CAPITAL FACILITIES APPENDIX

WATER

Service Area

Orting's water system is described as a small Group A system. It has four service areas, Harman and Wingate Springs, Central Business District, Northend and west of the Puyallup River along the Orting Kapowsin Highway.

Water Demand

Current Water Demand - As of December 2002, there were 1,627 metered connections in the City's water system. For water demand calculations, the metered connections are converted to Equivalent Residential Units (ERUs) to account for non-residential services. The 1627 connections are equivalent to 1,780 ERUs. In addition to the metered connections, unaccounted water in Orting's system is estimated to be 441 ERUs. One ERU is equivalent to 220 gallons per day per connection for average use and 506 gallons per day per connection during peak day events. Community water usage exceeds 900,000 gallons per day during peak events.

Projected Water Demand - Future water demands are calculated by multiplying projected population estimates from the land use element by system ERUs for average and peak day demands. Because the types and extent of anticipated land uses do not differ substantially from the existing types of land uses, it is assumed that future water use patterns will not differ substantially from existing demands. Table 1 presents projections of future water demand.

Table CF-1
Projection of Future Water Demands

Year	Projected Household (Equivalent Residential Connections)*(1)*	Average Daily Water Demand (gallons per day)	Maximum Daily Demand (gallons per day)
2007	2,812	669,000	1,472,000
2012	3,523	838,000	1,844,000
2017	4,139	985,000	2,167,000
2022	4,879	1,161,000	2,555,000

(1) Population based on County-wide allocation, and on a 2.5-person household size

Water Supply

Table 2 describes the proposed improvements to water sources for each service area. Based on the allowable capacity of the sources (the lesser of physical source capacity or water rights), the City's sources are currently capable of delivering instantaneous

flow of up to 997 gpm and annual flow of up to 916 acre-feet. The current system allowable capacity is adequate for the current and projected population to the year 2007. The current allowable capacity does not include water rights for Well No.3 totaling 650 gpm instantaneous and 187.3 acre-feet annually. The City is in the process of designing the third well. Assuming physical capacity of Well No. 3 matches the water rights, the City would have adequate instantaneous and annual water source capacity for the 20 year planning horizon (through the year 2022). Table 3 illustrates the water rights, physical capacities and allowable use capacity of the City's water sources

Table CF-2
Inventory of Water Sources

Service Area	Source	Improvements	Distribution System
Wingate & Harman Springs	Wingate & Harman Springs	Corrosion Control Improvements	6-12" wrapped steel, ductile iron,and asbestos-cement pipe
CBD	Wells #1 & 2 Wingate & Harman Springs	Filtration Plants at Wells #1 and 2	2-12" wrapped steel, ductile iron, and asbestos-cement pipe
Northend	Wells #1 & #2 Wingate & Harman Springs	Filtration plants & Well #3 Storage Tank	6-12" ductile iron and PVC pipe
West of Puyallup River	Not currently served	12 Supply line across Puyallup River Bridge	None existing

Table CF-3
Capacities of Water Sources

Source	Production Rate (GPM)
Well #1	500
Well #2	175
Harman Springs	72
Wingate Spring	250
Boatman Springs	0
TOTAL	**997**

Water Storage and Transmission

The total existing water storage capacity of the Orting water system is 958,600gallons. Each of the four spring sites is equipped with a concrete reservoir storage tank with capacities as follows: Lower Harman (190,000), Upper Harman (92,700), Wingate

(125,900) and Boatman (57,300). The lower Harman reservoir was replaced in 2003 with a 190,000 gallon tank to account for storage losses at the Boatman facility. Boatman Springs has been disconnected from the distribution system and currently serves just a few homes. Well #1 has a 550,000 gallon concrete reservoir.

One of the most serious problems with the water system is the leaking of primary transmission pipes. These pipes carry municipal water from the wells and spring sites to the city's customers. The unaccounted water (the difference between quantities of water read at the source meters and consumers' meters) requires considerable city crew time to repair leaks and represents lost revenue potential for future connections. The City has initiated an annual leak detection program in an effort to reduce the quantity of unaccounted water.

Water Quality

The water supply is chlorinated at all of the sources and is carefully monitored in accordance with State Department of Health standards.

Needs

The Orting water supply was analyzed on the basis of available storage and the ability of the system to supply fire flows as well as providing domestic needs. .

Existing water rights will be adequate for supplying water for the demands of projected populations. The system is capable of supplying fire flow requirements for single occurrence residential and commercial fires.

The Capital Facilities Program (Table 6) contains specific water system improvements that have been identified in the water utility master plan. In addition, the plan identifies the need for additional operation and maintenance staffing. The capital improvement projects include:

- Well No. 1 Filtration Plant
- Well No. 2 Pump Upgrade, Filtration Plant, and Emergency Generator
- Wingate Springs Improvements (including Corrosion Control and Emergency Generator)
- (New) Well No.3
- Harman Springs Corrosion Control
- Tacoma System Intertie
- Northend Reservoir
- Orville Road Main
- Wingate Main
- Northend Distribution Loop
- Downtown Main Replacement
- 178th Avenue Loop
- Orting Southern Road Main Extension
- Telemetry System

Wastewater

Existing Collection System

Orting's collection system ranges in age from the 1943 “old town” lines to new lines installed in recent subdivisions. The sewer system serves virtually all of the commercial and residential property in the city. As of December 2002, the City’s sewer system had 1776 physical connections which is equivalent to approximately 1937 ERUs based upon flow and loading data observed at the wastewater treatment plan (WWTP). Recent WWTP design capacity analysis has determined that the City will need to complete the planned phase II expansion before 2006 to provide service to the projected population. The system service area covers about 800 acres including the High Cedars golf course community located outside the City limits. At the present time there are no industrial users of the system.

The general slope of the Orting planning area is from the southeast to the northwest, towards the treatment plant. The northern and western portions of the area slope away from the existing treatment plant, creating a need for the pumping of sewage.

The city has five pumping stations One, located at the intersection of Calistoga Street W. and the Puyallup River, serves the Soldiers' Home and that portion of service area south of the Puyallup River. The Soldier's Home, housing approximately 180 residents is the major commercial user in the area, ,.

The second pumping station serves the High Cedars Village and Golf Course and discharges to the city sewer system through a 3,100 foot 6-inch diameter forcemain. The system is designed to handle 300 connections in the High Cedars development. In 1996, the pump station had a total of 81 hookups. The Village Green, Village Crest, and Rainier Meadows pumping stations respectively serve those two developments.

Wastewater Treatment

The wastewater treatment plant serves all property within the City including the High Cedars Golf Club development and the Soldier's Home. The City and Pierce County have entered into an interlocal agreement that transfers the ownership, operation, and maintenance of the Cascadia UGA sanitary sewer service area, collection system, and wastewater treatment responsibilities from the City to the County.

Existing Deficiencies

The existing gravity collection system has a serious inflow and infiltration problem due to the aging infrastructure. Inflow is defined as surface water and storm sewer water entering the sanitary sewer system through leaks. The state Department of Ecology has directed the city to correct this problem. Immediate complete correction of infiltration and inflow is not financially feasible making gradual replacement and rehabilitation of the existing sewers the only economic alternative. Replacement and

rehabilitation of the existing sewers will take place systematically by removing areas of the system with the greatest inflow and infiltration problems first. The City has been working to reduce inflow and infiltration and plans to spend $114,000 each year on inflow and infiltration projects.

The treatment plant currently has enough capacity to serve a population equivalent of approximately 4,911 and plans to expand the facility to serve 9,351 population equivalents by 2006.

Effluent from the wastewater treatment plant currently discharges into the Carbon River just north of the plant through an outfall pipe located 8 feet above the river bottom. Due to concerns over river bar formation in the vicinity of the exposed outfall which prohibit the development of a submerged outfall this side bank discharge will be maintained for all phases of future expansion.

Solids from the treatment process are currently stored in a lagoon facility at the treatment plant site. The lagoon is nearing its storage capacity and will require dredging and disposal of the solids before the end of 2007. Dredging and disposal costs are estimated to be as much as $500,000.

Future Wastewater Flows

To project future wastewater flows for Orting, existing treatment plant flows and loadings as well as future collection systems have to be evaluated. Total wastewater flows are the sum of residential, commercial and industrial wastewater plus infiltration and inflow. The existing sewer flows are mainly a function of residential flows and infiltration and inflow; industrial and commercial flows are minimal, as described earlier.

The *City of Orting General Sewer Plan/Engineering Report Amendment (Parametrix, Inc., 2001)* details the methodology for projecting service area population equivalents within the City's urban growth area. Table 4 shows the current population, the wastewater treatment plant design population and the projected buildout population.

Table CF-4
Sanitary Sewer Service Area Population Equivalents*

Region	Population Equivalents		
	Current	Phase 1	Buildout
Residential	3,723	4,312	8,025
Commercial	107	370	915
High Cedars	110	229	475
Total	3,940	4,911	9,415

*Population Equivalent = one individual contributing a typical per capita flow and waste load to the treatment plant.

- Residential: 2.5 population equivalents per dwelling unit
- Commercial: 1,000 population equivalents per 7 acres; 2,000 gallons per acre per day; and 130 gallons per capita per day per population equivalent

- High Cedars: 110 existing dwelling units; 190 dwelling units at buildout, for planning purposes only. Actual service is not anticipated.

Source: Parametrix, Inc.

Water Reuse

Irrigation of nonfood crops is the least costly, most prevalent potential use of reclaimed water. Irrigation demand could be greater than the dry season maximum month effluent flow of the Orting wastewater treatment plant. Feasible irrigation uses of reclaimed water include Village Green and Whitehawk Parks, the Foothills Trail, school grounds, and irrigated areas within the Cascadia Planned Community. These uses are estimated to generate ultimate demand for 574 gpm on average and 1,150 gpm for the peak period. Water reuse facilities at the treatment plant and in the Orting Valley will be constructed by the City Sewer Utility. Facilities within the Cascadia Community will be constructed by the development corporation through a developer extension agreement. All facilities will be owned and operated by the City.

The Capital Improvements Program (Table 6) lists planned improvements to the wastewater and water reuse system that are planned for the next 14 years. These improvements include significant expansion of the wastewater treatment plant and the development of an extensive water reuse treatment and distribution system. The improvements will also include a facility to treat the solids from future wastewater flows so they can be disposed of more cheaply. Storage of the solids in the on-site lagoon will end as soon as the solids treatment facility is complete. These projects are largely driven by the agreement between the City and the Cascadia Development Corporation for wastewater services to be provided by the City to the Cascadia Planned Community. About $37 million worth of improvements are anticipated during the year 2020.

Storm Water

The Pierce County River Improvement's *Puyallup River Basin Comprehensive Flood Control Management Plan (1991)* refers to Orting as one of the "hot spots" in the study area which has experienced chronic flooding problems and is not adequately protected from the 100 year floods. If a flood on either the Puyallup or Carbon Rivers were to cause levee failure or change their course, they would usually flood and possibly erode adjacent high quality agricultural lands. Potential damage to urbanized areas in Orting is also high if the levees protecting these areas were to fail.
The *Puyallup River Basin Comprehensive Flood Control Management Plan* identifies the types of potential damage which could occur along the Puyallup River, including the inundation of residential and agricultural lands south of Orting; the inundation of over 100 single family residences plus a power substation in Orting; closure of Calistoga St.W., a major arterial in Orting; inundation of River Glen Campground, High Cedars Golf Course and agricultural lands northwest of Orting; and overtopping and possible closure of SR 162 between Orting and McMillan. Specific areas of potential damage along the Carbon River include minor inundation of vacant and agricultural land in Orting. The Management Plan recommends site specific alternatives to control the impacts of flood flows which could be implemented by

Pierce County River Improvement. The City will prepare a Flood Hazard Mitigation Plan in 2007-2008.

Because of State department of Ecology requirements for reducing non-point sources of pollution in Puget Sound, the City completed the Comprehensive Plan for the storm water system in 2002. The City's storm water utility collects fees based on storm water runoff created by impervious surfaces on each parcel within the city. These funds are used to construct needed storm water collection, detention, and treatment facilities. The City has also adopted the Department of Ecology's *Stormwater Management Manual for Western Washington, August 2005* edition as part of the Orting Municipal Code. All new and redevelopment must comply with the requirements and recommendations in the manual.

SCHOOLS

Orting Public School District No. 344 operates the city's elementary, middle and high school facilities. In June of 2003, the School District adopted the *Capital Facilities Plan for 2003-2008 (CFP).* The CFP contains an inventory of existing facilities; analysis of student enrollment trends; determination of level of service standards and future capacity demands; and construction and finance plans for proposed facility development. Since the adoption of the CFP, the District has constructed the first phase of Ptarmigan Ridge Elementary School located at 805 Old Pioneer Way NW. The following summarizes the CFP.

The District facilities include the following:

Orting Primary	316 Washington Avenue N.	Capacity 440
Ptarmigan Ridge Intermediate	809 Old Pioneer Way NW	Capacity 500
Orting Middle	121 Whitsell St.NE	Capacity 336
Orting High	320 Washington Avenue N	Capacity 427
District Administration	120 Washington Avenue N.	

Capacity figures do not include temporary or "portable" classrooms which are currently used to accommodate the population overflow.

These facilities are sited on 74 acres of land within the City limits. In addition, the District owns 100 undeveloped acres within the City limits and 20 acres of undeveloped land south of the City. A new middle school for 650 students is under construction and will open in 2009 on the west side of Washington Avenue N south of Ptarmigan Ridge Elementary. A new football stadium will be built on the middle school site.

Orting High School is currently constrained by the lack of teacher offices, physical education space, band/choir rooms, performing arts area and capacity in lunchroom space. The "old" Orting Middle School is constrained by the lack of regular classrooms, physical education space and library space, no performing arts area, lunchroom capacity, lack of a vocational classroom, and teacher planning space. This facility will be renovated for other uses following occupancy of the new middle school.

The District has forecasted enrollment trends for the next six years based on State Office of Public Instruction methods, and assuming that all residential projects for which mitigation agreements have been executed are completed. The forecasts also assume that new residential construction will generate an average 0.69 student per unit. The resulting forecasts for the Year 2005/2005 show elementary enrollment at 793; middle school enrollment at 495; and high school enrollment at 550. Beyond 2005, the forecast indicates that enrollment will increase by an additional 30% assuming a moderate rate of new residential development.

Using these forecasts and its adopted level of service standards of 80 square feet per elementary student, 110 square feet per middle school student, and 120 square feet per high school student; the District has identified a number of projects which are planned for the next six years. These include; replacement of the middle school, an addition to the current high school as well as the purchase of portable classrooms for all schools. Other improvements include construction of additional parking at the high school; new kitchen facilities and relocation of the District Administration headquarters and transportation facility. The following table summarizes the six-year capital facilities plan.

Table CF-5
Orting School District Capital Facilities Plan

PROJECT	ESTIMATED COST (2003 DOLLARS)
Renovate gym locker room	$1,938,250
Middle School Replacement	$17,680,000
High School Addition	$1,164,000
Portables	$263,000
Food Services (New Central Kitchen	$1,250,000
Transportation Facility	$4,130,000
TOTAL	$26,425,250

Financing School Facilities

The CFP identifies the funding sources for capital projects as bonds, levies, state matching funds, and impact mitigation fees. The City is currently collecting fees on behalf of the District from a number of residential projects which have been approved in recent years. The District, Pierce County and the City established a school impact fee system in 1997 which collects additional fees from new residential development aimed at providing needed facilities to house this growth. For current unmet needs, the District will rely on the other funding sources. A 2006 bond issue for $29,500,000 will fund the construction program and land acquisition for a new elementary school.

Libraries

In addition to schools, public libraries also offer education and recreational services to the community. The Orting public library, housed in the Multi-purpose Center is a branch of the Pierce County Library System. The existing facility was constructed in 1981, and has not been expanded since then. The library occupies approximately one-half of the floor area. The total building floor area is 6,000 square feet and the site area is 10,560 square feet – devoted to parking and an entry plaza.

Orting's library is one of the smaller branches in the Pierce County system, and is considered to have an adequate collection of books records, cd's, tapes, talking books, newspapers and magazines, although the recent growth in the service area is straining the facility. Since it is part of the Pierce County Library system, use of the facility is not limited to Orting residents. Many residents from the surrounding communities, such as Graham, South Prairie, Buckley and Sumner opt to use the facilities.

Preliminary analysis of library facility needs has been initiated and city/library system discussions are underway. This process will include an alternatives study of potential site and building locations and configurations for the library, community meeting facilities, and City Hall as well as parking to support these uses
.

Parks And Recreation

Orting’s close proximity to Mt. Rainier National Park the Gifford Pinchot National Forest and the wilderness areas surrounding the mountain offer Orting residents numerous recreation opportunities.

As of 2007, the City owns just under 100 acres of parks, trails and open space land. The usable parks are small neighborhood and mini-parks supporting passive recreation. Orting City Park is a focal point for the downtown area, providing picnicking facilities, playground equipment, a gazebo, horseshoe pit, and a bell tower. A proposed building will provide space for indoor events and markets. Charter Park, just south of downtown is a new facility designed for skateboarding. Several large new residential developments will include both public and private parks. Foothills Trail is an important recreational asset for the City and the surrounding community. Grazter Park is an undeveloped 21 acre site intended to be improved as a community park and habitat enhancement area.

The City has adopted a Parks, Trails, and Open Space Plan (PTOS). The PTOS identifies current resources, current needs, and forecast needs for the future. Level of Service standards for park land and facilities and trails have been established. Strategies for meeting the needs have also been identified. A parks impact fee has been implemented and is generating revenue for improvements. The supply of land and facilities addressing short-term needs are being addressed by the following:

- The phases of Village Green, approved in 2001 as part of a planned unit development include a 2.2 acre "village green", a 0.68 acre "trailside park", and 5 small "pocket parks". The village green and the pocket parks will be privately owned and maintained by the homeowners' association. The trailside park will be dedicated to the City. Further, the developer has proposed the future construction of a "community center" with indoor and outdoor recreation facilities that would be open to the public on a membership or fee basis.
- Development of the "Village Crest" area east of SR 162 involves dedication of wetlands, and possibly some usable recreation land as a natural resource area along the Carbon River.
- The "Hidden Harbor" planned development southwest of the Puyallup River adjacent to the Old Soldiers' Home has dedicated fully-improved parks, trails, and recreation facilities.
- A proposal has been made to construct a pedestrian bridge ("Bridge for Kids") across the Carbon River near the Village Crest development, primarily for emergency evacuation. This bridge and connecting trails would enhance the City/County trail system.

With these, the City's <u>current needs</u> are:

- A community park of sufficient size to accommodate several play fields and courts suitable for junior and adult league play; along with passive recreation, children's play area(s), picnic facilities, restrooms and off-street parking that can be used for community events and activities. This need will be fulfilled when Grazter Park is developed;
- Trail connections linking the Foothills Trail, the "Powerline Trail", and the proposed Carbon River bridges.

Future Needs

The City is expected to double in size in the next 15-20 years. Using the same LOS, this population would result in the following needs:

Table CF-7
Future Parks, Trails & Open Space Needs

PARK/FACILITY TYPE	2017 DEMAND	2007 SUPPLY	SURPLUS (NEED)

Mini-Parks	16 Acres	1.83 Acres	(14 Acres)
Neighborhood Parks	16 Acres	21.64 Acres	6 Acres
Community Parks	40 Acres	21.28 Acres	(19 Acres)
School-Parks		(limited)	N/A
Natural Resource Areas		48Acres	N/A
Greenways		19.92 Acres (14.28 Acres*)	?
Special Use Parks		1	(1)
Fields & Courts	~10 Fields	2 Ball fields	(4-5 Fields)
	~ 10 Courts	1 Basketball Court 3 Half Courts	(4-5 Courts)
Trails	8 Miles	1.5 (+1.7) Miles	(4 Miles)

* Puget Sound Energy powerline right-of-way

Most of these future needs should be addressed through developer dedications, facility donations, or impact fees. The Parks Plan should identify locations for future parks, trails and facilities to be funded by these sources. In laying this out, it is also very important to understand how operations and maintenance of new facilities will be funded. Typically, this is done through the general fund or sometimes levies and users' fees. Here too, partnerships need to be considered, using the resources of the school district to provide services, or having homeowners' associations take care of facilities within their communities. The Orting School District is developing additional sports fields in the Middle School project.

The City has adopted an impact fee ordinance, is planning for facilities on recently-dedicated lands and designation of a trails links to connect the existing system with the planned Carbon River pedestrian bridge, and is exploring a partnership with the Orting School District. These steps will result in a more definitive listing of parks, trails and open space improvements to be funded and developed in the next 6 years.

Police And Fire Protection

Police

The Orting Police Department operates with six full-time officers, supplemented with nine reserve officers and two in training. Full time personnel work ten hour days four days a week, ensuring that two officers are available at night during the peak hours. Currently, the department has achieved a ratio of 1.5 officers per 1,000 resident population, which is below the national average of 1.7 officers per 1,000 population. The Department's service area is limited to Orting city limits, but officers will respond to an incident outside of the city, as necessary. The Department strives to maintain an unofficial response time of three to four minutes. Should areas outside the City be annexed, a minimum of at least three full-time officers will need to be hired to maintain the Department's ability to adequately serve Orting residents.

Police facilities are located in the Public Safety Building on Washington Avenue SE between Hardefeldt and Olive Streets. The Department has six police vehicles. Orting shares the Buckley dispatcher with four other communities in the area, with jail facilities provided by Pierce County and the Cities of Puyallup and Buckley. In the

first eight months of 2000, Orting police responded to 1,557 calls, compared to 1,972 in 1999, 1,988 in 1998, 1,908 in 1997 and 2002 in 1996.

Fire Protection

The Orting Fire Department, along with Pierce County Fire District 18, provides fire protection services to Orting and the Orting Valley. The Orting fire station is located in the Public Safety Building on Washington Avenue SE. District 18 has a fire station located on Patterson Road. The Fire Department is comprised of 2 full time employee, the Fire Chief, and approximately 44 volunteer fire fighters. The number of emergency medical training held by volunteers is excellent for the department's size. Thirteen of the volunteers have Emergency Medical Training certification, two of which are paramedics, and four volunteers are First Responders. The primary disadvantages of the City and County relying on volunteer fire fighters instead of permanent employees is reduced response time and availability of personnel, especially at night. The City has a new medical aid vehicle, one command vehicle and one engine with 1,000 gallon tank capacity. The District also has a 20-year old 2,800 gallon tanker and two rescue vehicles. The construction of the reservoir and booster pump station at Well Number One provides adequate fire flow to fight simultaneous fires in the lower pressure zone. Fire flow is not adequate in the upper pressure zone.

Orting has a Fire Insurance Rating classification of seven on a scale that ranges from one to ten, with one being the highest. This low rating was determined in 1981 based on existing manpower levels and physical facilities. At that time, the fire department was self-dispatching and the water systems were not considered adequate to provide the necessary fire flows. The City is attempting to get a more current rating which would reflect recent improvements, such as 911 emergency services and an increase in water storage capacity. The Fire Insurance Rating for the area outside the City in District 18 is eight.

One other issue is the adequacy of the fire station facility in terms of its ability to house and service fire engines and other equipment, as well as to provide a "sleeper program" should the City decided to hire permanent fire fighting staff. The City should consider either expanding the station facilities or moving the station to another location.

City Administration

The Orting City Hall located at Varner Avenue and Train Street was constructed in the 1920s, and up to 2007 housed the Orting Fire Department as well as city administration functions. The building area is 6,000 not including the loft area over the truck bays. The site area is 9,000 square feet. The administration area has been remodeled to accommodate growing space needs for additional staff. The former council chamber has been converted to offices and conference areas. The City Council, municipal court, and boards and commissions meet in the Community Building. Preliminary space needs analyses indicate that about twice as much space will be needed to accommodate increased demand on the administration created by population growth.

Bridge For Kids

A local private organization has proposed the construction of a pedestrian bridge across the Carbon River with a grade-separated SR 162 crossing and links to pedestrian trails on the east side of the River. This project is intended to provide an emergency evacuation route for children from the Orting schools as well as others. Pierce County has completed a preliminary engineering study for the sponsors, funded by a state grant. Efforts are underway to raise further grants from state and federal sources.

CONCURRENCY

The purpose of the Capital Facilities Element is to determine the availability of existing capital facilities, forecast future needs for such facilities based upon the projected growth in the community, and determine how such facilities will be financed. Future needs should also be based not only upon the projected growth of the community, but also maintaining a locally determined level of service to be provided by those facilities. This concept of maintaining level of service standards throughout the planning time frame is a key goal of the Growth Management Act. Goal 12 of the Act states that those public facilities and services necessary to support development shall be adequate to serve the development at the same time the development is available for occupancy and use without decreasing current service levels below locally established minimum standards. This concept is known as "concurrency," and it applies to transportation facilities and to a locally defined list of additional capital facilities.

Locally established standards are referred to as "level of service standards (LOS)," and are a method of measuring the quality or quantity of service provided by a facility. Policy CF 3.43 of the Capital Facilities Element establishes the City's adopted LOS.

CAPITAL FACILITIES FINANCING

The six-year capital facilities plan includes improvements that the comprehensive plan elements indicate are necessary, along with potential funding sources. In order to identify these potential funding sources, it is important to review how capital improvements have been financed in Orting in the past.

Orting does not typically allocate general fund revenues for large capital projects. Rather, these projects are funded through bond issues, state and federal grants, and revenues from enterprise funds, such as water, sewer and solid waste fee revenues. Over the past three years capital projects have been financed primarily through federal and state grants, and revenues from the Motor Vehicle Tax.

Financing Sources

The funding sources identified below are potential long-term choices that may be available to the City for major capital improvement projects. The sources will depend on the status of the City's existing financial commitments, capital required, cash flow requirements, source availability, and whether the source is acceptable to the customers. Any package selected must provide sufficient revenue to construct system improvements as well as satisfying any debt services. The following section will describe the several funding sources available to the City without reference to any specific project.

Revenue Bonds - The most common source of funds for construction of major capital improvements is the sale of revenue bonds. The tax-free bonds are issued by the City. The major source of funds for debt service on these bonds is from user charges to the individual utility customers. The major advantage of revenue bonds is that they protect the general obligation debt capacity for other projects.

The City is capable of issuing tax exempt bonds up to a 20-year term without public vote. In order to qualify to sell revenue bonds, the City must show that its net operating income (gross income less expenses from the utility) is equal to or greater than 1.4 times the annual principal and interest payments due for all outstanding bonded indebtedness. This 1.4 factor is commonly referred to as the coverage factor and is applicable to revenue bonds sold on the commercial market. As a comparison, the FmHA loan program only requires a coverage factor of approximately 1.1.

The major disadvantages to revenue bonds when compared to general obligation bonds are:

- Issuance costs tend to be higher.
- Interest rates tend to be higher because of lower security with the lack of a general obligation bond.
- Revenue bonds may require that all of the project's net revenues first be applied to either reducing outstanding debt or creating reserve funds for the same purpose.

General Obligation Bonds - The City, by special election, may issue general obligation bonds to finance almost any project of general benefit to the City. The bonds are paid off by assessments levied annually against all privately-owned properties within the City. This includes vacant property which otherwise would not

contribute to the cost of such general improvements. This type of bond issue is usually reserved for municipal improvements that are of general benefit to the public, such as arterial streets, bridges, lighting, municipal buildings, fire fighting equipment, and parks. In as much as the money is raised by assessment levied on property values, the business community also provides a fair share of the funds to pay off such bonds.

General obligation bonds have the best market value and carry the lowest rate of interest of all types of bonds available to the City because they are backed by the good faith of all the entire city's assets. Disadvantages of general obligation bonds include the following:

- Voter approval is required which may be time-consuming, with no guarantee of successful approval of the bond.
- The City would have a practical or legal limit for the total amount of general obligation debt. Financing large capital improvements through general obligation debt severely dilutes the ability of the city to issue future debt.
- Extensive use of general obligation debt may endanger the City's credit rating.

Utility Local Improvement Districts - Another potential source of funds for improvements comes through the formation of Utility Local Improvement Districts (ULID's) involving a lien against the property collected through assessment made on properties benefited by the improvements. ULID bonds are further guaranteed by revenues and are financed by issuance of revenue bonds.

ULID financing is frequently applied to water or sewer system extensions into previously unserved areas. Typically, ULID's are formed by the City at the written request (by petition) of the property owners within a specified area of the City. Upon receipt of a sufficient number of signatures on petitions, the local improvement area is defined, and a system is designed for that particular area in accordance with the City's general comprehensive plan. Each separate property in the ULID is assessed with the special benefits the property receives from the system improvements.

A City-wide ULID could form part of a financing package for large-scale capital projects such as water supply or storage improvements which benefit all residents in the service area. The City-wide ULID would be formed by a majority vote of the City Council.

There are several benefits to the City in selecting ULID financing. The assessment places a lien on the property and must be paid in full upon sale of the property. Further, a substantial number of property owners can be expected to pay the assessment immediately upon receipt.

Therefore, the City avoids the need to pay interest cost for a portion of the costs financed by the ULID. The advantages of ULID financing, as opposed to rate financing, to the property-owner include:

- The ability to avoid interest costs by early payment of assessments.
- If the ULID assessment is paid off in installments, it may be eligible to be deducted from federal income taxes.

- Low-income senior citizens may be able to defer assessment payments until the property is sold.
- Some Community Block Grant funds are available to property owners with incomes near or below the poverty level. Funds are available only to reduce assessments.

The major disadvantage to the City-wide ULID process is that it may be politically difficult to approve formation. The ULID process may be stopped if owners of 40 percent of the property within the ULID boundary protest its formation.

Centennial Clean Water Fund - State grants and loans administered by the Department of Ecology for the design, acquisition, construction, and improvement of Water Pollution Control Facilities and related activities to protect water quality. State grants and loans are available based on a 50% - 25% local matching share range.

State Revolving Loan Fund - State low interest loans and loan guarantees administered by the Department of Ecology for water pollution control projects. Applicants must show a water quality need, have a facilities plan for treatment works, and show the ability to pay back the loan through a dedicated source of funding. Funds must be used for construction of water pollution control facilities (wastewater treatment plants, stormwater treatment facilities, etc.).

Department of Health Water Grants - State grants available for upgrading existing water systems, ensuring effective management, and achieving maximum conservation of safe drinking water. Grant funds can be used for technical assistance for upgrading current water systems.

Aquatic Land Enhancement Account (ALEA) - Grants program administered by the Department of Natural Resources. ALEA funds are limited to water dependent public access/recreation projects or on-site interpretive projects. 25% local match required.

Outdoor Recreation Grant-in-Aid Funding - The Interagency Committee for Outdoor Recreation (IAC) provides grant-in-aid funding for the acquisition, development and renovation of outdoor recreation facilities. Park and boating program grants require 50% local match.

Conservation Futures – Pierce County provides grant funds to purchase conservation easements or property for the purposes of habitat and resource protection and active recreation.

Housing and Urban Development Block Grant - The city may qualify for Federal Department of Housing and Urban Development (HUD) Block Grants depending on its needs and the ability to compete with other communities. To qualify for a block grant, the applicant must show that the project benefits low and moderate income persons or households.

Farmers Home Administration - A Federal Agency, the Farmers Home Administration (FmHA), has a loan program which, under certain conditions, includes a limited grant program. Grants are awarded to the most financially needy

communities where utility and garbage rates are established at or higher than similar municipalities.

In addition, FmHA has a loan program for needy communities that cannot obtain funding by commercial means through the sale of revenue bonds. The loan program provides long-term 30- to 40- year loans at an interest rate that is based on federal rates, varying with the commercial market.

State Public Works Trust Fund - The Public Works Trust Fund (PWTF) is a revolving loan fund designed to help local governments finance needed public works projects through low-interest loans and technical assistance. The PWTF, established in 1985 by legislative action, offers loans substantially below market rates, payable over periods ranging up to 20 years.

Interest rates are 1%, 2%, or 3%, with the lower interest rates providing an incentive for a higher local financial share. A 20% local share qualifies the applicant for a 2% interest rate and a 30% local share qualifies for a 1% PWTF loan. A minimum of 10% of project costs must be provided by the local community. The useful life of the project determines the loan term, with a maximum term of 20 years.

To be eligible, an applicant must be a local government or special purpose City and have a long-term plan for financing its public works needs. If the applicant is a county or City, it must adopt the optional 1/4% real estate excise tax dedicated to capital purposes. Eligible public works systems include streets and roads, bridges, storm sewers, sanitary sewers, and domestic water. Loans are presently offered only for purposes of repair, replacement , rehabilitation, reconstruction or improvement of existing eligible public works systems, in order to meet current standards and to adequately serve the needs of existing service users. Ineligible expenses include public works financing costs that arise from forecasted, speculative or service area growth. Such costs do not make a project ineligible but must be excluded from the scope of their PWTF proposal.

Since substantially more trust fund dollars are requested that are available, local jurisdictions must compete for the available funds. The applications are carefully evaluated and the Public Works Board submits to the Legislature a prioritized list of those projects recommended to receive low-interest financing. The Legislature reviews the list and indicates its approval through the passage of an appropriation from the Public Words Assistance Account to cover the cost of the proposed loans. Once the Governor has signed the appropriation bill into law (an action that usually occurs by the following April), those local governments recommended to receive loans are offered a formal loan agreement with appropriate interest rate and term as determined by the Public Works Board.

Developer Financing - Developers may fund the construction of extensions to the water system to property within new plats. The Developer extensions are turned over to the City for operation and maintenance when completed.

It may be necessary, in some cases, to require the developer to construct more facilities than those required by the development in order to provide either extensions beyond the plat and/or larger pipelines for the ultimate development of the sewer system. The City may, by policy, reimburse the developer through either direct outlay, latecomer charges, or reimbursement agreements for the additional cost of facilities, including increased size of pipelines over those required to serve the property under development. Compensation for oversizing is usually considered when it is necessary to construct a pipe larger than eight inches in diameter in residential areas to comply with the intent of the Comprehensive Plan. Construction of any pipe in commercial or industrial areas that is larger than the size required to service the development should also be considered as an oversized line possibly eligible for compensation. Developer reimbursement (latecomer) agreements provide up to 10 years or more for developers to receive payment from other connections made to the developer-financed improvements. The developer may collect up to 75% of the cost of the original improvement through latecomer reimbursement.

System Development Charges (SDC) - The City may adopt a system development charge to finance improvements of general benefit to the total system which are required to meet future growth. System development charges are generally established as one-time charges assessed against developers or new customers as a way to recover a part or all of the cost of additional system capacity constructed for their use.

The system development charge or fee is deposited in a construction fund to construct such facilities. The intent is that all new system customers will pay an equitable share of the cost of the system improvements needed to accommodate growth. Typical items of construction financed by the system development charge are water treatment facilities, pump stations, transmission lines, and other general improvements that benefit the entire system. This system development charge is quite effective in a fast growing community, but of little value in areas with slow growth because too much time is required to accumulate sufficient funds.

The system development charge is applicable to those lots within plat developments that install a complete water system in their plat to include all lines and appurtenances. The system development charge then help finance the development of transmission lines, pump stations and water treatment facilities to increase the system capacity to meet the new demands.

There are two basic methods for determining system development charges. One is the system buy-in method, and the other is the incremental-cost pricing method. The first method recognizes capital contributions of existing customers towards financing existing facilities. New customers are required to pay an amount equivalent to that paid by existing customers towards invested capital funds under this method. Under the incremental-cost pricing method, new customers are responsible for their share of the last increment of the cost of system facilities. The goal of the incremental-cost pricing method is to eliminate or minimize future service rate increases due to growth by an up-front charge for new capacity.

Six Year Capital Facilities Plan

The six-year capital facilities plan, based on the capital facility needs identified in this plan and related functional plans is adopted annually by ordinance. Since the comprehensive planning process is a continuing, evolving process, this six-year plan will be continually reviewed and updated.

Any plan is a tool to aid in decision making. This plan is no exception. By outlining how the needed capital facilities of the future can be successfully provided, it will assist annual budget decisions which need to incrementally provide the funding for those facilities. The plan is not intended as a substitute for those budget decisions, only to provide a tool for them.

Capital facility is a widely used term that can be used in a variety of ways. In accounting, it may mean any asset that is capable of being capitalized. As such it would include vehicles, furniture, equipment, and similar assets, as well as much longer term fixed assets. The use of the term here, however, is intended to be much more limited, referring instead to long term fixed assets that have a significant (at least three year) life, and a substantial cost (at least $20,000). As such, these facilities would require a policy for financing of a longer term character than that which can be readily afforded by the annual budget cycle of the City.

In addition to the six-year plan, the Comprehensive Plan also anticipates other capital facilities needs throughout the 20-year life of the Plan.

20-Year Capital Facilities Needs

Table 8 lists the anticipated capital facilities needs, estimated costs, and potential funding sources for projects that the City is considering to accommodate growth between 2012 and 2032.

TABLE CF-8
20-YEAR CAPITAL FACILITIES NEEDS
(Transportation Facility Needs are identified in the Transportation Element Appendix)

PROJECT	YEAR	ESTIMATED COST	FUNDING SOURCES
SS-4 Harman Springs Corrosion Control	Unscheduled	$94,000	City (State Drinking Water Revolving Fund Loan)
SS-5 Wingate Springs CorrosionControl	Unscheduled	$106,000	City (State Drinking Water Revolving Fund Loan
ST-2 North End Reservoir	Unscheduled	$898,000	General Facilities Charges
D-1 Orville Road Main	Unscheduled	$856,000	City (State Drinking Water Revolving Fund Loan
D-3 North End Distribution Loop	Unscheduled	$315,000	Developers
D-5 178th Avenue Loop	Unscheduled	$516,000	Developers
D-6 Orting Southern Road Main	Unscheduled	$796,000	Developers
WWTP Phase 2 through 5*	2002-2015	$14,452,000	GFCs/Rates
Composting Facilities	2007-2014	$1,750,000	GFCs/Rates
Water Reuse Treatment & Distribution	2006-2012	$4,658,000+	GFCs/Rates/Cascadia
Collection System Improvements (Annual)	2002-2020	$7,824,000	GFCs/Rates
Bridge Street/River Ave Outfall Improvements	2012	$351,000	
Orting High School/Carbon River Outfall Improvements	2013	$269,000	
Gratzer Park Improvements	2008-2010	$1,000,000	Impact Fees, State Grants, Contributions, General Fund
City Hall/Library/Community Center Needs Anal and Site Selection Study	2008 – 2009	$50,000 - $100,	General Fund
City Hall/Library/Community Center Interim Renovation	2008-2009	$300,000	REET, General Fund