Planning Commission Recommendation

The Planning Commission considered proposed amendments to the Utilities and Conservation Element on March 19 and April 16, 2014, and on April 16, 2014 and March 11, 2015 (as part of an integrated review of all major Plan elements) and on April 1, 2015 recommended the following amendments.

Proposed new language is underlined: language proposed to be deleted is lined through. Iterations of proposed amendments are accompanied by the source and date of the change from the original proposal (e.g., Planning Commission, or PC for short, 5/21/14).

Proposed amendments to the Imagine Bothell... Comprehensive Plan for the 2015 Periodic Update are presented in the format of the existing Plan, which was conceived primarily as a paper document. Insofar as the public has indicated a preference for online access to the Plan, staff contemplates some reformatting once the Update is completed, including added images and links, to optimize the usefulness of the Plan as an electronic document. No substantive changes to text or illustrations would be made in such a reformatting. The Plan will remain available as a paper document as well.

The Growth Management Act (GMA) requires inclusion of a Utilities Element, to comprise “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.” The state Department of Commerce, in its Comprehensive Plan Checklist, says “The Utilities Element should relate to all services provided, planned for, paid for, and delivered by providers other than the jurisdiction.” (Emphasis added.) Consequently, Bothell's utilities element addresses solid waste as well as the utilities specified by law.

The GMA lists “energy conservation” as an optional additional element jurisdictions may choose to incorporate in their plans. Neither the GMA nor the Washington Administrative Code (WAC) provides any guidance as to what a conservation element should include.

Bothell elected to include conservation goals, policies and actions in the original 1994 Imagine Bothell... Plan, and to do so in a jointly named Utilities and Conservation Element.

In reconsidering the Plan for the 2015 Periodic Update, staff observed that the notion of “conservation” has expanded substantially since the GMA was enacted. Whereas initially, under GMA, it meant the sparing and efficient use of electricity, it now is commonly applied more broadly to mean the stewardship and protection of all of earth’s limited resources. In fact, today the term “sustainability” is used as often as, if not more often than, “conservation”.

“Sustainability” has been variously described, but probably the most widely accepted definition comes from a report issued by a United Nations Commission (the Brundtland Commission) in 1987: “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

Given this expanded view, staff felt that tying conservation only to utilities (as defined by GMA) was too limiting. Consequently, staff proposes to relocate conservation-related goals, policies and actions from the Utilities Element to the Natural Environment Element, where this topic can be addressed more inclusively and holistically. Accordingly, the title of the element would change from Utilities and Conservation to just Utilities.

In keeping with the need to simplify and streamline the Plan, this would allow the Utilities Element to focus on compliance with GMA requirements for that element.
Utilities and Conservation Element

Background and Analysis

Purpose and Relationship to GMA

The Growth Management Act (GMA) requires the utilities element of a comprehensive plan to consist 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.” This element addresses these utilities, as well as solid waste disposal. Three services often thought of as utilities but not included in this element are potable water supply, sanitary sewers and stormwater management. The GMA requires that these three services be addressed in the capital facilities element of a comprehensive plan, and they are so located in this Imagine Bothell... Plan.

In addition to meeting the GMA requirements with respect to utilities, this element also includes goals, policies and actions regarding conservation of resources utilized to provide these services. Please note...
Planning Commission Recommendation

that certain of these conservation goals, policies and actions deal with water usage, even though water supply, storage and distribution are addressed in the Capital Facilities Element.

At the writing of the 2015 Plan Update, providers within the Bothell Planning Area of the utilities discussed in this element are as follows, as of 2004:

1. Electricity
   - Puget Sound Energy
   - Snohomish County PUD No. 1

2. Natural Gas
   - Puget Sound Energy

3. Liquid Petroleum Pipelines
   - Olympic Pipeline Company

The following proposed revisions reflect the evolution of telecommunications in the Bothell area from a time when only one company provided a service, to the present, when each category of service has multiple providers.

PC 4/16/14 - The Commission concurred.

PC 3/19/14 - The following has been revised for accuracy.

PC 4/16/14 - The Commission concurred, with a simplification of the description of signals to “digital or analog signals”.

4. Telecommunications (transmission of information - sound, images and data - via digital or analog signals)
   - Wire or cable services: various providers
   - Wireless services: various providers
   - Satellite services: various providers
   - Telephone: Verizon
   - Personal Wireless Services: Various providers
   - Cable Television: Comcast
   - Fiber Optic Cable: Various providers

At this writing (March 11, 2014), the City Council was evaluating proposals by three different solid waste service providers to serve Bothell. Regardless of the outcome of that process, the nine King County areas annexed by the City in February, 2014, will continue to be served by Waste Management until at least 2021, under the contract in effect at the time of annexation. The following will be updated after the Council has awarded a contract.

Staff 4/3/14 update - The Council at its April 1 meeting directed staff to negotiate a solid waste contract with Recology / Cleanscapes. Again, once the Council has awarded the contract, the following section will be updated.

PC 4/16/14 - The Commission concurred.
Planning Commission Recommendation

5. Solid Waste
   - Recology CleanScapes and Waste Management, Inc.

Planning Area Profile

Electricity

**Staff 4/3/14 - PSE has reviewed the existing Utilities language and requests the following revisions to update this section for clarity or to otherwise comply with the GMA.**

**PC 4/16/14 - The Commission concurred, with a few minor revisions for clarity.**

Puget Sound Energy (PSE) and Snohomish County Public Utility District (PUD) supply electricity to Bothell residents. Electricity service areas are divided roughly along the county line with Puget Sound Energy serving Bothell Planning Area residents within King County and Snohomish County PUD serving Bothell Planning Area residents within Snohomish County. In addition, Seattle City Light, while not providing power to Bothell, maintains two three sets of 230,000-volt (230 kV) transmission lines which pass through the east side of the North Creek Valley and Two of these proceed south along 124th Avenue NE. PSE has a 230 kV line in parallel with a 115 kV line on a corridor which passes through the east side of the North Creek Valley then, while the third turns southeast and follows the Sammamish Valley. The 115 kV line in this corridor is planned for future conversion to 230 kV (see Figure UT-1).

Puget Sound Energy (PSE)

Puget Sound Energy provides electricity to the portion of the Bothell Planning Area within King County, serving approximately 8,500 customer accounts in the City. Electricity is supplied to the area by 115,000-volt (115 kilovolt or 115 kV) transmission lines located as follows:

- Two sets of lines in the North Creek Valley, one 115 kV line (to be converted to 230 kV in the future) running south from the County line to and connecting to a line running east, south and then east along NE 195th Street, and to a line running west along NE 195th Street; continuing south with about NE 195th where it feeds a line running west (see below), the other line which operates at 230 kV on a corridor (see Electricity introductory paragraph above) running south to about NE 170th Street, then veering southeast down the Sammamish Valley (Bothell-Sammamish and Sammamish-Vitulli) (Beverly-Kenmore and Beverly-Cottage Brook);

- One set of lines extending west in approximate alignment with NE 195th (Moorlands-Vitulli Beverly-Kenmore);

- One set of lines extending east in approximate alignment with NE 195th (Beverly-Cottage Brook);

- One set of lines extending southeast along the Tolt Pipeline right of way (Cottage Brook-MoorlandsWayne);

The above-described transmission lines serve a system of distribution substations which reduce the voltage current to 12,000 volts (12kV). From these substations extend 12 kV distribution lines which run
Planning Commission Recommendation

along local streets. Transformers then further reduce the voltage to 240 volts for distribution to residences or to 208 or 240 volts for commercial or industrial users.

Each substation has a rated "nameplate" capacity of 25 megawatts of electricity, with the exception of Vitilli, which has a rated nameplate capacity of 50 megawatts and is planned to be expanded to supply an additional 50. In addition, the Wayne, Norway Hill and North Bothell substations may be expanded in the future to supply an additional 25 megawatts. There are 18 distribution circuits fed from 4 distribution substations serving customers in the City of Bothell.

The Brightwater Pump Station on NE 195th Street at North Creek Parkway is served by a PSE distribution substation located on-site.

PSE officials provided figures for average load demands per square mile for the following different general categories of uses:

<table>
<thead>
<tr>
<th>Category</th>
<th>Demand per sq. mi.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single family housing</td>
<td>8 megawatts/sq. mi.</td>
</tr>
<tr>
<td>Multi-family housing</td>
<td>19 megawatts/sq. mi.</td>
</tr>
<tr>
<td>Commercial development</td>
<td>29 megawatts/sq. mi.</td>
</tr>
<tr>
<td>Industrial development</td>
<td>Varies</td>
</tr>
</tbody>
</table>

As an example of heavy industrial development demand, PSE officials pointed to the Seattle Times production facility, which demands as much as 12-15 megawatts, amounting to one-third of the current total for the City of Bothell. PSE officials stated that optimally, substations should be no more than two miles apart to serve an area at full buildout.

In addition to substations, an area may require one or more switching stations. Switching stations contain circuit breakers to improve reliability, but do not necessarily lower voltage.

PSE is planning projects within its system to measurably improve reliability of service to the Bothell area. These include adding additional transformers at existing substations, constructing new distribution substations and expanding interconnections with Snohomish County PUD No. 1. PSE hopes to meet 20 percent of projected future demand with conservation and 80 percent with new facilities.

PSE does not have any major projects planned within the Bothell city limits at this time. However, according to PSE, new projects can be developed in the future at any time due to:

- Increased capacity requirements resulting from new building construction and conversion from alternate fuels;
- The need to replace aging facilities; and
- Replacement or relocation of facilities as the result of state and municipal projects.
Planning Commission Recommendation

Snohomish County PUD has reviewed the existing Utilities language and requests the following revisions to update this section in compliance with the GMA.

PC 4/19/14 - The Commission concurred.

Staff 3/25/15 - After the Commission had completed its review, the City received material from the PUD which the PUD requested be reflected in the Plan. The material, titled “Inputs to the City of Bothell’s Comprehensive Plan,” is descriptive of the PUD’s services, and does not affect any Utilities Goals, Policies or Actions. Portions of the material have thus been added below where appropriate, and the entire document is included as Appendix UT-A-1. Prior language that was duplicative of the new language provided by the PUD has been stricken.

Snohomish County Public Utilities District No. 1 (the PUD) provides electrical service to the portion of Bothell’s planning area within Snohomish County. The PUD serves all of Snohomish County plus Camano Island, is the largest public utility district in the State of Washington, and is the 12th largest in the nation in terms of customers served.

According to information provided by the district in “Inputs to the City of Bothell’s Comprehensive Plan” (Appendix UT-A-1), “The PUD relies on a diversified power portfolio consisting of a long-term power supply contract with the Bonneville Power Administration (BPA), a broad range of conservation and energy-efficiency programs, three PUD-owned hydroelectric projects, some customer-owned generation and several long-term power supply contracts.

“In 2013, the PUD received 84 percent of its power supply from BPA, 6 percent from its long-term wind and other renewable resources contracts, 6 percent from its own hydroelectric projects, and 4 percent from wholesale market purchases. The PUD makes short-term purchases and sales in the wholesale power market to balance daily and seasonal fluctuations in its load and resources. The utility maintains over 6,300 miles of distribution and transmission lines to serve its more than 330,000 customers.”

Within the Snohomish County portion of the Bothell Planning Area the PUD operates four substations, and is planning a fifth in the Canyon Park business park area. The PUD reports that it designs most of its substations to accommodate a future second bank of transformers for additional capacity. The PUD relates that developments in the computing industry have led to commercial facilities that consume substantially more power than traditional facilities of similar size. These facilities are composed of extremely dense and power-intensive computer servers and associated cooling systems. The PUD states that facilities of this type locating within Bothell or its Planning Area may require the construction of additional transmission, substation and/or distribution facilities to serve the electric demand in the future.

With respect to future service generally, the PUD reports that its Board of Commissioners has adopted an “Integrated Resource Plan (IRP) which positions the utility to serve the electricity needs of its customers well into the future through the following actions:

- Implement all cost-effective energy conservation measures.
- Conduct a thorough situation scan of demand response technologies and applications.
Planning Commission Recommendation

- Evaluate energy storage technologies and execute the Modular Energy Storage Architecture project.
- Continue to evaluate geothermal development potential within Washington State.
- Continue to identify and evaluate new small hydroelectric resources.
- Participate in Initiative 937 rulemaking (the State of Washington’s ‘Energy Independence Act’).
- Continue to monitor new demand-side and supply-side technologies and pursue where applicable.
- Actively participate in capacity planning efforts underway in the region.

“From a planning perspective, capacity assessments for the PUD focus on analysis of ‘System Peak Demand’ - the largest amount of power the utility is called upon to deliver at any one time. The Normal Winter System Peak Demand is expected to rise from the 2014 level of 1,383 megawatts to 1,604 megawatts in 2032, an increase of 16 percent. To meet this growing peak, the PUD has identified a Preferred Plan developed in 2013 as part of its IRP process.” Details of this plan may be found in Appendix UT-A-1.

With regard to meeting the Bothell area’s future demands, the PUD reports, “the PUD plans to use conservation and energy efficiency programs to serve population growth in the City of Bothell. This will be done in conjunction with improvements in system operation and infrastructure. Future service plans to meet growth throughout Snohomish County are guided by the PUD’s short-term (7 years) and long-term (20 to 60 years) capital plans.”

The “Inputs to the City of Bothell’s Comprehensive Plan” provided by the PUD did not list any capital construction projects in the Bothell area within the next seven years, although the PUD has purchased land in the Canyon Park business park for a future substation. See Appendix UT-A-1.

Snohomish County supplies electricity to the portion of the Planning Area within Snohomish County. The general arrangement of transmission lines, substations, distribution lines, transformers and service lines to individual homes and businesses is as described above, except that each Snohomish County PUD substation has a 28 megawatt capacity, as compared to the 25 megawatt capacity to which PSE substations are constructed.

In addition, this portion of the Planning Area contains a major Bonneville Power Administration substation. The Sno-King substation, located south of Maltby Road at 35th Avenue SE, has a 1,650 megawatt capacity, and distributes power to several 115,000 volt PUD transmission lines serving south Snohomish County.

Within the Planning Area, these transmission lines are located as follows (see Figure UT-1):

- Extending west from BPA’s Sno-King substation, roughly parallel to but south of Maltby and Filbert Roads;
- Extending south along 9th Avenue SE, then west along 228th Street SE;
- Extending east from the Sno-King substation along Maltby Road, then south parallel to and west of 45th Avenue SE, then east along 228th;
- Extending south parallel to and east of 45th Avenue SE.
Planning Commission Recommendation

The Snohomish County portion of the Planning Area contains four substations as well. The PUD designs most of its substations to accommodate a future second bank of transformers for additional capacity. Snohomish County PUD reports that developments in the computing industry have led to commercial facilities that consume substantially more power than traditional facilities of similar size. These facilities are composed of extremely dense “computer server” load and associated cooling systems. Facilities of this type locating within Bothell or its Planning Area may require the construction of additional transmission, substation and/or distribution facilities to serve the electric demand in the future.

Staff 4/3/14 - PSE has reviewed the existing Utilities language and requests the following revisions to update this section for clarity or to otherwise comply with the GMA.

PC 4/19/14 - The Commission concurred, with a minor revision for clarity.

Natural Gas

Puget Sound Energy

Puget Sound Energy (PSE) is certified by the Washington Utilities and Transportation Commission to provide the Bothell Planning Area with natural gas. PSE estimates that it serves over 8,500 customer accounts within the City of Bothell with natural gas.

PSE’s sources of natural gas are wells in the Rocky Mountains and in Canada. The gas is transported through interstate pipelines by Williams Northwest Pipeline to PSE’s gate stations. The Northwest Pipeline, which originates in Canada and consists of two pipes, one 26 inches in diameter and designed to carry natural gas at a pressure of 600 pounds per square inch, the other 30 inches in diameter and designed for 1,000 pounds of pressure. The main Pipeline route is east of Woodinville and Redmond, but also includes lateral lines to facilitate service to areas. Two of these lateral lines branch off from the main pipeline in south Snohomish County, north of the Bothell Planning Area boundary, and extend in parallel west to Lynnwood. The Planning Area is served primarily from three PSE lines which branch off the Northwest Pipeline lateral, one at 31st Avenue SE and about 184th Street SE, the other two at a location in Mountlake Terrace.

From PSE’s gate stations, supply mains transport the gas to district regulators where the pressure is reduced to less than 60 pounds per square inch (psi). The supply mains are made of welded steel pipe that has been coated and is cathodically protected to prevent corrosion. They range in size from 4 to 20 inches in diameter.

Distribution mains are fed from the district regulators. They range in size from 1 1/4 to 8 inches in diameter and the pipe material typically is polyethylene (PE) or wrapped steel (STW).

Individual residential service lines are fed by the distribution mains and are typically 5/8 or 1 1/8 inches in diameter. Individual commercial and industrial service lines are typically 1 1/4, 2 or 4 inches in diameter.
Distribution lines branching off from the main PSE supply lines may be four, six or eight inches in diameter. Lines serving individual homes are typically five-eighths inch in diameter, and those serving commercial uses have a diameter of one and one-quarter inch.

PSE has established as its optimum service standard a pressure of 45 pounds per square inch, and as the minimum service threshold a pressure of 15 pounds per square inch. According to PSE officials, during cold weather, the pressure in Bothell decreases to as low as 25 pounds per square inch. Approaches utilized by PSE to improve service to an area demonstrating decreases in pressure include the following:

- Looping systems to provide alternate directions of supply;
- Adding parallel lines to supplement supply;
- Replacing existing lines to increase volume.

PSE reports that it does not have any major projects planned in Bothell, but that new projects can be developed in the future at any time due to:

- Increased capacity requirements as the result of new building construction and conversion from alternate fuels;
- The need to replace aging mains; and
- The replacement or relocation of facilities as the result of state and municipal projects.

Within the Bothell Planning Area, PSE is planning several construction projects to improve future service delivery (see Figure UT-1).

PSE officials estimate that the natural gas supply system will be able to meet the demand for natural gas supply within the Planning Area over the next 20 years. PSE does not anticipate the need for additional pipeline corridors within the Planning Area unless growth accelerates, at which time additional studies will be necessary to analyze system needs.

The following proposed revisions are based on input received from Olympic Pipeline Company.

PC 4/16/14 - The Commission concurred, with a minor revision to delete the map reference since the pipeline location is not depicted, at the request of the purveyor.

### Liquid Petroleum Pipelines

#### Olympic Pipeline Company

The Olympic Pipeline Company operates a 400-mile long refined petroleum pipeline system from refineries in extreme northwestern Washington to Portland, Oregon. These pipelines carry refined petroleum products consisting of diesel, jet fuel and gasoline. Two parallel pipes - one 16 inches in diameter, the other 20 inches - transmission lines pass through the eastern portion of the City (see Figure UT-1). At the time of the 2015 Periodic Plan Update, Olympic reported that it had no plans for expansion for the foreseeable future.

The Federal Office of Pipeline Safety (OPS) regulates interstate liquid pipelines and their associated facilities.
Telecommunications

Telecommunications comprises the transmission of information - sound, images, written and numerical data - via digital or analog signals. Such information may travel through wires or cables of various different conductive materials; through air; or through space.

In Bothell, telecommunications services are available from several providers, using a variety of technologies and facilities, each with planning implications.

Wire and cable services

These services rely on wires or cables either mounted on poles or buried underground to transmit information to and from residential and commercial users. Telegraph service was the original wired telecommunications medium, replaced in short order by telephone service, the traditional version of which remains available. However, this service has been largely overshadowed by a plethora of other more information-rich services transmitted via cable in shared aerial or underground utility corridors.

Bothell grants franchises to cable services companies to allow them to install their aerial or underground cables and appurtenant equipment within City rights of way: in return, franchisees agree to make available to Bothell residents numerous channels of video programming, including a number of public access channels, for a fee. Users may also obtain telephone, internet access, data transmittal and other services from the cable companies. As of the writing of the 2015 Plan Update, cable franchisees in Bothell were Comcast and Frontier.

Under the franchise agreements, cable companies must ensure adequate capacity to accommodate future growth in the number of customers in Bothell.

Implications for Bothell of an expanding cable network include increasing competition for limited space for utilities within public rights of way, and the cumulative impacts on pavement integrity of repeated cuts to install new cables.

With respect to the first issue, the City has policies and implementing regulations requiring the use of joint utility trenches where feasible, to accommodate water, sewer, storm and utility cables. As to the second issue, the number and extent of roadway cuts and pavement patches associated with cable installation has been drastically reduced via the widespread use of directional bores. In a directional bore, a cable is
Planning Commission Recommendation

inserted via a small hole in a roadway or nearby landscaped area and then guided to its desired destination via steerable boring equipment, without the need for large pavement cuts.

**Telephone**

Verizon provides telephone and related services throughout the Bothell Planning Area. Telephone system facilities within the Planning Area include switching stations, trunk lines, and distribution lines running along streets and to individual homes and businesses. Switching stations, housed in typically small, windowless structures, are located within the Planning Area as follows (see Figure UT-1):

- On 228th Street SW, west of Fitzgerald Road;
- On Main Street at 103rd Avenue NE, in downtown Bothell; and
- On NE 160th Street east of Brickyard Road.

No additional switching stations or other major construction projects are anticipated for the Planning Area over the next 20 years.

**Personal Wireless Services**

The Federal Communications Commission (FCC) has granted licenses to numerous personal wireless service providers to serve the portion of Western Washington containing the Bothell Planning Area. Within the Planning Area there are numerous cell sites or antennas which relay signals to and from PWS users of wireless devices.

While these sites originally consisted of lattice or monopole towers on or near the tops of hills, the growth in wireless device cell phone usage and number of providers has necessitated additional sites, and relay facilities are now found on telephone poles, light poles, water tanks, churches and commercial buildings as well.

As the number of relay facilities grows, they must be progressively lower in height so as to minimize signal overlap and interference with nearby facilities. Consequently, overall height of cellular towers - a major source of controversy early on - has diminished somewhat as an issue. Additionally, wireless service providers are becoming more adept at camouflaging antennas and/or designing them to integrate with the building or structure on which they are mounted. Finally, as use of wireless devices becomes ubiquitous, users have become more accepting and tolerant of the antennas.

Wireless service providers are expected to have or create sufficient capacity to accommodate growth over the 20-year planning horizon.

**Satellite services**

Less widespread than wired or wireless services, satellite telecommunication services at the writing of the 2015 Plan Update primarily offered video programming. Signals are relayed via satellites in geosynchronous orbits and captured by parabolic antennas, or “dishes”, typically mounted to homes or businesses on or near the roof to obtain an unobstructed signal.
Planning Commission Recommendation

The land use implications of satellite services have changed over time. Early dish antennas were very large, typically requiring a ground installation in a front or rear yard. Neighbors often objected, finding the antennas aesthetically unpleasing. Dish antennas have become much smaller, to the point where they have become accepted household accessories.

Satellite service providers are expected to have or create sufficient capacity to accommodate growth over the 20-year planning horizon.

Cable

Comcast Cable Communications offers cable TV service within Bothell in accordance with a contract with the City. Under the terms of the contract, Comcast provides a channel (Channel 21) for use by the City. As of 2004 the City utilizes the channel to broadcast City Council and Planning Commission meetings, public service announcements and previews and replays of City events such as the annual Fourth of July celebration.

Capital facilities owned and operated by Comcast include underground and aerial trunk and distribution lines, signal amplifiers approximately every 2,000 to 2,200 feet, and junction boxes at each individual property receiving service. Until 2003 Comcast maintained a microwave relay facility mounted on a tower on City property at the top of Norway Hill: improvements in ground transmission facilities made the microwave relay unnecessary, and it has been removed.

Comcast rents pole space or shares trenches with Puget Sound Energy, Snohomish County PUD, or Verizon to carry overhead or underground cables which supply service to homes and businesses within the Planning Area. Comcast is upgrading its cable system to a hybrid fiber coaxial system that will serve the entire Puget Sound region. Once the upgrade is complete, the system will provide enhanced services such as high-speed Internet.

Fiber Optic Cable

Various private operators have installed underground fiber optic cable in the Planning Area. Fiber optic cable allows high-speed data communications and transport across the United States.

Solid Waste

The following language is proposed to reflect Bothell’s participation in the development, maintenance and implementation of the King County Comprehensive Solid Waste Management Plan. This language is considered warranted to clarify that the City plays an active role in promoting recycling and other waste-reduction activities, beyond merely contracting with a hauler for waste disposal.

PC 4/16/14 - The Commission concurred.

The City of Bothell collaborates via interlocal agreement with King County and 36 other King County cities (all cities except Seattle and Milton) in planning for solid waste prevention, recycling, collection, transfer, processing and disposal, under the King County Comprehensive Solid Waste Management Plan. Bothell’s responsibility under the Plan is to participate in the planning process and jointly implement the plan with the county.
Planning Commission Recommendation

Examples of plan implementation actions Bothell and other cities are called upon to pursue include the following:

- Lead by example by improving waste prevention and recycling in city operations and facilities;
- Work with food producers, grocers, restaurants and schools to donate surplus meals and staple food items to local food banks;
- Promote consumer use of recyclable bags at grocery and other retail stores;
- Provide education and promotion to increase recycling, including recycling of food scraps and food-soiled paper;
- Adopt green building policies and regulations supporting design of buildings that have less impact on the environment, are energy efficient and use recycled materials;
- Explore options to increase the efficiency and reduce the price of curbside collection of bulky items, while diverting as many items as possible for reuse or recycling; and
- Address space and collection needs of mixed-use buildings.

The Plan sets a number of goals to be achieved by 2020:

Reduce total waste generation -
Per capita goal, maximum of 20.4 pounds per week (2011 generation was 21.9 pounds per week);
Per employee goal, maximum of 58 pounds per week (goal surpassed in 2011, at 53.6 pounds per week).

Reduce waste disposal -
Per capita goal, maximum of 14.2 pounds per week (goal surpassed in 2011, at 13.6 pounds per week);
Per employee goal, maximum of 22.9 pounds per week (goal surpassed in 2011, at 19.5 pounds per week).

Increase recycling -
Goal for all single family, multi-family, non-residential and self-haul activity, 70 percent (2011 recycling rate was 52 percent).

Bothell contracts for collection, transfer and disposal of recycling, garbage and organics (comprising yard waste and food scraps) with private solid waste haulers Recology CleanScapes and Waste Management.

At this writing (March 11, 2014), the City Council was evaluating proposals by three different solid waste companies to serve Bothell. A Council decision is expected in April or May, 2014. Regardless of the outcome of that process, the nine King County areas annexed by the City in February, 2014, will continue to be served by Waste Management until at least 2021, under the contract in effect at the time of annexation. The following section will be updated after the Council has awarded a contract.

Staff 4/3/14 update - The Council at its April 1 meeting directed staff to negotiate a solid waste contract with Recology / Cleanscapes. Again, once the Council has awarded the contract, the following section will be updated.

PC 4/16/14 - The Commission concurred.
Solid waste, recycling and yard waste collection services within the City of Bothell are primarily provided through contracted services with Recology CleanScapes Waste Management, Inc. About 12 percent of the city, comprising nine separate areas that were annexed in 2014, are served by Waste Management, Inc., which will continue to serve those areas through 2021. Most households within the City receive solid waste recycling and yard waste collection services. Most businesses within the City receive solid waste collection service with recycling and yard waste collection available as optional services.

In 2003, the total single family, multi-family and commercial waste stream amounted to approximately 24,235 tons. Of this total, single family homes accounted for about 62 percent, multi-family about 11 percent, and commercial about 27 percent. The total tonnage was divided among solid waste, recycling and yard waste as follows: solid waste, 14,219 tons; recycling, 4,512 tons; and yard waste, 5,504 tons.

Solid waste collected within the City of Bothell is delivered to a transfer station and then hauled to a regional landfill. The recyclables and yard waste are collected and transported to a facility where the material is sorted and sold on the commodities market or, in the case of yard waste, turned into compost and sold.

The City of Bothell participates in ongoing programs with Recology / Cleanscapes Waste Management, Inc. and King County to organize and promote special collection events and opportunities for bulky and extra waste items that aren’t collectable at the curb and for collection of hazardous waste materials.

### Siting of Essential Public Facilities

The Growth Management Act requires local governments to develop a process for identifying and siting essential public facilities and to incorporate that process into local comprehensive plans. Essential public facilities can be difficult to site, and their location in a community may be locally unpopular. The Act charges state and local governments with the task of ensuring that such facilities as needed to support orderly growth and the delivery of public services are sited in a timely and efficient manner.

Several types of utility facilities may be considered difficult to site, including but not limited to high voltage transmission lines, electrical substations, cellular transmission towers, and large transmission pipelines.

The Land Use element discusses the siting of essential public facilities in detail, and provides for a regionally coordinated siting process. This element incorporates a policy (UTC-P149) referencing the discussion and policy in the Land Use element.

The following proposed language explains the process by which this element was updated.

**PC 4/16/14 - The Commission concurred.**

### Development of Goals, Policies and Actions

For the 2015 Periodic Plan Update, utility providers operating within the Bothell Planning Area were contacted and requested to furnish current system information as well as information concerning any planned system expansions or enhancements necessary to accommodate forecasted growth. Goals, policies and actions were modified for the 2015 Update where warranted to reflect providers’ latest plans and system needs.
Planning Commission Recommendation

As stated in the introductory note box, goals, policies and actions concerning conservation have been deleted from this element and are proposed to be relocated, where warranted, in the Natural Environment Element. The reason for this is that conservation, as a philosophy and activity, is not limited to utilities, and is more appropriately incorporated among Natural Environment goals, policies and actions. One exception is Policy UT-P8, which is proposed to be retained insofar as it relates specifically to utility facilities.

PC 4/16/14 - The Commission concurred.

Utilities and Conservation Goals, Policies and Actions

Goals

Since the title of this element would change from “Utilities and Conservation” to “Utilities”, the abbreviation for the purposes of numbering of pages, goals, policies and actions would similarly change from “UC” to “UT”.

PC 4/16/14 - The Commission concurred.

UTC-G1 To ensure that utilities are available or can be provided to serve the projected population within the Planning Area in a manner which satisfies customer demand and is fiscally and environmentally responsible, aesthetically acceptable to the community, and safe for residents.

UC-G2 To reduce the rate of consumption of natural resources in order to improve air and water quality and slow solid waste accumulation. Reduction of natural resource consumption will diminish the need to identify and develop costly new resource supplies.

Policies

UTC-P1 Utility providers have indicated that they do not anticipate the need for major new transmission or distribution facilities within the Planning Area during the time horizon of the Plan. If any providers identify a need for such major facilities, the City shall coordinate with the provider(s) to ensure inclusion consideration of all reasonably feasible alternative locations for the new facilities, at the earliest possible stage in planning.

UTC-P2 Regulate construction of utilities within and near critical areas in accordance with applicable federal, state and city regulations. Particular attention should be paid to minimizing the impacts of utilities construction in areas which contribute to the health of habitat for those species protected under the Endangered Species Act.
Planning Commission Recommendation

| UTC-P3 | Require utility providers to implement best management practices (BMP’s) for any development activities. |
| UTC-P4 | Require the undergrounding of new utility distribution lines with the exception of high voltage electrical transmission lines. High voltage lines are exempted due to the high cost and potential adverse environmental impacts of undergrounding such lines. |
| UTC-P5 | Consistent with rules and tariffs of the Washington Utilities and Transportation Commission, require the undergrounding of existing utility distribution lines where physically feasible as streets are widened and/or areas are redeveloped. Assign a high priority to undergrounding of lines within view corridors. |
| UTC-P6 | Promote co-location of major utility transmission facilities such as high-voltage electrical transmission lines and water and natural gas trunk pipelines within shared utility corridors, to minimize the amount of land allocated for this purpose and the tendency of such corridors to divide neighborhoods. |
| UTC-P7 | Promote co-location of utility distribution facilities in shared trenches and coordination of construction timing to minimize construction-related disruptions to the public and to reduce the cost of utility delivery to the public. |
| UTC-P8 | Promote conservation measures to reduce the need for additional utility distribution facilities in the future. |
| UTC-P9 | Promote recreational use of utility corridors, for example, for trails, sports courts and similar facilities where found to be safe and compatible with the primary use. |
| UTC-P10 | Ensure that utility purveyors limit disturbance to vegetation within major utility transmission corridors to that necessary for safety and maintenance of transmission facilities. |
| UTC-P11 | Encourage utility providers to exercise restraint and sensitivity to neighborhood character in the practice of trimming tree limbs around aerial utility lines. |

The following proposed new policy was prompted by language in the Washington Administrative Code (WAC). The WAC provides guidelines and suggestions for implementing state law in the Revised Code of Washington (RCW).

PC 4/16/14 - The Commission concurred.

| UT-P12 | Educate the public on appropriate vegetation planting and management in the vicinity of underground and/or aerial utilities to avoid preventable conflicts. |
| UTC-P13 | Ensure utility facilities are designed in such a manner as to minimize adverse aesthetic impacts on surrounding land uses. |

PC 4/16/14 - The Commission requested language promoting greater reliability and the identification of uses that should be a high priority for service restoration in the event of a power outage or other loss of service.
Planning Commission Recommendation

**UT-P14** Encourage utility providers to implement system improvements to enhance reliability. Collaborate with utility providers to identify high-priority uses for restoration of service following a power outage or other loss of service. Such high-priority uses include but are not limited to schools, senior housing and medical clinics.

**UTC-P153** Provide for a common regional site review process for consideration of proposed utility facilities which constitute essential public facilities of a countywide or statewide nature, as defined in the Land Use element. Such utility facilities are necessary components of a system or network which provides a public service or good, serve a population base extending beyond the limits of the host community, and may be difficult to site due to perceived environmental impacts on their immediate surroundings. See Land Use Policy LU-P14.

**UTC-P164** Support improvements to the telecommunications system which facilitate business, educational, and recreational activities and ensure that Bothell maintains a competitive advantage in attracting and retaining businesses.

The following proposed amendment would adopt the King County Comprehensive Solid Waste Management Plan by reference. "X" is a placeholder: the appropriate appendix letter would be assigned at the conclusion of the process.

**PC 4/16/14 - The Commission concurred.**

**UT-P17** The King County Comprehensive Solid Waste Management Plan, as approved and periodically amended, is hereby adopted by reference as Appendix UT-A-2 to this Imagine Bothell... Comprehensive Plan, to provide guidance for future City decisions relating to solid waste prevention, recycling, collection, transfer, processing and disposal.

The following policies all concern conservation and thus are proposed to be deleted. Indeed, some of these relate to the conservation of potable water, which is not addressed in this element: this “forced fit” further reinforces the proposition that conservation goals, policies and actions do not belong in the Utilities Element.

**PC 4/16/14 - The Commission concurred.**

**UC-P15** Pursue development of regulations encouraging water conservation.

**UC-P16** Provide water conservation assistance to customers.

**UC-P17** Promote public education, awareness and involvement in water conservation programs.

**UC-P18** Practice efficient water use in municipal buildings, parks, City maintained planting areas and the Bothell Cemetery.

**UC-P19** Adopt and implement energy efficient practices in all municipal buildings.

**UC-P20** Continue to promote the City recycling program in single family and multi-family residential areas and extend the program to all businesses.
Planning Commission Recommendation

UC-P21——Continue to promote recycling within all municipal facilities.

Actions

The following proposed revision more accurately describes what can be realistically captured on a comprehensive-plan-level map.

PC 4/16/14 - The Commission concurred.

UTC-A1 Maintain a detailed maps and plans depicting the location of existing and proposed utility facilities and their capacities. See Figure UT-1.

PC 4/16/14 - The Commission requested refinement of the following action, for clarity and more precise direction.

UTC-A2 Meet periodically with representatives of utility purveyors to ensure a proactive coordination of plans and construction projects to meet the evolving utilities needs of Bothell residents and businesses.

Per GMA, a utilities element does not concern potable water supply: the following action is more appropriately located in the Capital Facilities element, and thus is proposed to be deleted.

PC 4/16/14 - The Commission concurred.

UC-A3 Pursue alternative water sources.

UTC-A4 Work with utility purveyors to identify opportunities for recreational facilities within utility corridors, where found to be safe, and to develop a program which addresses funding, construction of facilities, and long-term maintenance.

UTC-A5 Prepare a list of view corridors adversely impacted by aerial utility distribution lines, to identify high-priority corridors for undergrounding of existing lines upon street widening or redevelopment.

The following proposed action would implement proposed new policy UT-P12 above.

PC 4/16/14 - The Commission concurred.

UTC-A6 Make "right tree, right place" brochures available at the Development Services counter and on the City website to inform the public of appropriate vegetation planting and management in the vicinity of underground and/or aerial utilities.

PC 3/19/14 - The Commission requested that more attention be given to promoting composting and other alternatives to discarding food and yard waste. Accordingly, staff proposes the following.

PC 4/16/14 - The Commission concurred, with a minor revision.
Planning Commission Recommendation

**UT-A7** Continue to strive to reduce residential and business waste generation and waste disposal via educational efforts by Bothell staff and the City’s solid waste service provider to promote recycling as well as the collection and off-site composting of such organics as lawn waste, food scraps and food-soiled compostable materials.

The following conservation-related actions are proposed to be deleted.

**PC 4/16/14 - The Commission concurred.**

- **UC-A6** Continue to participate in and develop information programs for homeowners, apartment dwellers and business that provide advice on how to reduce water consumption. This information may be disseminated through the City newsletter, with monthly utility bills, or by other means that should be readily accessible to the public.

- **UC-A7** In the review of proposed developments, encourage the use of low water demand landscaping (also referred to as xeriscaping) and water-efficient irrigation systems, temporary irrigation systems or no irrigation system if the landscaping can establish and is sustainable without an irrigation system.

- **UC-A8** Continue to actively identify, evaluate and repair leaks in City water mains and meters.

- **UC-A9** Develop and implement new and innovative programs to support water conservation.

- **UC-A10** Explore and when feasible, include water consumption history in customer water bills.

- **UC-A11** Provide to building permit applicants information on energy-efficient appliances and building materials and techniques.

- **UC-A12** Give priority in City procurement procedures to recycled materials, if equal in cost or less expensive than other materials.

- **UC-A13** Investigate the feasibility of using Brightwater reclaimed water for irrigation and other purposes and pursue if found to be cost-effective.
Imagine Bothell...Comprehensive Plan
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Figure UT-1
Major Utility Facilities