

## **7.0 CAPITAL FACILITIES**

### **7.1 INTRODUCTION**

Capital facilities and public services are generally owned by public/semi-public entities and provide for the health, safety, and welfare of community residents. They provide water, wastewater systems, heat, and electricity for light, gas lines and emergency response. Water, heat and electricity for light are among the necessities of life; people also depend on other services such as communications systems. Both current and future residents should be assured that service capacity is adequate to meet demand. In this regard, it is particularly important for future growth not to degrade or diminish services to existing users. Even more fundamental, the location of capital facilities and utilities (where service is available) are intended to be harmonious with community plans to support and foster desired development.

The Capital Facilities chapter of this Sub-Area Plan Update discusses the capital improvements and services necessary to meet the adopted Level of Service (LOS) for the Kingston Urban Growth Area (UGA), and identifies funding, where known. To implement the planned facilities, service improvements are identified for a six-year time period—better known as a capital improvement program (CIP). The chapter also discusses some of the improvements to public facilities and services necessary to support the 2025 population allocation to Kingston. This chapter is an integral component of the Kitsap County Capital Facilities Element of the Comprehensive Plan.

### **7.2 CAPITAL FACILITY IMPROVEMENTS**

#### **7.2.1 Fire Protection and Emergency Medical Services**

Policies 1.2.4 and 1.3.4<sup>21</sup> in the Capital Facilities Element of the Comprehensive Plan indicates that fire and emergency service is a Category “D” public facility. Category D facilities are provided by entities other than Kitsap County. Therefore, the standards for LOS are reflected in a non-county agency’s annual budget or Capital Improvements Program (CIP). As a fire protection district, North Kitsap Fire & Rescue (NKF&R; formerly known as Kitsap County Fire District #10) provides emergency services in Kingston that include two major elements: fire stations and apparatus.

The district recently completed implementation of a major capital facilities project that included repositioning of its fire stations. Two new stations (located at 26642 Miller Bay Road NE and at 23260 South Kingston Road NE) were constructed with funds from the sale of voter-approved general obligation bonds. An additional new station (located at 4911 NE Twin Spits Road) was built with funds set aside by Kitsap County Fire District #14 prior to its merger into NKF&R. All three stations were completed in 2001. These facilities are designed to accommodate additional response personnel and are positioned

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<sup>21</sup> Kitsap County Capital Facilities Plan, Revised July 21, 1999

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with an eye toward future population growth patterns. The district provides area citizens with one staffed fire station for every 12.5 square miles of service area, with an average district response time of 6 minutes.

With large capital projects implemented and financial resources severely limited, the district does not have immediate plans to construct any more facilities. There are, however, several capital facilities issues that are attracting on-going attention during NKF&R's long-range planning efforts.

- Potential growth in the Kingston UGA. NKF&R retains ownership of its former headquarters/station (11171 NE SR104) and while weighing whether to keep it into the future, leaders are noting that significant growth in the number of commercial structures (even in the absence of accompanying population expansion) could someday compel the district to re-open a facility in the downtown core.
- High average response times to the Eglon and Cliffside neighborhoods, both well outside and north of the UGA. Generating fewer than 100 (less than 4% of the district's total alarm volume) emergency calls a year, this area experiences the longest average response times of any neighborhood in the NKF&R service area. Should the area experience a significant growth in population, the ensuing growth in emergency call volume might warrant repositioning and staffing the district's volunteer-only station on Eglon Road.

Future needs for apparatus, or "fire units," are most impacted by accumulated mileage and service life. Population growth – unless extreme – is unlikely to affect the district's need for new apparatus. NKF&R's leaders have an apparatus replacement schedule that is based on projected service lives. It is important to note that personnel costs are the most likely impact for fire protection districts during significant population growth. Additional personnel will be needed to maintain levels of service (average response times) as growing population produces additional demand for emergency services.

Based on the LOS standard for North Kitsap Fire & Rescue of 0.582 fire and emergency units per 1,000 in population, the growth anticipated under this Sub-area Plan will generate a demand of 15.13 new fire/emergency units (ie, fire engines, water tenders and medic units) at build out. This is a net deficiency of -3.13.

Revenue sources for mitigation of the deficiencies will come from property taxes collected for the District from special levies based on property valuation. Increases in the assessed valuation of property resulting from urban development in the sub-area are the mechanism for generating additional property tax-based revenues to support the provision of additional fire protection and emergency medical services and facilities. It is assumed that new revenue will be required near the 2025 build-out.

**Table 7.1 Kitsap County Analysis of Capital Facility Requirements;  
North Kitsap Fire and Rescue**

Current LOS = 0.582 fire units in service per 1,000 population				
(1) Time period	(2) Service area population	(3) Units required at 0.000582 per capita	(4) Fire units available	(5) Net reserve or deficiency
1994 actual	13,747	8.0	8.0	0.0
1995-2000: Growth non-capacity costs	1,512	0.9	0.0	-0.9
Total as of 2005	23,000	13.39	12	-1.39
2006-2025: Growth	3,000	15.13	0.0	-3.13
2025 Total	26,000	15.13	12	-3.13

### 7.2.2 Law Enforcement

Policies 1.2.3 and 1.3.3<sup>22</sup> in the Capital Facilities Element of the Comprehensive Plan indicates that correctional facilities are a Category “C” public facility. Category C facilities are typically provided by Kitsap County and, therefore, the standards for LOS apply to the County’s annual budget and Capital Improvements Program (CIP). However, the adopted LOS for these types of facilities is exempt from the concurrency management system requirements of the Comprehensive Plan.

Based on the adopted Kitsap County LOS standards for correctional facilities per 1,000 in population the maximum growth anticipated under the 2003 Kingston Sub-Area Plan generated the need for the following:

- 1.97 to 17.01 new adult corrections facility beds at build-out;
- 54 to 468 square feet of additional work-release facility at build-out; and,
- 0.40 to 3.42 new juvenile facility beds at build-out.

According to capital facilities planning completed for the 2003 Sub-Area Plan, there was adequate need for the construction of a new correctional facility expansion. This project was completed in 2003 and was financed through a 0.10% criminal justice incremental sales tax. The County financed the recent juvenile facility expansion through a general obligation bond issue. The new facilities were sized to accommodate projected overall population growth for the next twenty years in Kitsap County, satisfying the general planning horizon for County purposes. These facilities appear adequate to accommodate the additional incremental needs for correctional facilities brought about due to eventual urban development in the Kingston Sub-Area.

<sup>22</sup> Kitsap County Capital Facilities Plan, Revised July 21, 1999

Law enforcement personnel, equipment and vehicle costs for the Sheriff's Department are financed through the County General Fund. Increases in the assessed valuation of property resulting from urban development in the Sub-Area are the mechanism for generating additional property tax-based revenues to support the provision of additional (non-capital facility) law enforcement services. These funding schemes are generally employed to expand law enforcement facilities when needed.

### **7.2.3 Public Education Facilities**

The Capital Facilities Plan component of the overall Kitsap County Comprehensive Plan indicates in Policies 1.2.4 and 1.3.4<sup>23</sup> that public schools are a Category "D" public facility. Category D facilities are provided by entities other than Kitsap County; therefore, the standards for levels of service do not apply to the County's annual budget or Capital Improvements Program (CIP). However, the standards for levels of service do apply to the annual budgets and CIPs of the entities that provide public facilities. The adopted LOS for these types of public facilities and services are exempt from the concurrency management system requirements of the Comprehensive Plan.

Based on a standard household size of 2.5 persons per household, growth discussed in the 2003 Kingston Sub-Area Plan would generate between approximately 180 to 1,549 new students ranging from K to 12 at build-out—an identified deficiency in classroom space. To address this deficiency, a new high school is under construction (also known as the Kingston High School) and occupancy is expected in time for the 2006/2007 school year.

Funds for school facilities come from property taxes collected for the District from both general and specific levies and, potentially from state funding formulas. Increases in the assessed valuation of property resulting from urban development in the sub-area are mechanism for generating additional property tax-based revenues to support the provision of necessary school facilities and operations.

The District may propose increased tax levies to the voters when the need for a new school is warranted, based on adopted level of service standards being exceeded (ie, classroom size limits). However, if the voters fail to approve bond measures to construct new facilities, the District may increase its classroom size limit and/or bring in temporary (portable) classroom facilities to accommodate increased student levels. Kitsap County also collects impact fees on new residential development for the school district. The 2003 Sub-Area Plan notes Kitsap County adopted a phased increase to impact fees which would supplement existing revenues when the phase-in is implemented.

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<sup>23</sup> Kitsap County Capital Facilities Plan, Revised July 21, 1999

#### **7.2.4 Parks and Recreation**

The Capital Facilities Plan component of the Comprehensive Plan indicates (in Policy 1.2.3 and 1.3.3<sup>24</sup>) that Parks/Open Space is a Category “C” public facility. Category C facilities are typically provided by Kitsap County and, therefore the standards for LOS apply to the County’s annual budget and Capital Improvements Program (CIP). However, the adopted levels of service for these types of facilities are exempt from the concurrency management system requirements of the Comprehensive Plan.

Based on the adopted Kitsap County LOS standards for park and recreational facilities per 1,000 in population, the maximum growth anticipated under the 2003 Kingston Sub-Area Plan generated the need for the following:

- 11.4 to 98.6 new acres of regional parks at build-out;
- 2.5 to 21.5 new acres of local parks at build-out; and
- 6.9 to 59.6 acres of open space at build-out.

Areas around Carpenter Lake and areas within the Arborwood PUD present significant opportunities for parks and open-space areas within the Sub-Area due to the size and presence of development-constrained critical areas. Arborwood indicated in its land use request that it would convey 104 acres of greenway to the County as part of its proposed development. The additional incremental demand for regional and local parks can be met through a combination of on-site dedication of open-space land for such purposes and the future development of lands in public ownership, or other planned regional parks and facility improvements in North Kitsap County identified in the Capital Facilities Plan.

In addition, the Kingston Citizens’ Advisory Committee, Parks, Trails and Open Space Sub-Committee developed a Community Trails Plan (Appendix E). The plan shall be used as a guide for on-going trail development and access in the Kingston area.

#### **7.2.5 Water Systems**

The Capital Facilities Plan component of the overall Comprehensive Plan indicates in Policies 1.2.4 and 1.3.4<sup>25</sup> that public water supply is a Category “D” public facility. Category D facilities are provided by entities other than Kitsap County; therefore, the standards for levels of service do not apply to the County’s annual budget or Capital Improvements Program (CIP). However, the standards for LOS do apply to the annual budgets and CIPs of the entities that provide public facilities. The adopted LOS for these types of public facilities and services are also exempt from the concurrency management system requirements of the Comprehensive Plan.

Kitsap County Public Utility District #1 (PUD) is the purveyor of public water service in the study area. The District owns and operates 53 water systems that serve customers at

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<sup>24</sup> Kitsap County Capital Facilities Plan, Revised July 21, 1999

<sup>25</sup> Kitsap County Capital Facilities Plan, Revised July 21, 1999

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various locations throughout the County. The District's North Peninsula Water System was created through the consolidation of seven District systems. The systems consolidated include Kingston, Hansville, Jefferson Beach, Jefferson Point, Gamblewood, Cedar Acre 5 and Kingston Farms. This consolidation allows the PUD to better manage source and storage capabilities, address system deficiencies, provide for additional reliability and address needs for new wells and water rights. The Kitsap PUD Water System Plan was updated and approved by the Washington State Department of Health in Fall 2002.

Water service to all of the properties contained within the alternatives would be provided by the PUD, excepting those properties that propose to construct individual residential wells or are currently served by individual wells or small private water systems. The following existing source, storage and transmission/distribution capacities have been identified for the existing system.

### **Source Limitations**

Without further source improvements, discussed below, the existing North Peninsula sources are expected to meet projected demand through the year 2008. A well with a capacity of approximately 370 gallons per minute (gpm) will be needed between 2008 and 2020 to satisfy anticipated demand for the full system. The existing sources are capable of meeting the demand created by 5,139 Equivalent Residential Units (ERU) or 11,872 persons.

### **Storage Capacity**

Subject to improvements to storage, the existing North Peninsula storage facilities have surplus capacity for current and future demand through 2020. The existing full system storage facilities are capable of meeting the demand of 7,885 ERUs (18,217 persons) without conservation.

### **Transmission / Distribution Capacities**

A series of scenarios were run using a hydraulic model in 2003. These scenarios were analyzed for compliance with peak hour demand and fire flow requirements, and no areas within the study area were found to have inadequate pressures during peak hour demand.

The adequacy of fire flow was also assessed in 2003. Hydrants identified with inadequate fire flow are typically limited by points in the system remote from the point of fire. Fire flow greater than 500 gpm is available at all of the identified hydrants in the study area at pressures greater than 20 pounds per square inch (psi). However, pressure elsewhere in the district may fall below 20 psi, but will remain above 10 psi to prevent shortages.

**PUD 1, North Peninsula Water System Capacities**

<b>Period</b>	<b>Demand</b>	<b>Population</b>
Existing	Capable of supporting demand of up to 11,872 persons.	Current Water District population is 9,400.
Existing to 2008	Has certified water rights for additional 5,600 District population above current population.	Demand of population of 15,000 supported.
2008 to 2020	Additional water right (Kingston Well 7) needed to add capacity for additional 6,000*. Additional capacity could come from Port Gamble Well and/or conceptual Seabeck line extension.	District population total of 21,000 accommodated with additional Kingston Well 7 water right.
Existing to 2025	The Kingston UGA population is projected to be 5006 by 2025. Noting <u>Countywide</u> rural population increase of 25,000 during planning period, capacity is sufficient with anticipated District improvements.	
* If Well 7 is delayed, treated Wells 2 & 3 could be opened.		

PUD Capital Improvement Plan

The PUD has proposed a Capital Improvement Plan that addresses identified deficiencies. The PUD Capital Improvement Plan specifically addresses capacity through 2020, but estimated volumes of improvements will support the project population through 2025.

Analysis has indicated that the existing capacity of the production wells will be able to satisfy demand through the year 2008. An increase in source capacity of 370 gpm will be needed to satisfy anticipated demand through the year 2020.

Future source deficiencies may be addressed through a few possible approaches. Application for the issuance of a water right for Kingston Well #7 is in the final stages of review by Department of Ecology. Kingston Well #7 has a capacity of 700 gpm and is located north of Kingston Lumber off of 272<sup>nd</sup> PI NE. This well will provide 2,597 ERUs, which would equate to 6,000 more people, satisfying demand through 2025 at minimum. If issuance of a water right for Kingston Well #7 is indefinitely delayed, treatment for manganese may be added to Kingston Wells #2 and #3 and those wells brought online. These sources are permitted for 100 gpm and 150 gpm, respectively. The PUD is also planning to complete the Port Gamble Well along SR104 in the near future. The Port Gamble well is expected to have a capacity of at least 700 gpm or more. The establishment of either new source could satisfy projected demand in the study area.

If water rights are not secured, other sources of supply could also be explored. Reclaimed water may be an available option for some commercial activities. The amount of water currently available for reuse is approximately 78,000 gallons per day (gpd). Other options may include additional treatment to existing production facilities or mainline extension, eg, Seabeck.

### **7.2.6 Wastewater Collection and Treatment Facilities**

The Capital Facilities Plan component of the Comprehensive Plan indicates in Policies 1.2.3 and 1.3.3<sup>26</sup> that sanitary sewer service is a Category “C” public facility. Category C facilities are typically provided by Kitsap County and, therefore, the standards for LOS apply to the County’s annual budget and Capital Improvements Program (CIP). However, the adopted LOS for these types of facilities is exempt from the concurrency management system requirements of the Comprehensive Plan.

Sewer service in the Kingston area is owned and maintained by Kitsap County. Financed by federal and state grants and a Utility Local Improvement District (ULID), the original Kingston Wastewater Treatment Plant (WWTP) and collection system were constructed in 1975. Situated on 10.04 acres, the treatment plant provides secondary treatment for the Kingston service area. The plant was designed to treat 150,000 gallons of sewage per day. A “packaged” treatment plant, the headworks, comminutor, bar screen, circular activated sludge treatment unit, and effluent disinfection are all contained within a single manufactured steel plate tank. After 25 years, much of the equipment is approaching the end of its useful life. The collection system continues to function well, although, an increase in infiltration and inflow (I & I) has been noted during the last several years.

The collection system constructed under ULID#3 includes Pump Station (PS) #41 and a collection system that serves the downtown commercial area and parcels along SR104 to Lindvog Rd, residential properties in Kingston, Kingston Beach Tracts and Barrett’s Addition. Much of the original system was constructed using asbestos-cement pipe.

Subsequent extensions provided additional pump stations to the system. These include: Kingston Junior High School (PS # 42), Kingston Elementary School #7 (PS #43), and the North Kitsap Transportation Facility (PS #52). Completion of construction of the new Kingston High School in 2006 will add another pump station to the system. See Figure 7-1 for a map of sewer systems in Kingston.

Anticipating that the treatment plant flows would reach 85% of design capacity within five years, the County contracted with Brown and Caldwell in 1991 to prepare a facilities plan for the system upgrade. That facilities plan, completed in 1994 and updated in 1995 and 1998, recommended demolishing the existing plant and constructing a new one outside of the downtown Kingston area on the old Nike site north of Spectrum School. Relocating the WWTP was consistent with the Kingston community’s goal to develop a downtown park on the existing plant site.

The County began discussions with the North Kitsap School District in December 1993 regarding the purchase of approximately 10 acres north of Spectrum School. However, the District opted to construct their new Transportation Facility in the area proposed for the new treatment plant. As a result, the County purchased a 23.55-acre parcel near the end of Norman Road in 1996.

The initial EIS scoping meeting for the Kingston Wastewater Facilities Plan was held in January 1994, but was sparsely attended. Changing the proposed treatment plant location

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<sup>26</sup> Kitsap County Capital Facilities Plan, Revised July 21, 1999

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prompted the need for a Supplemental EIS, with a scoping meeting held in November 1998. As a part of the scoping process, the Kitsap County Department of Community Development invited potentially affected or interested agencies, tribes, organizations, and citizens to comment on the major issues associated with the expansion of the Kingston WWTP and collection system. The draft SEIS was issued in March 1999. The FSEIS was issued February 2000, with the appeal period extended to March 30, 2000. An appeal by a local citizens' group resulted in the preparation of an addendum to the FSEIS and subsequent dismissal of the appeal by the Hearings Examiner in 2002.

Completed in May 2005 the new Kingston wastewater treatment facility is designed to treat an average daily flow of 292,000 gallons per day. This is a 95% increase in capacity from the previous facility, and will accommodate residential and commercial growth in the Kingston area for the next 20 years, until 2025. The plant utilizes an oxidation ditch, with two rotating stainless steel brushes, for biological treatment. Two oxidation ditches were constructed, one for current flows and the second to accommodate future growth; only the active ditch contains rotating brushes.

Built in conjunction with the new treatment plant and located on the old plant grounds, Pump Station #71 pumps all sewage generated in Kingston approximately 1.8 miles to the new plant. With the demolition of the old plant, the site will ultimately provide additional park opportunities for the Kingston community.

Also included in the improvements was the construction of a new outfall into Puget Sound. Since the previous outfall was damaged during dredging operations by the State ferry system, the new pipe was located well outside the ferry corridor and extended to 165 feet below sea-level to limit impacts on shellfish harvesting areas.

With the completion of these new facilities, new connections are allowed anywhere within the Kingston UGA. It is anticipated that the first extensions will occur along South Kingston Road, financed either by developers or the formation of a ULID.

The following table notes sewage flows to the Kingston plant over the last five years:

Year	Avg. Monthly Total	Max. Daily	Min. Daily	Avg. Daily
2000	2,815,731	140,000	14,100	92,330
2001	2,683,974	189,900	59,280	88,355
2002	2,829,872	193,090	53,850	93,360
2003	3,250,311	176,440	61,350	106,846
2004	3,197,738	221,930	71,400	104,842

### Collection & Transmission System

The Kingston collection system consists of approximately 38,300 feet of gravity sewer pipe ranging in size from 8" to 12" in diameter and approximately 21,650 feet of forcemain ranging from 4" to 6" in diameter. Five pump stations serve the Kingston area. With the scheduled completion of the new Kingston High School in 2006 an additional pump station and forcemain pipe will be added to the system.



Waste sludge from the Kingston wastewater treatment plant is currently trucked to the Central Kitsap plant for digestion and treatment. It is anticipated that this practice will continue. Additional sludge storage and thickening is planned for the new plant to enable greater sludge capacity and trucking schedule flexibility.

Future needs and capacity will be determined based on the preferred alternative and, if necessary, appropriate mitigation measures identified during environmental permitting.

### **7.2.7 Stormwater Facilities**

Stormwater facilities needed by new urban development in the Sub-Area will be comprised of on-site facilities provided by the developer consistent with the requirements of the Kitsap County Code Chapter 12, Stormwater Management, as amended. In addition to the stormwater detention and water quality treatment requirements stated in the Kitsap County manual, other agencies may require that additional standards be applied to any individual project site to protect sensitive environmental resources or that mitigation be provided for any development. It is anticipated that project-level environmental permitting may be necessary on a case-by-case basis.

### **7.2.8 Solid Waste Disposal**

The Capital Facilities Plan component of the Comprehensive Plan indicates in Policies 1.2.3 and 1.3.3 that solid waste collection and disposal is a Category “C” public facility. Category C facilities are provided by (or privately contracted through) Kitsap County; therefore, the standards for LOS does apply to the County’s annual budget or Capital Improvements Program (CIP). However, the adopted levels of service for these types of public facilities and services are also exempt from the concurrency management system requirements of the Comprehensive Plan.

Consistent with the LOS adopted in the Capital Facilities Plan, Kitsap County developed a service level ordinance that outlines recycling and yard waste collection programs that are provided by a Washington Utilities and Transportation Commission (WUTC) franchised hauler. Kitsap County provides disposal service for all cities and unincorporated County lands through a service agreement with Waste Management to operate the Olympic View Transfer Station. Collection of municipal solid waste will also continue to be provided by the franchised haulers regulated by the WUTC. According to the Capital Facilities Plan, there are no anticipated disposal capacity deficiencies in the identified planning scope, regardless of the final alternative<sup>27</sup>.

Increases in the assessed valuation of property resulting from urban development in the Sub-Area is a mechanism for generating additional revenues to support the provision of necessary solid waste collection, disposal and recycling facilities.

### **7.2.9 Transportation – (See Chapter 6)**

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<sup>27</sup> Kitsap County Capital Facilities Plan at 141.