



## Chapter 7. Public Facilities, Utilities, and Services Element

### Introduction

The City of Longview owns and manages a number of public facilities, including local roads, parks, library, water and sewer lines, police and fire facilities, administrative buildings and maintenance facilities. In addition to facilities owned and managed by Longview, there are a number of publicly owned facilities managed by other special districts, which provide for some of Longview's public facility needs. These include but are not limited to schools, water supply, sewage treatment, and solid waste.

Facilities belonging to power and telecommunication (electrical, natural gas, cable and telephone) serving Longview are addressed in the Energy and Telecommunication Utilities Element of the Comprehensive Plan.

Following is a summary of existing conditions taken from the "Final Existing Conditions Report" prepared for Longview in June 2005, addressing Longview or special district facilities and services. The Existing Conditions Report provides an overview of the existing conditions in Longview and provides background

information useful in developing goals, objectives, and policies for the Public Facilities, Utilities and Services Element.

## Land Use and Capital Facilities

One aspect of managing growth in the City of Longview is ensuring that needed public facilities, infrastructure and services are available when growth occurs. The implementation of a well thought-out plan for public facilities, utilities and services will help Longview realize its vision. Implementation of the City's land use plan is contingent on the development of needed infrastructure in a timely and orderly fashion.

## Level of Service and Forecast of Future Needs

Level of Service (LOS) is the adopted standard used to measure the adequacy of services being provided. The adequacy of services, or LOS, relate to the types of services rendered. It can range from a precise measurement, such as the amount of time it takes for a fire truck to reach the scene of a fire, to as imprecise a measurement as a community's perception of how much and what type of open space is needed. LOS measures for each facility type provides a clue as to what, how much and when new capital facilities are, or may be needed.

LOS standards are established through a process that includes such factors as a community's population and its economic and fiscal resources. Population growth drives the types, amounts, and locations of services, and economics determine the amount of funding available to meet those service needs.

When an LOS standard has been established, the performance of a capital facility/service can be measured. A capital facility operating at or above the established LOS indicates no need for improvements or new facilities. A facility operating below established LOS is an indication that there may be a need for improvements, or new facilities, or evaluation of the LOS. However, if funding is not available to bring the service back to the established level, then the LOS is reexamined to determine if it is adequate, or the land use plan and growth targets may be adjusted.

Most service providers have established LOS standards or propose to do so, as described below for each service.

## Capital Facilities Financing

The provision of capital facilities contributes to the quality of life of Longview's residents. Parks, utilities, fire stations and other community and regional facilities are a physical reflection of the community's values. Longview is planning to

accommodate projected growth in households and jobs over the next 20 years with a full array of services. Therefore the needed capital facilities will include maintaining and improving level of services as growth occurs.

Currently the City identifies its planned improvements and revenue sources in the Capital Improvement Program in the budget. Current budget funds include the following:

- arterial street fund;
- federal housing and urban development (HUD) fund;
- capital projects fund (real estate excise tax [REET], motor vehicle tax, donations);
- LID (local improvement district) construction fund;
- water fund (rate supported);
- sewer fund (rate supported);
- filter plan fund;
- stormwater fund (rate supported);
- transit fund; and
- parks and recreation memorial trust fund.

The City may consider other funding sources in the future where appropriate to the type of facility and community needs. A range of options is available, some requiring County or voter approval. Additional capital financing sources include, but are not limited to the following:

- special purpose districts;
- obligations such as bonds and lease-purchase arrangements;
- grants from federal or State agencies;
- conservation areas real estate excise tax;
- conservation futures property tax;
- land dedication or fees-in-lieu of dedication for open space, parks, and/or conservation;
- local option sales tax for criminal justice; and
- Washington State Environmental Policy Act (SEPA) Mitigation Fees.

These funding sources are described further in the Henderson, Young & Company memo “Capital Financing Ideas for Longview,” dated May 29, 2006. SEPA Mitigation is described in more detail below as it is a potential general source of

funds for multiple facilities and is related to the demand created by new development.

## SEPA Mitigation Fees

SEPA (RCW 43.21C.060) authorizes local governments to condition the approval of development applications on mitigation (including a mitigation payment or fee) for the cost of specific adverse impacts on the built environment caused by the proposed development. Mitigation can be required for impacts on any type of public facility. The amount of the mitigation payment must be directly related to the specific adverse environmental impacts attributable to the type and size of the proposed development.

The following are typical steps in developing a study of SEPA mitigation fees:

1. Identify the level of service benchmark to be used for quantifying the impact of development on the built environment.
2. Forecast future development.
3. Estimate future impacts on the built environment by applying the level of service benchmark to the forecast of future development.
4. Compare the capacity of existing infrastructure to the estimates of future impacts to determine whether current infrastructure is sufficient to serve new development, or if mitigation is needed to accommodate future development.
5. Identify infrastructure projects that will mitigate impacts of future development.
6. Use the cost of infrastructure mitigation projects and the forecasts of future development to calculate the mitigation fee per unit of future development.

Longview Municipal Code (LMC) 19.80.140 includes consideration of the effects of a proposed subdivision on public facilities (LMC 19.80.140 (7), and 19.80.490). It may be possible to establish a SEPA mitigation fee system based on these provisions of LMC and relevant provisions of the City's comprehensive plan.

# Inventory (Summary of Existing Conditions) Facilities, Utilities, and Services

## General Government

### *Civic Buildings*

City of Longview maintains and/or utilizes a number of other capital facilities and buildings in order to perform the necessary administrative functions of the City. The City is responsible for the maintenance and operation of approximately 293,000 square feet of buildings. Table 7-1 provides a list of major buildings owned by the City, their location and approximate square footage.

**Table 7-1. Major City Buildings**

Facility	Address	Approx. Square Footage
Longview City Hall	1525 Broadview	32,000
Street, Traffic, Transit and Fleet Divisions	254 Oregon Way	9,318
Transit Center	1135 12th Avenue	900
Regional Water Treatment Plant	101 Fishers Lane	12,000
Water/Sewer Operations	1460 Industrial Way	24,768
Longview Police Department	1351 Hudson	34,000
Longview Fire Department (Station 81)	740 Commerce	14,868
Longview Public Library	1600 Louisiana	33,000
Parks Division	706 30th Avenue	3,700
		5,400 (auto parking garage)
		462 (garage)
Recreation Office	2920 Douglas Street	4,516
Mint Valley Golf Course and Facilities Maintenance	4002 Pennsylvania	3,716 (Pro Shop)
		4,500 (Warehouse/ Maintenance)
		2,420 (Golf Cart Storage Shed)
Mint Valley Racquet and Fitness Complex	4004 Pennsylvania	33,920
Highlands Police Satellite Office	216 30th Avenue	2,211
Longview Fire Department (Station 82)	2355 38th Avenue	4,800
Columbia Theater	1231 Vandercook	18,000
Senior Center	1111 Commerce Avenue	4,500
McClelland Arts Center	951 Delaware Street	11,000

Facility	Address	Approx. Square Footage
Woman's Club Building	835 21st Avenue	3,800
Elks Memorial Building	2121 Kessler Blvd	2,010
Square Dance Building	1041 Industrial Way	4,828
Recycling Office	-	756
AMR (rental)	-	1,725
SignMasters	-	4,000
201 Fishers Lane rental	-	1,200

Source: City of Longview Existing Conditions Report (June 2005) and City of Longview Parks Department (2006)

As of this writing, there are no identified general Citywide improvements. Longview does not anticipate significant general government capital needs in the future.

## Parks and Open Space

Parks and recreation facilities serving the residents of Longview include City and County facilities. The City of Longview maintains over 435 acres of park and open space land that offer active and passive recreational opportunities to residents and preserve natural areas of the community. Facilities owned and operated by Longview include 3,600 feet of shoreline access, 48 acres of surface water, and 5.6 miles of trails. Most of the existing trail miles are located around Lake Sacajawea.

The basic building blocks of the parks and recreation program are the neighborhood and community parks. Other components include regional parks; special use facilities such as an art center, memorial building, racquet and fitness complex, and senior citizen center; golf course; bikeway; and pedestrian paths.

The City of Longview has classified its parks system into six different types of park and recreational facilities:

- **Class I.** Neighborhood Playlots (Bailey, Kellogg, and Rotary parks);
- **Class II.** Neighborhood Park (Archie Anderson, Cloney, Victoria Freeman, Mark Hoehne, Roy Morse, John Null, 7th Avenue, Vandercook, Windermere parks and Community Gardens site);
- **Class III.** Neighborhood Passive and Preservation Area (Lake Sacajawea and R.A. Long parks and the Library grounds);
- **Class IV.** Community Park (Roy Morse, John Null and 7th Avenue parks);
- **Class V.** Regional Park Facilities (Gerhart Gardens, Lake Sacajawea Park and the Mint Valley Golf Course and Racquet/Fitness complexes); and
- **Class VI.** Special Use Facilities (Senior Citizen Center, Woman's Club Building, McClelland Arts Center and the Elks Memorial Building).

Based on current Parks and Recreation LOS standards, Longview has a current deficiency of parkland and trails, which will continue to increase as growth occurs in Longview. Table 7-2 describes current LOS standards for parks and recreational facilities, and park supplies and deficiencies.

**Table 7-2. Park Level of Service Standards**

Class	Level of Service	Demand 2004 City and PAB (acres)	Demand 2025 City and PAB (acres)	Actual Supply (acres)	Deficiency 2004/2025
I	No numerical standard	-	-	-	-
II	7 acres/1000 population	275	339	145	130/194
III	No numerical standard	-	-	-	-
IV	3 acres/1000 population	118	145	101	17/44
V	No numerical standard	-	-	-	-
VI	No numerical standard	-	-	-	-

Source: City of Longview Park and Recreation Comprehensive Plan (2000)

PAB = Planning Area Boundary

Geographically, West Longview and the area outside of downtown tend to be underserved by neighborhood parks. Current growth trends may continue to contribute usage to existing parks and facilities. In the future, Longview will pursue acquisition of undeveloped parcels in areas where future development is likely in order to protect natural areas and environmentally sensitive sites and serve as the location for future parks or recreational facilities. Longview currently imposes park land dedication requirements for development greater than 25 acres; however, much of the new growth in residential has occurred on smaller acreage.

## Public Safety

### *Fire Suppression and Emergency Medical Services provided by City*

Within the City limits, fire and emergency medical services and capital facilities are managed and maintained by the Longview Fire Department. They consist of two fire stations that house support apparatus including engine companies, an aerial ladder truck, an aid company, and a number of other specialty vehicle and equipment. See Figure 7-1 for the Fire Department’s current service area.

The main station, Station 81, is located at 740 Commerce Avenue and was built in 1975. A minimum of six line firefighters and one battalion chief are on duty 24 hours a day, seven days a week. The Fire Marshal also works part-time out of this facility and part-time at the Community Development Department, located at City Hall.

The second station, Station 82, is located at 2355 38th Avenue and was built in 1979. The 38th Avenue station is a minimum three-person engine/aid company and houses

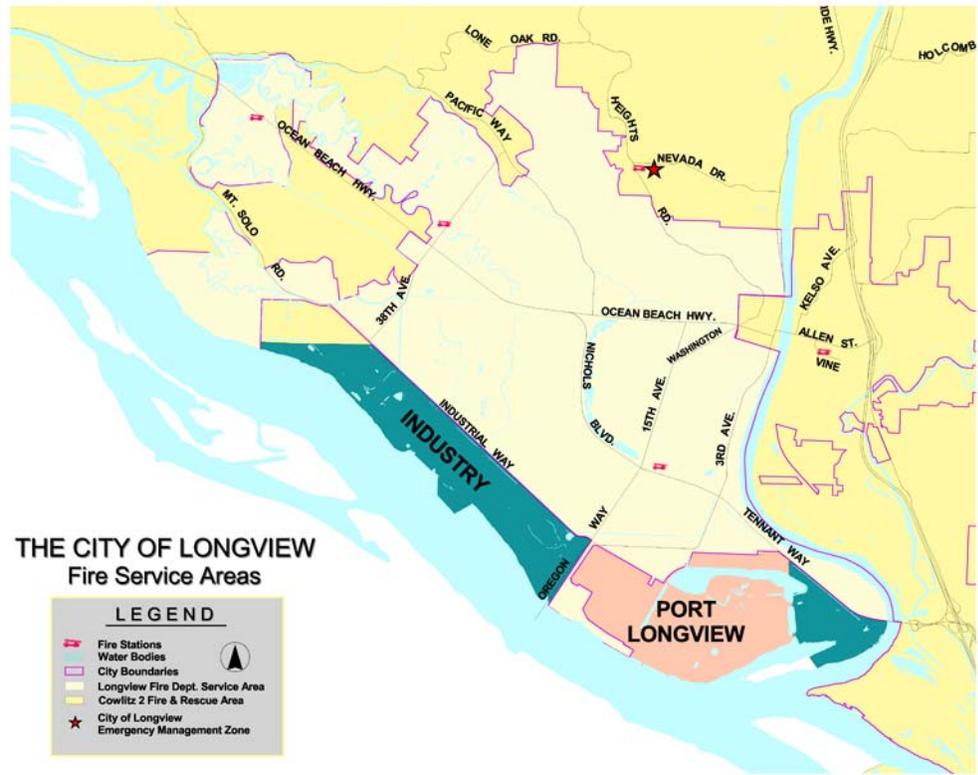
Engine 82, which responds primarily to emergency calls in the west end of Longview. Station 82 also provides backup to Station 81; however, the station closest to the call is dispatched to achieve the quickest response time possible. Calls for structural fires require all units from both stations to respond in order to staff and perform all on-scene rescue and fire control measures. Also stored at Station 82 is the Cowlitz County Homeland Security Hazardous Materials Mass Decontamination Unit.

The Cowlitz County 911 Center currently dispatches emergency calls. Longview's average response time to fire and emergency medical calls in 2005 was 5.2 minutes, in response to 4,800 calls for service. In 2005, the Longview Fire Department responded to emergency calls in 5 minutes or less 65% of the time. The trend in fire and emergency medical calls since 1990 has increased at a rate of 6% per year. During this same period, the population growth in Longview was less than 1% per year. Possible causes for the increase in the number of calls rising faster than population growth may include an increase in calls for emergencies involving the abuse of controlled substances and an increasing portion of the local population who use the pre-hospital system and emergency response as their primary healthcare services. Growth in new construction throughout the City is expected to increase demand for fire prevention services, including review of new building permits, on-site inspections for code compliance during the construction phase, and continued annual site prevention inspections.

The Longview Fire Department has a mutual aid agreement in effect with all Cowlitz County fire agencies in order to provide overlapping emergency response. The Fire Department also contracts with 14 entities outside of the city limits to provide fire protection service at industrial sites such as Weyerhaeuser, Longview Fibre, Specialty Minerals, and Equachlor. In conjunction with these efforts, the Longview Fire Department provides Confined Space Rescue Services and has frequent interaction with other fire agencies.

The department staff consists of 36 firefighters, three interns, three battalion chiefs, an administration battalion chief, a fire marshal, a fire secretary, and a fire chief. Thirty of the departments personal are emergency medical technicians and seven are First Responder trained. This staffing level represents one firefighter per 862 residents.

Figure 7-1. Fire Suppression and Emergency Medical Service Boundaries



City of Longview Comprehensive Plan  
December 2006

Source: City of Longview GIS

Washington State House Bill 1756 requires cities and towns to adopt specific levels of fire service protections. The level of service is to be decided by each municipal government. Annual reporting of adopted response measures is required to begin in 2007. Currently, Longview does not have a level of service for fire and emergency medical services. The fire chief will be recommending level of service standards to the city council in late 2006.

Washington State also has requirements for the staffing of fire departments. The State's Labor and Industries safety requirements (WAC 296-305-05001) specify a Two In/Two Out requirement for firefighters in Washington State. At minimum staffing, this requires the Longview Fire Department to have at least two units on scene before entry into a fire can begin.

Table 7-3 shows planned improvements between 2006 and 2008 for the Fire Department. The Longview Fire Department is currently working with Fire District #2 on West Longview to plan a joint station. The Fire Department is also in the process of evaluating a LOS standard with a 6-minute response time 90% of the time.

**Table 7-3. Fire Department Capital Facility Improvement**

Fire	Cost by Year						
	2006	2007	2008	2009	2010	2011	2012-2025
Station 81 Training Room/Office Accommodations	\$48,000	-	-	-	-	-	-
Roof Exhaust at Stations 81 & 82	-	\$90,000	-	-	-	-	-
Auxiliary Power/Stations 81 & 82	-	-	\$13,500	-	-	-	-

Source: 2005/2006 Budget Capital Improvement Program

## *Police*

Police facilities consist of headquarters at 1351 Hudson Street, and a second station, the Highland Police Satellite Office at 216 30th Ave. Between 1990 and 2005, the Police Department experienced an average annual increase in call volumes similar to the city population growth rate during that same time period. However, between 2000 and 2005 there was a 17% increase in calls. Potential causes for the increase in calls between 2000 and 2005 include decrease in economic vitality of the community and the subsequent increase in crime rate, increased homeless population, increase in drug and alcohol related incidents, increased calls at the mental health facility that services the region, and overcapacity of the County jail, which often allows repeat offenders of lesser crimes to be released sooner.

In 2003, serious crime was up 27%. Longview had a significant reduction in serious crime in 2004 (13%). In 2005 there were 35,188 calls for service. The State awards the City a special grant fund to combat crime.

Current Police Department staff includes 53 commissioned officers, 10 reserve officers, 12 full-time civilians, and one part-time civilian. This staffing level results in one commissioned officer per 667 Longview residents, which compares with a State average reported by the U.S. Census (2003 estimated population) of one officer per 619 Washington residents and a national average for similar-sized cities (population 25,000 to 99,999) of one officer per 565 U.S. citizens.

Table 7-4 shows the Police Department’s planned facility improvements between 2006 and 2008.

**Table 7-4. Police Department Capital Facility Improvements**

Police	Cost						
	2006	2007	2008	2009	2010	2011	2012–2025
Expand Women's Locker Room	\$30,000	-	-	-	-	-	-
Replace Carpet	-	\$20,000	-	-	-	-	-
Privacy Fencing Around Employee Parking	-	-	\$9,000	-	-	-	-

Source: 2005/2006 Budget Capital Improvement Program

Other potential longer-term capital improvements under preliminary consideration include the following:

- A combined public safety building housing the Police and Fire Departments to address lack of parking and lack of ancillary police facilities (e.g., women’s locker room), and lack of Fire Department space.
- A satellite sub-station potentially in West Longview or downtown, depending on the location of a combined public safety building.

## Education

### *Public Schools*

#### **Longview School District No. 122**

The Longview School District No. 122 serves most school age Longview residents. The Longview School District includes eight elementary schools, three middle schools and two high schools, along with administration, maintenance and operations facilities. With the exception of one elementary school (Robert Gray), all of these facilities are located within the Longview city limits. Please see Figure 7-2.

The Longview School District has approximately 7,300 students and 850 employees. Maximum capacity of the existing school facilities is estimated to serve a population of 8,500 students.

The Longview School District utilizes maximum class size ratios (students per class) as a LOS indicator. The class size ratios are shown in Table 7-5.

**Table 7-5. Maximum Class Size Ratios for 2004–2005**

School/Grade	Class Size Ratio (students: class)
Elementary: K–4	24:1
Elementary: 5	28:1
Middle School: 6–8	23:1
High School: 9–2	24:1

Source: Longview School District No. 122

Over the past 10 years, there has been a decline in enrollment of students due to declines in birth rates and an unstable job market; however, increased enrollment is expected to begin in 2011, to reflect the City’s expected new growth and development and the distribution of school-aged residents. Existing LOS can be maintained without new facilities through 2014 (the extent of the School District’s 10-year capital improvement program), due to the existing capacity within the school facilities.

### Lower Columbia College

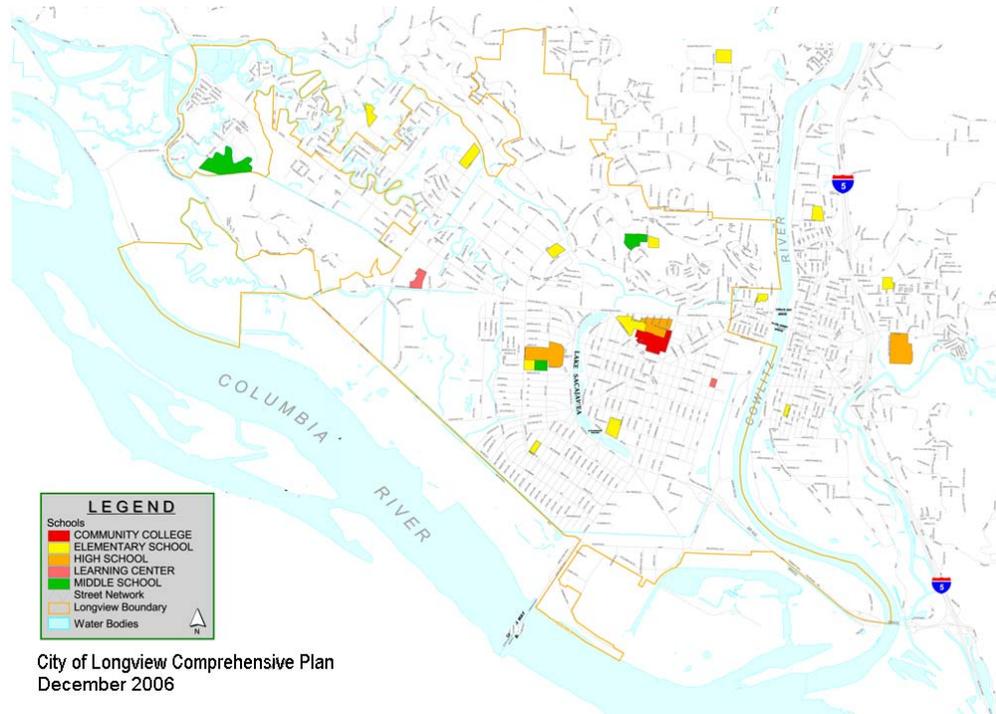
Lower Columbia College (LCC) is one of the oldest community colleges in the state. The campus encompasses 35 acres and contains of 22 buildings totaling 395,000 square feet. LCC’s primary service area includes Cowlitz and Wahkiakum counties and Columbia County in Oregon. LCC served 6,337 students in 2002–2003. The school has an enrollment of 2,983 FTE (full-time equivalent) students.

Approximately 80% of total enrollment is associated with daytime on-campus programs. According to LCC’s 2003 Master Plan, an increase in daytime enrollment of 14% is expected by 2012. LCC is anticipating an increase in transfer and vocational programs with special emphasis on allied health.

According to the Lower Columbia College Master Plan, there are several capital projects the college has planned and programmed as a part of their capital program for 2005–2015 including the following:

- **Fine Arts Center Building.** A 45,000-square-foot performing arts facility on Maple Street, including a large auditorium space. Construction began in late 2005 with the demolition of existing building in preparation for construction.

Figure 7-2. School Locations in Longview



City of Longview Comprehensive Plan  
December 2006

- **Health/Sciences Building Replacement.** A new building to house the physical and natural sciences as well as instructional space for nursing and related allied health programs. The building is proposed for construction in the 2010–2011 biennium. The proposed location is along Maple Street.
- **Business and Technology Center (off-campus).** The college is seeking a community partnership with local businesses, government, and local educational agencies contributing in-kind, matching funds, and services to support a customized employee training, business development, general services, and technology transfer program. The concept supports LCC’s plan to expand training in manufacturing, pulp and paper processing, management and safety education, and other programs that will support the economic diversification of the community. LCC aims to develop this off-campus center in the 2007–2009 biennium.
- **Building Renovations and Additions.** Minor improvements, additions, and renovations as part of the college’s 10-year capital program.
- **Parking Areas.** Additional parking to support new construction or replace parking displaced by new construction.

## *Library*

The Longview Public Library consists of a 33,000-square-foot building that underwent a much-needed exterior restoration in 2001. The Longview library offers a varied collection of materials and a wide range of services. Resources include an automated circulation system, more than 165,000 books, and over 13,000 magazines and newspapers in the print collection. The non-print collection includes over 6,500 compact disks and cassettes, over 6,000 videotapes and DVDs, a variety of video-related equipment, microfilm, microfiche, art reproductions, and other special materials.

The current staffing level is one full-time staff per 2,500 residents in the service population and one part time staff per 5,000 residents in the service population. Maintaining the current level of staffing for the projected 2025 service population of 62,000 will require five additional full-time staff members and two part-time staff members.

Currently, the Longview Library experiences more visits per capita than the state or national averages, yet is staffed by fewer professionals as shown in Table 7-6.

**Table 7-6. Library Service Comparison**

	Longview	Washington Average	U.S. Average
Paid FTE Staff per 25,000 persons in service area	10.0	13.8	12.3
Paid FTE Librarian per 25,000 persons in service area	3.0	5.2	4.0
Visits per Capita	5.5	4.8	4.4

In 2009, the Library plans to expand its patron parking lot with a budget of \$157,740. Other desired but unbudgeted library improvements include the following:

- add a branch library in the Highlands police substation;
- add a West Longview library branch based on growth; and
- expand the main branch based on growth.

## Utility Infrastructure

The City of Longview provides water and sewer service to the planning area as shown in Figure 7-3.

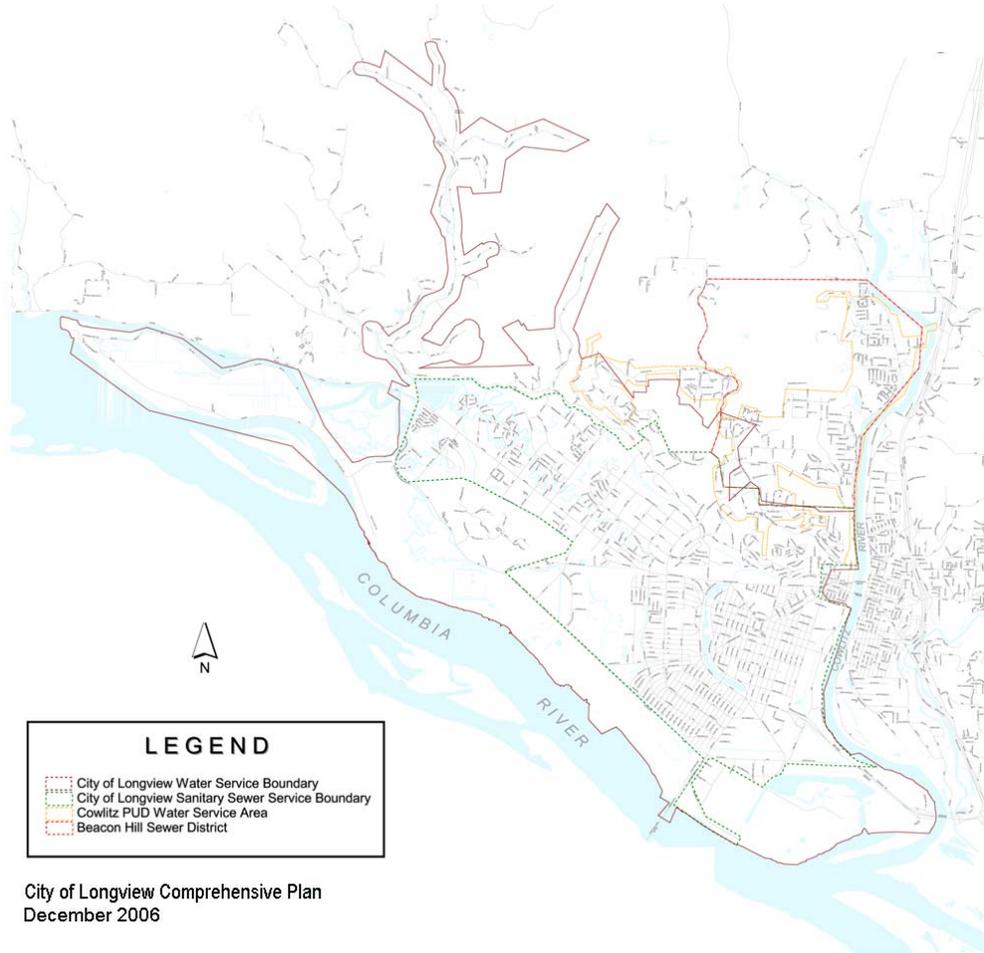
### *Water System*

Water facilities serving Longview are provided by two public agencies: the City and Public Utility District No. 1 of Cowlitz County PUD. The City and Cowlitz County PUD jointly own and operate a regional water treatment plant that uses the Cowlitz River as its source of water. In addition to the regional water treatment plant, Longview owns and operates six pump stations, 12 reservoirs, and 206 miles of transmission and distribution mains.

Per capita residential/commercial water consumption in Longview’s distribution area averaged 142 gallons per person per day in 2003. Local commercial/industrial customers use approximately 21% of the total water production of the facility, but some of the larger industries, including Weyerhaeuser and Longview Fibre, obtain most of their process water from on-site wells or the Cowlitz or Columbia rivers.

The regional treatment plant has a finished water capacity of 15.5 million gallons per day (mgd). If current growth trends continue, the plant will be at capacity peak day demand by 2019. Options for providing sufficient water in the future include expanding the plant, implementing water conservation measures, and increasing treatment plant operating hours to 24 hours per day. The City’s Water System Plan promotes a 3% conservation goal.

Figure 7-3. Utility Service Boundaries



Source: City of Longview GIS

The 12 water reservoirs owned and operated by Longview have a total effective capacity of 17 million gallons, which is considered adequate to meet project supply and fire flow requirements. New development will be served, as long as system additions are built to standards that anticipate future growth.

Under a Water Service Area Agreement, the three water purveyors in the Longview Kelso urban area (Longview, PUD, Kelso) have a long term “wheeling” arrangement whereby the three agencies can share each other's facilities when necessary. This agreement provides backup resources in case of emergency, natural disaster, and for scheduled maintenance outages. After Mt. St. Helens erupted on May 18, 1980, Longview and Weyerhaeuser installed an emergency line connecting the City to the Weyerhaeuser water system, which comes from the Columbia River, to provide an alternate source of water to the City and the PUD. Additionally, a second water main crossing of the Cowlitz River was constructed with the new Allen Street Bridge in 2000, increasing capacity and providing redundancy for the water main crossings connecting the Longview and Kelso systems.

Table 7-7 shows the planned improvements to the Longview water system through 2025, based on the recently completed water system plan (2005).

### *Sewer System*

Two sewage treatment plants and their collection systems serve Longview. The Cowlitz Water Pollution Control Plant (CWPCP) is owned and operated by the Three Rivers Regional Wastewater Authority (TRWWA) whose members include Longview, Kelso, Beacon Hill Sewer District, and Cowlitz County. Longview owns the second sewage treatment facility, the West Longview Lagoons, which are operated by TRWWA under contract to the City.

Some residential properties within Longview and its planning area continue to use residential on-site disposal systems, which should be phased out as development proceeds and sewers become available.

Major industries along the Columbia River (Longview Fibre, Weyerhaeuser and closed Longview Aluminum) operate their own collection and treatment systems to treat their industrial wastes.

The West Longview Lagoons treatment system was constructed in 1966 and was upgraded and expanded in 1975 and 1986 to four lagoons totaling approximately 46 acres, with algae removal and disinfection. The Lagoons treat and discharge effluent into a Consolidated Diking Improvement District No. 1 drainage ditch, where it is then pumped into Coal Creek Slough and ultimately flows to the Columbia River. The Lagoons provide advanced primary treatment with a total capacity of 2.7 mgd, or about 13,100 population equivalents.

Table 7-7. Water System Capital Facility Improvements

Project Description	Projected Growth	Cost							2012–2025
		2006	2007	2008	2009	2010	2011		
LT-01 – Replace pipeline from Longview RWTP to Hillside Reservoir	Growth 25%	\$530,000	\$3,090,000	-	\$3,280,000	-	-	-	
LT-02 – Upgrade regulator station serving Upper Coal Creek, Zone 502, from Trella Acres Reservoir by replacing existing service 3-inch PRV with 6-inch PRV.	Growth 50%	\$35,700	-	-	-	-	-	-	
LT-03 – Replace 3,200 LF of 6-inch dia. Pipe with 12-inch dia. pipe from Trella Acres Reservoir to Coal Creek Rd regulator station.	Growth	-	-	-	-	-	-	\$323,000	
LT-04 – Replace 1,500 LF of 6-inch dia. pipe with 12-inch dia. pipe from N. 50th Ave. Reservoir to 10-inch dia. pipe crossing.	Growth	-	-	-	-	-	-	\$303,000	
LT-05 – Install 2,300 LF of 16-inch dia pipe from Mount Solo Reservoir to Mount Solo Road.	Growth	-	-	-	-	-	-	\$619,000	
LT-06 – Replace 600 LF of 6-inch dia pipe with 8-inch diameter pipe along Willow Grove Connection Road/Willow Grove.	Growth	-	-	-	-	-	-	\$81,000	
LT-07 – Install 2,300 LF of 12-inch dia. Pipe Pacific Way/Coal Creek Road to Niemi pump station.	Growth	-	-	-	-	-	-	\$464,000	
LD-01 – Replace 1,400 LF of 6-inch dia. Pipe with 12-inch dia pipe on Ammons Drive from Indian Creek PS to Indian Hills Drive	Growth 50%	-	\$476,000	-	-	-	-	-	
LD-02 – Replace 3,300 LF of 6-inch dia. Pipe with 12-inch dia. Pipe on Ammons Drive from Indian Hills Drive to Ammons Reservoir.	Growth 50%	-	-	-	-	\$1,057,000	-	-	
LD-03 – Replace 2,000 LF of 6-inch dia. Pipe with 12-inch dia. Pipe on Pacific Way, east of Coal Creek Road	Growth 50%	-	-	\$719,000	-	-	-	-	
LD-04 – Replace 2,000 LF of 6-inch dia. Pipe with 12-inch dia. Pipe on Pacific Way, east of Coal Creek Road	Growth 50%	-	-	-	\$763,000	-	-	-	
LD-05 – Replace 3-inch PRV at Cascade Way and City View with Regulator station.	Growth 50%	-	-	\$40,100	-	-	-	-	

Project Description	Cost							
	Projected Growth	2006	2007	2008	2009	2010	2011	2012–2025
LD-06 – Replace 1,000 LF of 6-inch dia. pipe with 8-inch pipe on Cascade Way from Madrona Drive to Lower Hillcrest regulator station.	-	-	-	-	-	-	\$135,000	-
LD-07 – Replace 2,000 LF of 6-inch dia. pipe with 8-inch pipe on Clark Creek Road, north of 10-inch pipe crossing. Install inter-zone valveing.	-	-	-	-	-	-	\$404,000	-
LD-08 – Install 5,400 LF segment and 6,200 LF segment of 8-inch dia. pipe along northern branch of Willow Grove Road, parallel to cut off slough	-	-	-	-	-	-	\$1,580,000	-
LD-09 – Install 8,000 LF of 8-inch dia. pipe on Harmony Drive	-	-	-	-	-	-	\$1,080,000	-
LD-10 – Install 4,060 LF of 8-inch dia. pipe on Moilanen Road	-	-	-	-	-	-	\$547,000	-
LD-11 – Install 7,000 LF of 8-inch dia. pipe on Coal Creek Road/Ragland Road within Upper Coal Creek Zone 502	-	-	-	-	-	-	\$941,000	-
LD-12 – Install 1,400 LF of 8-inch dia. pipe on Clark Creek Road.	-	-	-	-	-	-	\$188,000	-
LPS-01 – Install a 250 –gpm pump at Hillcrest Pump Station	-	-	-	-	-	-	-	TBD
LPS-02 – Construct booster station on Moilanen Road	-	-	-	-	-	-	-	TBD
RTP-01 – Project Report and Pilot Testing, including evaluation of a Ranney collector system	Growth 25%	\$169,600	-	-	-	-	-	-
RTP-02 – Phase I RWTP Improvements	Growth 25%	-	\$2,070,000	\$2,200,000	-	-	-	-
RTP-03 – Phase II RWTP Treatment Plant Improvements Study	Growth 75%	-	-	-	-	-	\$113,000	-
RTP-04 – Phase II RWTP Improvements: Increase raw water pipe size, improve pipe gallery, replace or repair intake screens and sludge collector device	Growth 75%	-	-	-	-	-	-	\$3,280,000

Notes: LF = Linear Feet; PS = Pump Station

Source: 2005 Comprehensive Water System Plan Update Longview- Kelso Urban Area.

The lagoon treatment process is less expensive to operate and maintain than the activated sludge secondary treatment process performed at the CWPCP. However, lagoons consume large areas of land, which can be a limitation to expansion; local weather conditions hinder their performance; and increasing water quality standards frequently require post-lagoon treatment to meet discharge standards.

Due to increasing discharge permit requirements and concerns about water quality in the receiving waters, the West Longview Lagoons must be upgraded to comply with water quality standards. Furthermore, water quality impairments in the receiving waters and increasingly more stringent discharge permit requirements make it uncertain whether the Lagoons treatment system can be retained without significant post-lagoon treatment and relocation of the effluent discharge location.

More detailed information on the wastewater treatment and collection system serving Longview can be found in the “Final Existing Conditions Report” (June 2005). The Longview Sewer Plan Update is currently underway. It is expected to be finished in mid-2007 and will address the broad range of issues facing Longview, including the West Longview Lagoons. Table 7-8 provides a summary of the planned facility improvements including replacement projects for pump stations, as well as the transmission and distribution systems.

In addition to long-term sewer planning, the Public Works Department is considering developing regulations that would address discharges of fats, oils, and grease into the wastewater collection and treatment system, such as by restaurants.

### *Stormwater System*

Longview’s stormwater drainage system consists of natural (e.g., rivers, creeks, sloughs) and artificial (e.g., curbs, gutters, pipes, ditches) drainage ways and facilities that hold and convey surface water by gravity flow or pumping. Longview faces a continuing need to maintain and improve the drainage facilities to manage increased runoff. Most runoff in Longview must be pumped to the Cowlitz and Columbia rivers and the underground storm drain systems in some areas are not sized to handle the increased runoff that results from new development that have increased the amount of impervious surfaces.

Table 7-8. Sewer System Capital Facility Improvements

Project Description	Growth Project	Cost						
		2006	2007	2008	2009	2010	2011	2012–2025
PS Upgrade – Mint Farm	-	-	-	-	-	-	-	-
SCADA Modifications	-	\$100,000	\$100,000	\$100,000	\$100,000	\$150,000	\$150,000	-
S15 / PS Rehab – OB4	-	-	-	\$800,000	-	-	-	-
S14 / PS Rehab – OB3	-	-	-	\$650,000	-	-	-	-
S12 / PS Rehab – OB1	-	-	-	\$790,000	-	-	-	-
(Future) PS-WL-29, OB2	Growth 100%	-	-	-	-	-	-	\$700,000
(Future) Grid Upsizing	Growth 100%	-	-	-	-	-	-	\$1,500,000
Annual Main Replacement	-	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$220,000	-
West Longview I/I	-	-	-	-	-	-	\$100,000	-
GIS Data Conversion	-	-	-	-	-	-	-	-
Road Reconstruction	-	\$250,000	\$100,000	\$100,000	\$100,000	\$200,000	\$220,000	-
Emergency Power	-	-	\$50,000	\$60,000	\$60,000	\$60,000	\$65,000	-
West Longview Facilities Study	-	\$320,000	-	-	-	-	-	-
S8 / PS Rehab – 3185 Ammons	-	-	-	-	-	-	-	-
S29 / PS Rehab – 3263 Washington Way	-	-	-	-	-	-	-	-
Operations Center Reroofing Project	-	-	-	-	-	-	-	-
W. Longview GSP/FP (Adding E. Longview)	-	\$200,000	-	-	-	-	-	-
Middle School Oversizing	-	-	-	-	-	-	-	-
S5 / PS Rehab – 4422 Pennsylvania Ave	-	\$361,000	-	-	-	-	-	-

Project Description	Growth Project	Cost						
		2006	2007	2008	2009	2010	2011	2012-2025
S10 / PS Rehab – 2600 42nd Avenue	-	-	\$300,000	-	-	-	-	-
S23 / PS Rehab – 2256 48th Avenue	-	\$365,000	-	-	-	-	-	-
West Longview Treatment Facility	-	-	\$1,000,000	\$10,000,000	\$9,000,000	-	-	-
30th Avenue Liner – Continuing Phases	-	\$138,000	\$145,000	\$153,000	\$161,000	\$170,000	-	-
Comprehensive Plan (Sewer Portion)	-	-	-	-	-	-	-	-
Annual LID Projects	-	\$20,000	\$25,000	\$25,000	\$30,000	\$40,000	\$40,000	-
S9 / PS Rehab: 2310 42nd Avenue	-	\$365,000	-	-	-	-	-	-
30th Avenue Improvements	-	-	-	-	-	-	-	-
S33 / PS Rehab – 1025 33rd Avenue	-	-	-	\$250,000	-	-	-	-
PS Rehab – Bailey	-	-	-	-	-	\$500,000	-	-
S6 / PS Rehab – 2401 46th Avenue	-	-	\$350,000	-	-	-	-	-
S2 / PS Rehab – 4007 Pacific Way	-	-	\$175,000	-	-	-	-	-
S30 / PS Rehab – 1524 33rd Avenue	-	-	-	\$350,000	-	-	-	-
S4 / PS Rehab: 2402 38th Avenue	-	-	-	\$350,000	-	-	-	-
S11 / PS Rehab – 4014 Oak	-	-	-	\$150,000	-	-	-	-
PS Rehab – Hudson	-	-	-	-	-	-	\$500,000	-
S20 / PS Rehab – 5501 Finch	-	-	-	-	\$200,000	-	-	-

Project Description	Growth Project	Cost						
		2006	2007	2008	2009	2010	2011	2012-2025
S21 / PS Rehab – 2401 50th Avenue	-	-	-	-	\$200,000	-	-	-
S22 / PS Rehab: 5343 Oriole Street	-	-	-	-	-	\$200,000	-	-
S17 / PS Rehab – 4711 Merlin	-	-	-	-	-	\$200,000	-	-
S7 / PS Rehab – 2725 32nd (Pershing)	-	-	-	-	-	\$200,000	-	-
S36 / PS Rehab – 2566 Corman Road	-	-	-	-	-	\$200,000	-	-
S37 / PS Rehab – 920 7th Avenue	-	-	-	-	-	\$200,000	-	-
Croker Avenue Extension – MF Phase 1	Growth 100%	\$155,000	-	-	-	-	-	-

Source: 2006 Sewer Rate Model from City of Longview's Utilities Administrator, Gregg Hannon.

The Consolidated Diking Improvement District No. 1 (CDID No. 1) is responsible for operating and maintaining the major ditches and pump stations serving Longview. In the early 1980s, CDID No. 1 completed major master planned projects, including new pumps, booster stations, and raising dike heights, which significantly improved storm drainage. In 1995, CDID No. 1 constructed an additional pump station near 3rd Avenue. A continuing drainage capacity issue is the conversion of ditches into culverts. Culverts lower the capacity of ditches to retain stormwater, thereby necessitating greater pumping capacity or increasing flooding potential in the vicinity of the culvert. Culverts should be constructed only when necessary and should be done with the addition of pumping capacity or the provision of reservoir storage elsewhere.

The boundaries of CDID No. 1 encompass the lowlands of Longview and adjacent unincorporated areas but not the upland areas of the watershed, even though they generate storm runoff that must be handled by CDID No. 1. The district is operated with funds from property tax levies within the district. Upland residents, since they are not in the district, pay nothing for CDID No. 1 stormwater management, though they are part of the watershed. As an example, the boundaries of the Lexington Flood Control Zone District were changed in 1981 to incorporate upland areas of that watershed. In 1999, the City adopted a stormwater utility to provide revenue to fund drainage maintenance activities and to manage the City's compliance with pending stormwater regulations. These funds cannot, however, be used to fund CDID No. 1 activities and have not resolved the inequities between lowland and upland residents' burden to pay to manage runoff.

In 1999, the City adopted a drainage and erosion control ordinance to reduce the volume of runoff and amounts of sediment and pollutants discharged from newly constructed developments.

In 2003, to comply with federal Clean Water Act regulations that became effective for urban areas with less than 100,000 in population, the City applied for a National Pollutant Elimination Discharge System (NPDES) Phase 2 Stormwater permit for its municipal drainage system. The City expects to receive its permit in late 2006. The NPDES Phase 2 permit will likely require the City to adopt more stringent stormwater detention and water quality requirements, and to apply those to any development or redevelopment activity, regardless of the amount of new impervious surfaces created. These new requirements should reduce the demand for capacity in the drainage system, but they will also negatively impact a property owner's ability to maximize productive use of the property because of the space needed to address stormwater issues.

Additionally, segments of the CDID No. 1 drainage ditches have been identified by the Washington State as impaired water bodies, meaning that they have one or more pollutants exceeding State water quality standards. The State is required to conduct a

Total Maximum Daily Load (TMDL) study of the impaired ditches to determine the amount of pollutants that the ditches may receive and still meet water quality standards. The TMDL may result in regulations to implement a cleanup plan that may further restrict or control the volume and water quality of runoff, as well as other activities that increase pollutants in the ditches.

Table 7-9 lists planned facility improvement projects for the City’s stormwater system through 2009.

Future development will be affected by and will need to address storm drainage issues and requirements based on the specific characteristics and design of the new development. However, this is not expected to prevent growth from occurring.

**Table 7-9. Stormwater System Capital Improvements**

Stormwater Utility Fund – CIP	Cost						
	2006	2007	2008	2009	2010	2011	2012–2025
Mint Valley Pump Station Upgrade – Design/Construction	\$265,000	-	-	-	-	-	-
Annual Stormwater Projects	\$50,000	\$50,000	\$50,000	\$50,000	-	-	-

Source: 2005/2006 Budget Capital Improvement Program

### *Solid Waste*

Longview contracts with Waste Control, Inc. to provide solid waste and recycling collection within the City limits. Weekly collection of garbage is the minimum mandatory level of service for all residents and businesses in Longview. Solid waste disposal within Longview has increased by annual average rate of 1.14% since 1997.

The Cowlitz County Landfill is expected to reach capacity by February 2013. Upon closure of the Cowlitz County Landfill, transfer facilities will be needed for temporary waste storage before waste is shipped out of the County for disposal. The Cowlitz County landfill currently provides a convenient disposal site for solid waste, allowing it to be hauled directly to the landfill without the need for a transfer facility. However, due to economic and competitive pressure and the limited capacity remaining at the Cowlitz County Landfill, Waste Control, Inc. plans to construct a transfer station to handle solid waste at 1150 3rd Avenue in Longview.

Longview contracts its recycling collection and sorting services to Waste Control, Inc. Weekly recycling collection is mandatory for all residents; commercial recycling is not mandatory, but for an additional fee commercial customers may request recycling service for selected commodities. Since 1997, recycling in Longview has increased by an annual average rate of 4.67%. Longview plans to increase its recycling rate by 1% annually, and add a yard-waste recycling program, if feasible.

Longview has entered into an agreement with Cowlitz County to be involved in a joint City/County Solid Waste Management Plan and has been a participant since adoption of the first plan in 1972 (subsequent updates were in 1984 and 1993).

## Public Facilities, Utilities, and Services Goals, Objectives and Policies

**Goal PF-A** Ensure that public facilities and services are provided, operated, and maintained in an effective and efficient manner.

### General Government

**Objective PF-A.1** Conduct long-range capital improvements programming and financing through comprehensive plans for land use, parks, and utilities to ensure that facilities and services are available to meet future needs and that existing facilities and services are maintained and improved. Regularly update these plans no less frequently than every 7 years when the Comprehensive Plan is reviewed. Implement long-range plans through the annual Capital Improvement Program and the biennial budget processes.

**Policy PF-A.1.1** Design and construct public facilities and services to handle the anticipated growth of the City and Planning Area, and to minimize future maintenance and repair costs.

**Policy PF-A.1.2** Evaluate the ability of the City to maintain public facilities and services during review of proposed new development, such as through the land use and environmental permitting processes.

**Policy PF-A.1.3** Monitor implementation of the Capital Improvement Program against the rate of growth and development to determine whether adequate public facilities are being provided. If adequate facilities and services are not available, then the land use element, levels of service, or revenue sources may be adjusted accordingly.

**Policy PF-A.1.4** Consider impacts on future City development and land use patterns due to the timing and location of new facilities and existing facilities improvements.

**Policy PF-A.1.5** Maintain the area classified as civic center on the Land Use Plan Map as a principal site for government and professional offices.

- Policy PF-A.1.6 Continue to remove barriers to public facilities for persons with disabilities to meet Americans with Disabilities Act requirements.
- Policy PF-A.1.7 Continue to play a strong role in the regional community and advance intergovernmental coordination, planning, and sharing of public facilities and services.
- Policy PF-A.1.8 Closely coordinate planning for the siting and improvement of sewer, water, road, educational and other public facilities not within the City’s immediate authority with other special districts and service providers.
- Policy PF-A.1.9 Continue to evaluate projects considered for the Capital Improvement Program based on community need, efficiency and durability, health and safety concerns, and availability of funding sources, including the opportunity for grants/loans.
- Policy PF-A.1.10 Analyze, develop, and apply policies or regulations addressing SEPA mitigation fees to help fund public facilities necessary to serve growth, including but not limited to roads, parks, libraries, schools, and fire suppression. Prepare the analysis and policies or regulations as appropriate by December 2008.
- Policy PF-A.1.11 Finance the 6-year Capital Improvements Program within the City's financial capacity to achieve a balance between available revenue and needed public facilities. If the projected funding is inadequate to finance needed public facilities based on adopted level of service standards and forecasted growth, the City could do one or more of the following:
- lower the level of service standard,
  - change the Land Use Plan,
  - increase the amount of revenue from existing sources, and/or
  - adopt new sources of revenue.
- Policy PF-A.1.12 Continue to apply for all available State and federal grants and other funds to assist development and improvement of public facilities and services.
- Policy PF-A.1.13 Ensure that the ongoing operating and maintenance costs of a public facility are financially feasible prior to constructing the facility.

## Parks

**Objective PF-A.2** Reserved for inclusion of pending Parks Plan.

**Policy PF-A.2.1** Reserved for inclusion of pending Parks Plan.

## Public Safety

**Objective PF-A.3** By December 2007, study the feasibility of a joint public safety building for police and fire services to serve as the headquarters for these departments.

**Policy PF-A.3.1** Continue to enhance the levels of police and fire protection and to meet the needs identified by these departments.

**Policy PF-A.3.2** Maintain mutual aid agreements with other cities and counties in the region and respond accordingly to requests.

**Policy PF-A.3.3** Participate in regional emergency management programs.

**Objective PF-A.4** Match the level of police services to the public safety needs and conditions of the Longview community. As part of the biennial budget, work toward achieving a police level of service at the U.S. average ratio of one officer per 565 citizens.

**Policy PF-A.4.1** Expand police services and facilities in conjunction with new growth and/or changes in crime rates and community needs. Priority areas include, but are not limited to West Longview and Highlands.

**Policy PF-A.4.2** Provide proactive response and investigation to reported crimes or other such requests for police services.

**Objective PF-A.5** By December 2009, include “Crime Prevention through Environmental Design” components in site design guidelines or regulations for new development in coordination with Objective LU-C.1. Where appropriate, techniques may include promoting mixed-use development, visibility of activity areas from surrounding residences and uses, increased pedestrian-level lighting, use of low fences, see-through landscaping, visible building entrances, and other techniques. Ensure appropriate training for public safety and/or planning personnel to implement the design guidelines/regulations.

**Policy PF-A.5.1** Encourage crime prevention and education programs or activities that stimulate neighborhood cohesiveness such as Neighborhood

Watch programs, community clubs, and others. Provide speakers or demonstrations as requested by community groups.

**Policy PF-A.5.2** Provide special programs, such as officers in the schools, to respond to community needs.

**Objective PF-A.6** Establish and maintain levels of service that meet the fire suppression and emergency medical needs of the Longview Community. Implement a level of service equal to a 6-minute response time 90% of the time. Measure the level of service periodically as part of the Fire Department’s annual reports and consider service and facility needs at the time of the biennial budget.

**Policy PF-A.6.1** Provide and maintain fire suppression and medical response services that meet Longview community needs.

**Policy PF-A.6.2** Provide public education and fire prevention programs to reduce risk of fire and need for emergency medical response.

**Objective PF-A.7** Evaluate the need for fire suppression and EMS services and facilities in West Longview in conjunction with Cowlitz County Fire and Rescue District 2. Adopt the joint plan through the City and District when completed. Implement plan recommendations for the City of Longview Fire Department through the biennial budget.

**Policy PF-A.7.1** Work with other fire and rescue jurisdictions to coordinate fire related activities such as training, hazardous spill response, inspections and plan review as feasible, particularly in the City’s Planning Area.

## Education

**Objective PF-A.8** Support Longview School District and Longview Community College master plans and capital improvement and education programs. In conjunction with the review of the Longview Comprehensive Plan as provided in Objective LU-A.1, no less frequently than every 7 years, provide updated growth projections to the Longview School District and Lower Columbia Community College to assist in their planning needs.

**Policy PF-A.8.1** Coordinate with Longview School District staff as the District prepares its capital improvement programs. If student enrollment increases, determine if adjustments in SEPA

mitigation fees are appropriate, in coordination with Objective PF-A.2.

**Policy PF-A.8.2** Promote convenient and safe access to public schools, through transportation capital improvements in developed areas and through review of new development for transportation and education impacts.

**Policy PF-A.8.3** Work with the Longview School District and Lower Columbia Community College to foster a well-trained and -educated work force, such as attracting four-year college programs to Longview.

**Objective PF-A.9** Strive to achieve and maintain a library level of service at the 2005 Washington State Average:

- Paid full time equivalent staff per 25,000 persons in service area: 13.8
- Paid FTE Librarian per 25,000 persons in service area: 5.2

Assess the level of service with the biennial budget.

**Policy PF-A.9.1** Provide a high level of public library services adequate to meet the needs of a growing community and changing technology.

**Objective PF-A.10** Maintain and expand library capital facilities as needed based on community needs and growth. Capital facility needs and costs should be included in the annual Capital Improvement Program and addressed in the biennial budget.

**Policy PF-A.10.1** Add a branch library in the Highlands vicinity. Make efficient use of existing public facilities, such as co-location with the Highlands branch police station.

**Policy PF-A.10.2** Study the need for an expanded library facility or branch facility in West Longview.

**Policy PF-A.10.3** Expand the main branch based on population growth.

**Goal PF-B** Maintain and enhance the current high standard of sewer and water service, storm drainage, recycling, and solid waste collection in the City.

## Water

**Objective PF-B.1** Implement the approved Water System Plan for the Longview-Kelso Urban Area, through inclusion in the City

Capital Improvement Program and biennial budget as appropriate.

- Policy PF-B.1.1 Provide sufficient potable water in the future for peak day demand. Measures to provide sufficient water treatment capacity include expanding the plant, implementing water conservation measures, and increasing treatment plant operating hours.
- Policy PF-B.1.2 Support the Water System Plan’s conservation target of 3% as recommended in the Plan.
- Policy PF-B.1.3 Ensure system additions are built to standards in anticipation of future growth.
- Policy PF-B.1.4 Plan for capital facility expansion and improvements to increase fire flow as development occurs on the hillside areas.
- Policy PF-B.1.5 Continue to work with the City of Kelso, industry, and federal and State agencies to plan for water service contingencies and emergencies relating to the potential impacts of Mount St. Helens eruptions on the Cowlitz River.
- Policy PF-B.1.6 Continue the Water Service Area Agreement between Longview, PUD, and Kelso whereby the three agencies can share each other’s facilities when necessary.

## Sewer

- Objective PF-B.2 Complete the General Sewer Plan by the end of 2007. Implement the approved plan through inclusion in the City Capital Improvement Program and biennial budget, as appropriate.
- Policy PF-B.2.1 Ensure that sewer lines and related facilities needed to serve new development are the responsibility of the developer or, in some cases, provided through a local improvement district.
- Policy PF-B.2.2 Continue rehabilitating sewage collection systems to reduce infiltration and inflow as recommended by the General Sewer Plan to ensure that wastewater treatment systems are used efficiently and their design lives extended.
- Policy PF-B.2.3 Determine needed improvements to the West Longview Lagoon System. Improvements may involve upgrading the Lagoons, replacing the Lagoons with another treatment process, or

abandoning treatment at that location and conveying all wastewater to the Cowlitz Water Pollution Control Plant.

- Policy PF-B.2.4 In the General Sewer Plan, identify additional collection system improvements needed to serve the projected growth in the Longview service area.
- Policy PF-B.2.5 Enhance or reinforce regulations that address discharges of fats, oils, and grease into the collection and treatment system.

## Storm Drainage

- Objective PF-B.3** Respond to National Pollutant Discharge Elimination System permit requirements regarding stormwater detention and water quality requirements after the permit is issued. The permit is expected in 2007.
- Policy PF-B.3.1 Continue to work closely with Consolidated Diking District No. 1 to ensure adequate drainage and flood protection and control of weeds, rats, mosquitoes, and other public safety hazards relating to ditches and sloughs.
- Policy PF-B.3.2 Allow culvert construction only when necessary and in a manner that does not reduce the reservoir function of ditches.
- Policy PF-B.3.3 Continue efforts to establish an urban area drainage district, in order for upland areas to assist lowland areas in the cost of surface drainage management.
- Policy PF-B.3.4 Maintain the City stormwater utility to provide revenue to fund drainage maintenance activities and to manage the City's compliance with stormwater regulations.
- Policy PF-B.3.5 Require developers to construct storm drainage improvements directly serving the development, including any necessary off-site improvements. Require that storm drainage improvements needed to serve new development are built prior to or simultaneous with such development. Ensure that stormwater facilities required of new development are designed and built for low-cost, long-term maintenance.
- Policy PF-B.3.6 Require developers to consider aesthetics as well as functional requirements in designing surface water facilities. Encourage developers to include multiple-use surface water facilities in their developments. Consider recreational, habitat, educational, cultural, open space, and aesthetic opportunities.

- Policy PF-B.3.7 Emphasize the proper installation and maintenance of erosion control measures in association with all construction activities.
- Policy PF-B.3.8 Maintain and update as necessary City drainage and erosion control ordinances to reduce the volume of runoff and amounts of sediment and pollutants discharged from newly constructed developments.
- Policy PF-B.3.9 Promote the establishment of regional surface water management facilities to support infill development and preclude the need for individual on-site ponds and facilities, provide development incentives, encourage efficient use of land, and reduce overall facility maintenance costs.
- Policy PF-B.3.10 Protect and enhance existing flood storage and conveyance functions and ecological values of floodplains, wetlands, and riparian corridors.
- Policy PF-B.3.11 Where feasible, retrofit existing roadways with facilities to enhance water quality and reduce peak flows as roadway improvement projects are completed.
- Policy PF-B.3.12 Promote the installation of newer storm drainage methods at the time of home remodels through educational materials.

## Solid Waste

- Objective PF-B.4 Continue the County/City partnership in the joint Comprehensive Solid Waste Management Plan. Participate in the periodic Solid Waste Master Plan Update.
- Policy PF-B.4.1 Continue to provide efficient solid waste collection and to participate in efforts to improve the regional solid waste management system.
- Policy PF-B.4.2 Promote recycling by residents and businesses through a curbside recycling program and recycling centers.
- Policy PF-B.4.3 Ensure that new or reclaimed or continuing solid waste facilities located in the City minimize potential environmental impacts to air quality, water, and other natural systems, and provide for reclamation plans.