |
| City Hall replace HVAC system | 2018 | $80,000 |
| City Hall roof replacement | 2018 | $50,000 |
| City Hall LED lights | 2018 | $10,000 |
| Off leash dog park | 2018 | $10,000 |
| Seawall Park Design | 2018 | $5,100 |
| Install solar panels City Hall roof | 2019 | $65,000 |
| Remodel City Hall restrooms | 2019 | $20,000 |
| Replace City Hall carpets | 2019 | $30,000 |
| Library roof replacement | 2020 | $40,000 |
| Fire house upgrades | 2021 | $100,000 |

**Table UCF-12**

| Public Works Fleet Replacement Plan | | |
|---|---|---|
| **Project** | **Fiscal Year** | **Total Cost** |
| Replace 2003 Chevy Silverado Pick up w/ towing package | 2018 | $45,000 |
| Replace 2007 Ford F350 Pickup w/ towing package | 2019 | $50,000 |
| N/A | 2020 | |
| N/A | 2021 | |
| Replace 2013 Ford F250 Pickup With towing package, diesel tank | 2022 | $60,000 |
| Replace 2013 Ford F250 Pickup With towing package | 2023 | $65,000 |

## UTILITIES AND CAPITAL FACILITIES GOALS AND POLICIES

### GOAL UCF-1 Utilities and Capital Facilities Planning

The city and third-party utility providers shall plan for and strive to adequately provide needed capital facilities and utilities to all properties within the city that protect investments in existing facilities, maximizes the use of existing facilities, and promotes orderly and compact growth to accommodate anticipated growth consistent with the community's goals as identified in the Comprehensive Plan and County Wide Planning Policies.

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| UCF - 1.1 | Land use, capital facilities and utilities planning shall be coordinated to the greatest extent possible, not overburden the downstream capacity of the service and not be a financial burden on the city. |

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| UCF - 1.2 | In partnership with utility providers, identify and map the location of existing, proposed and newly installed capital facilities and utilities. |

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| UCF – 1.3 | New development, including long and short subdivisions, site plan approvals, and building permits for new residential and commercial development, are required to be served by sewer and water. (CWPP3.4.4-6) |
| a) | Variances or waivers may be considered for new non-residential development or single family residential construction due to topographical constraints or lack of approval by contiguous land owners. |
| b) | Variances and waivers will not be considered for short and long subdivisions. |
| c) | Where septic systems and wells have been permitted for new development they shall be considered temporary and interim solutions until such time that City sewer and water is available |

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| UCF – 1.4 | City sewer and water shall not be extended outside the UGA unless necessary to respond to a documented public health hazard caused by existing development which cannot be remedied in any other reasonable way.<br>• Where contiguous to the City boundary, inclusion into the UGA, annexation and a development agreement shall be conditions of extending sewer and water services to these properties. (CWPP 3.6.1)<br>• Where the property is not contiguous to the City boundary a development agreement shall be required and the extension of services shall not facilitate urban development. |

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| UCF – 1.5 | Capital facilities planning within the PGA shall be undertaken jointly with the County. |

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| UCF – 1.6 | The City shall process permits and approvals for utility facilities in a fair and timely manner and in accord with the development regulations to encourage predictability. |

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| UCF-1.7 | The city shall reassess the land use element of this plan if the funding necessary to meet identified capital facilities to support the anticipated growth is not available in a timely manner. In planning for capital projects and facilities the city shall consider the long-term economic and social benefits of projects that include placemaking elements that capitalize on Langley's small town charm and increase its attractiveness as a place to live, work or visit. |

**GOAL UCF-2 Capital Improvements**

Capital improvements shall be provided to correct existing deficiencies, to replace worn out or obsolete facilities and to accommodate desired future growth.

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| UCF -2.1 | Improvement projects identified for implementation in the other elements of this plan and determined to be of relatively large scale and cost $5,000 or more shall be included in the six-year Capital Improvement Program. |

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| UCF – 2.2 | Proposed capital improvement projects shall be evaluated and prioritized using the following criteria and be consistent with the rest of the Comprehensive Plan |
| a) | Corrects existing deficiencies or replaces needed facilities |
| b) | Eliminates a public hazard |
| c) | Eliminates a projected capacity deficit |
| d) | Achieves State agency plans |
| e) | Facilitates economic development |
| f) | Reduces demand |
| g) | Other capital improvements are being undertaken in the same location |
| h) | Outside funding sources have been secured |
| i) | Financially feasible |

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| UCF – 2.3 | The City will review the feasibility of developing an asset management program for all its infrastructure and capital facilities. |

**GOAL UCF-3 New Development**

New development shall bear its fair share of utility infrastructure improvement costs.

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| UCF - 3.1 | City sewer and water connection fee revenues shall be allocated primarily for capital improvements related to their expansion. |

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| UCF – 3.2 | New development shall pay for the capital improvements necessary to serve the project or proportional to the project's impact. |

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| UCF – 3.3 | The city may at its discretion participate in funding infrastructure for projects that serve the public interest. |

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| UCF – 3.4 | The City may establish incentives, including for example reduced connection fees for sewer and water to encourage a mix of housing types and affordability. |

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| UCF – 3.5 | The cost of related on and off site improvements necessary to facilitate a specific development shall be borne by the proponent and shall not result in a diminished LOS without mitigation. |

**GOAL UCF-4 Fiscal Management**

The city shall manage its fiscal resources to support the provision of needed capital improvements.

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| UCF – 4.1 | The city shall continue to adopt an annual capital budget and a six-year capital improvement program. |

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| UCF – 4.2 | The city shall seek out all possible funding sources to finance capital improvements including, for example, private funds, grants and bonds. |

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| UCF – 4.3 | Fiscal policies to direct expenditures for capital improvements will be consistent with other Comprehensive Plan Elements. |

**GOAL UCF-5 Levels of Service**

The city shall coordinate land use decisions and financial resources with a schedule of capital improvements to provide existing and future capital facility needs.

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| UCF – 5.1 | The city and/or developers shall provide for public facilities and services needed to support development concurrent with the impacts of such development. To the greatest extent possible these facilities shall meet adopted Level of Service standard. |

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| UCF – 5.2 | The city will emphasize capital improvement projects which promote the conservation, preservation or revitalization of commercial and residential areas, or improve functionality. |

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| UCF – 5.3 | The city shall use the following LOS standards in reviewing the impacts of new development and redevelopment upon public facility provision: |
| a) | Drainage swales:<br>25-year, 24-hour peak flows. |
| b) | Stormwater management systems:<br>Retain on-site the runoff from 25-year, 24-hour storm at peak discharge rates. |
| c) | Traffic circulation:<br>a. Roadway link specific for all roadways in the city's jurisdiction. The LOS by |

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| | segments is indicated in the Transportation Element.<br>b. Major collector: LOS B at peak hour traffic.<br>c. State highway and county road: LOS A over 24-hour period, off-season traffic.<br>d. Collectors and local roads. |
| d) | Sanitary Sewer:<br>110 gallons per person per day |
| e) | Potable Water:<br>Yearly average 125 gallons per capita per day (gpcd) raw water source (dry season 154 gpcd) including a 10% contingency; 189 gpcd treatment and pumping capacity, plus 120,000 gallons per day fire reserve. |

**GOAL UCF – 6 Water Management**

The City shall protect the public interest in managing surface water drainage, groundwater resources, and related functions of drainage basins, watercourses and shoreline areas.

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| UCF – 6.1 | New development shall be required to manage stormwater run off to maintain pre- and post-development flows, water quality and any discharge off site shall be treated. Green infrastructure is encouraged. |

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| UCF – 6.2 | The City shall partner with Island County on public education related to requirements for on-site septic systems. |

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| UCF – 6.3 | The City shall work with the Island County's Health Department and Water Resources Advisory Committee to monitor groundwater resources in particular in relation to the City's drinking water supply. |

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| UCF – 6.4 | The City shall prepare guidelines regarding low-impact development measures. (LMC Chapter 15 Source document Low Impact Development Technical Guidance Manual for Puget Sound (Puget Sound Action Team Publication No. PSAT 05-03). |

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| UCF – 6.5 | A hydrogeologic site evaluation may be required prior to approval of development identified by the Director of Public Works or Community Planning as having the potential for groundwater contamination and may include a mitigation plan inclusive of monitoring, process controls, remediation and possible alternatives. |

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| UCF – 6.6 | The City shall work with the Island County to manage stormwater on contiguous lands in the JPA. |

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| UCF – 6.7 | Review the Langley Well Head Protection Plan. |

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| UCF – 6.8 | Post-development run-off to city systems shall not exceed the pre-development discharge volume and/or rate to ensure the level of service of the existing stormwater system is not compromised. In instances where the physical conditions of the site cannot accommodate on-site retention of stormwater the city stormwater system must be able to accommodate the increased flow. |

**GOAL UCF – 7 Utilities**

Work with utilities and property owners to maximize efficiencies for the provision of utility services.

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| UCF – 7.1 | Promote when reasonable and feasible the co-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 disturbances to the environment, and to reduce the cost to the public of utility delivery. |

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| UCF – 7.2 | Use existing and identified future utility corridors for joint uses, such as trails, open space, and recreation. |

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| UCF – 7.3 | Provide timely effective notice to utilities to encourage coordination of public and private utility trenching activities for new construction and maintenance and repair of existing roads. |

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| UCF – 7.4 | Encourage provision of an efficient, cost effective and reliable utility service by ensuring land will be made available for the location of utility lines, including location within public transportation corridors, consistent with franchise terms and conditions including the possible payment of annual fees. |

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| UCF – 7.5 | Promote the extension of distribution lines to and within the designated urban growth area. Coordinate land use and facility planning to allow eventual siting and construction of distribution lines within right-of-way which are being dedicated or within roads which are being constructed or reconstructed. |

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| UCF – 7.6 | Review and amend existing regulations as necessary to allow maintenance, repair, installation and replacement of utilities, where consistent with the overall goals of the comprehensive plan. |

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| UCF – 7.7 | Provide information needed by public, quasi-public and private utilities to identify and plan for future service development. |

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| UCF – 7.8 | Encourage system design practices intended to minimize the number and duration of interruptions to customer service. |

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| UCF – 7.9 | Ensure that the goals, objectives, and policies of this plan and the implementing development regulations are consistent with the public service obligations imposed by federal and state laws on utility service agencies. |

**GOAL UCF – 8 Conservation**

Encourage water and energy conservation and greenhouse gas reduction and facilitate demand side management.

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| UCF – 8.1 | Remove barriers and facilitate the installation of renewable sources of energy including solar, wind, geothermal, biomass and high efficiency buildings. |

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| UCF – 8.2 | The City should consider adopting demand site management and conservation programs that reduce water and energy consumption and greenhouse house gas emissions. |

**GOAL UCF – 9 Critical Areas**

The installation and ongoing maintenance of utilities and capital facilities shall not negatively impact sensitive natural areas, critical areas and human health.

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| UCF – 9.1 | Locate facilities to reduce negative impacts to natural features, sensitive areas, and water quality and quantity. Where feasible, relocate existing facilities located in sensitive areas. |

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| UCF – 9.2 | Minimize environmental degradation from utility facility installation, replacement, repair, and maintenance. |

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| UCF – 9.3 | Employ siting policies, which minimize human exposure to potentially harmful effects of utility facilities. |