



CITY OF BAINBRIDGE ISLAND

2009 CAPITAL FACILITIES PLAN UPDATE

December 17, 2008

City Council – Final – Third Reading

TABLE OF CONTENTS

I. INTRODUCTION.....	3
RELATIONSHIP OF CAPITAL FACILITIES PLAN TO THE BUDGET.....	4
WHAT IS A CAPITAL FACILITY?	4
HOW ARE CAPITAL FACILITY PROJECTS IDENTIFIED?.....	5
<i>Levels of Service (LOS)</i>	5
PRIORITIZING CAPITAL PROJECTS.....	5
II. CAPITAL FACILITIES INVENTORY & PLANNING	6
CITY OFFICES, FACILITIES, & UNDEVELOPED LAND	6
PARKS & TRAILS	8
TRANSPORTATION FACILITIES (ROADS, BIKE LANES, SIDEWALKS, TRAILS)	10
WATER	11
<i>Winslow Water System</i>	12
SANITARY SEWAGE DISPOSAL.....	13
SURFACE & STORM WATER MANAGEMENT	14
III. SIX-YEAR CAPITAL IMPROVEMENT PLAN AND FINANCIAL ANALYSIS	16

APPENDICES:

- A. 2009 Capital Planning List – “Not Proposed” Capital Facilities
- B. Bainbridge Island School District – 2008-2013 Finance Plan
- C. Bainbridge Island Metropolitan Park and Recreation District CIP
- D. Bainbridge Island Fire District 2006-2017 Financial Plan
- E. Kitsap County Sewer District 7 Response
- F. Kitsap Public Utility District Capital Improvements

LIST OF TABLES

TABLE 1: CITY LAND AND OFFICE FACILITY INVENTORY	6
TABLE 2: CITY PUBLIC WORKS FACILITIES INVENTORY	7
TABLE 3: CITY UNDEVELOPED LAND INVENTORY	7
TABLE 4: PARK FACILITY LEVELS OF SERVICE.....	8
TABLE 5: PARKS & TRAILS INVENTORY	9
TABLE 6: TRANSPORTATION FACILITIES INVENTORY	11
TABLE 7: WATER SYSTEM LEVELS OF SERVICE	11
TABLE 8: GROUP A & B WATER SYSTEMS.....	12
TABLE 9: WATERS SYSTEMS WITH OVER 100 CONNECTIONS	12
TABLE 10: WINSLOW WATER SYSTEM WELL INVENTORY	12
TABLE 11: WINSLOW SEWER FACILITY INVENTORY	14

I. INTRODUCTION

Capital Facilities Plans (CFPs) are required under State law to identify capital facility deficiencies needed to serve our existing population, plan for capital facility improvements to meet the needs of our future population, and ensure that local governments have the fiscal capacity to afford to construct and maintain those capital facilities. Capital Facilities Planning is required to consider a 6-year time frame into the future. Therefore the 2009 CFP update includes the years 2009-2014.

The Capital Facilities Plan includes summary details of the major capital projects of the City and a financial capacity analysis. As the general purpose government on Bainbridge Island, the City is required to analyze and integrate the capital facilities plans from special purpose districts (Schools, Parks, Fire, etc) into its Capital Facilities Plan. The City and the special purpose districts continue to work together to integrate their capital planning efforts to provide a more even tax impact and to prioritize their projects while still providing quality facilities and services for the citizens they serve. This is consistent with Goal 6 of the Framework of the Comprehensive Plan:

All government entities strive to cooperate and serve their constituents in a fiscally sound manner; and Policy CF1.10 of the Capital Facilities Element: The City shall coordinate with other public entities which provide public services within the City to ensure that the Capital Facilities Plans of each of these entities are consistent with the City's Comprehensive Plan.

This CFP update has been developed in accordance with the RCW 36.70A, the Growth Management Act (GMA), and WAC 365-195, the Procedural Criteria. It begins with a short review of some of the concepts behind the Capital Facilities Plan.

This Capital Facilities Plan is the product of many separate but coordinated planning documents and planning bodies. Each of the special districts (Schools, Parks, Fire, etc) has its own capital facilities plans, which are attached as appendices to this document. The City's Comprehensive Plan has various elements that relate land use and population growth management to water resources and transportation, which in turn have various adopted plans, including a Non-Motorized Transportation Plan, Water System Plan, a Sewer System Plan, a Storm and Surface Water Management Plan, and a Pavement Management System Plan – each providing an inventory of existing facilities, an analysis of deficiencies and future demand, and recommendation for capital improvements. Most facilities must be planned for years in advance and planning means determining not only when a facility will be needed but how it will be financed. For facilities that are projected for four to six years in the future, capital costs are more estimates than actual. As the time for construction nears, actual costs are narrowed as design and engineering are completed. It is important to remember that capital facilities planning is not a once a year or once every two years effort, but an ongoing process requiring continual review as new information becomes available, conditions change, and priorities evolve.

The GMA requires that the Capital Facilities Element contain a financing plan that identifies the type and location of expanded or new capital facilities and the sources of funding that will be used to pay for them. There are two questions that must be satisfactorily answered:

- 1) What is the quantity of the public facilities that will be required during the six years? (identified in the inventory and needs analysis);
- 2) Is it financially feasible to provide the quantity of facilities that are required? (do we now, or will we, have the money to pay for them?)

Dependable revenue sources must be identified that equal or exceed the anticipated costs. If the costs exceed the revenue, the local government must reduce its level of service, reduce its costs (or increase revenue), or modify the land use element of its Comprehensive Plan to bring future development into balance with available or affordable facilities and services. This plan will examine each type of facility separately. The costs of all the facilities will then be added together in order to determine the financial feasibility of the plan. The Capital Facilities Plan is intended to be a planning document. It, therefore, does not contain the level of detail that the annual budget must contain. Some costs in the plan are estimated in order to give citizens a general idea of how much certain types of projects or facilities may cost.

Relationship of Capital Facilities Plan to the Budget

The Capital Facilities Plan and the City's budget serve different but related purposes. Both are prepared annually. The budget authorizes the amount to be spent during the coming year; whereas the Capital Facilities Plan identifies needed capital facilities over a six year period. A requirement of the Capital Facilities Plan is that it show how the needed facilities will be paid for during at least a six-year period. Because State law requires that no money can be spent on capital projects which are not shown in the Capital Facilities Plan, it is important that the budget not authorize spending on capital facilities not in the Plan.

What is a Capital Facility?

Capital facilities are those public facilities, including utilities, which are necessary for a government to carry out its functions to provide services to its citizens. Examples are roads, public buildings, schools, parks, water and sewer systems, fire protection and police protection facilities, and libraries. Often the entire collection of these facilities is referred to as infrastructure. Studies or plans (e.g. transportation studies) are not capital facilities and are not included in the Capital Facilities Plan.

There are several categories of capital projects and a key distinction is whether new or expanded facilities will serve existing residents or future population growth. Projects may also be proposed to maintain or repair existing capital facilities (cure deficiencies). The categories are as follows and will be used to identify specific projects proposed in the Plan:

- (M) Major maintenance, repair, renovation, or replacement of an existing facility that do not add additional capacity.
- (E) New facilities or improvements to existing facilities that provide added capacity to serve the existing population.
- (N) New facilities or improvements to existing facilities that are built primarily to provide added capacity to serve future population or employment growth.

How are Capital Facility Projects Identified?

Capital facility projects are generally identified from a planning process for a particular type of facility (e.g. roads, sewer, water, schools, parks, etc) that includes an inventory of existing facilities, an analysis of existing and future demand for service, an analysis of existing or anticipated deficiencies in service (often based on adopted levels of service), and maintenance needs. This planning process is typically incorporated into a local government's Comprehensive Plan or a specific system plan which is then adopted as part of a Comprehensive Plan.

Levels of Service (LOS)

Levels of Service (LOS) are usually quantifiable measures of the amount and/or quality of public facilities or services that are provided to the community and are usually expressed as a ratio of amount of service to a selected demand unit. For example, sewer LOS is expressed as 100 gallon per capita per day, public school LOS may be expressed as the number of square feet available per student or as the number of students per classroom. Police or Fire protection may be expressed as the average response time for emergency calls. Parks LOS is often expressed as the number of acres of park per 1,000 population. Once the level of service is decided upon it can then be determined what capital improvements are necessary to 1) cure any existing deficiencies, and 2) maintain that level as the community grows.

Prioritizing Capital Projects

Since it is unlikely that there is adequate money and resources to implement every capital project in a one-year period, the City goes through a process to prioritize capital projects. The City uses a combination of criteria to prioritize and rank projects that are proposed in a Six-Year Capital Improvement Project (CIP) list, including consistency with the City's Comprehensive Plan, level-of-service deficiency, financial capacity, budgetary policies, and community need. A recommended Capital Facilities Plan is presented to the City Council for consideration and adoption. Public outreach and participation is integrated throughout this process.

II. CAPITAL FACILITIES INVENTORY & PLANNING

The following is the City's capital facilities inventory. The inventory is organized by category and includes a current inventory of facilities, a narrative providing a general background of the planning activities and some discussion of future plans, and a discussion of level of service (LOS), if applicable.

City Offices, Facilities, & Undeveloped Land

City offices are located at several sites due to space constraints at City Hall. Additional City buildings and facilities provide a variety of functions, including public works operations and house cultural and social services. In recent years, the City has also lead an extensive effort to purchase open space and agricultural lands throughout the Island with revenue generated from an \$8 million bond approved by voters in 2001.

Table 1: City Land and Office Facility Inventory

Building and Location	Land Area		Building Area		Owned or Leased	Office Uses
City Hall						Administration, Finance, Planning, & Engineering
- 280 Madison Ave. N	1.92	Ac	24,107	SqFt	Owned	
Police Station						Police
- 625 Winslow Way E	0.82	Ac	7,000	SqFt	Owned	
Municipal Court						Municipal Court
- 10255 NE Valley Rd.	n/a		2,289	SqFt	Leased	
Subtotal Staff Office Space	2.74	Ac	33,396	SqFt		
Bainbridge Island Commons						Social Services & Public Meetings
- 223 BJune Ave.	0.38	Ac	4,975	SqFt	Owned	
Bainbridge Performing Arts (land only)						Land leased to BPA for \$1/yr through May, 2081
- 200 Madison Ave. N	2.45	Ac	n/a		Owned	
Helpline House						No-cost lease to Helpline House
- 282 Knechtel Way	1.07	Ac	4,400	SqFt	Owned	
Public Works Facility						O&M Offices, Shop, and Covered Equipment Storage
- 7305 NE Hidden Cove Road	12.62	Ac	22,712	SqFt	Owned	
Public Works Facility						Covered Storage
- 7305 NE Hidden Cove Road	Included		1,524	SqFt	Owned	
Public Works Facility						Fueling Facility
- 7305 NE Hidden Cove Road	Included		n/a		Owned	
Land with City-owned utilities	15.42	Ac	n/a		Owned	Wells, pump stations, etc.
Total	34.68	Ac	67,007	SqFt		

Table 2: City Public Works Facilities Inventory

Facility	Floor Area		Function
Portable office trailers (4)	2,520	SqFt *	Storage, safety & future parks buildings
Steel shop building	2,400	SqFt	Storage - holds telemetry
PW Facility - Wood Building	100	SqFt	Well house
PW Facility - Shop	7,776	SqFt *	Mechanics Shop / Equipment Maintenance
PW Facility - Covered Equipment Storage	11,520	SqFt *	Covered Equipment Storage
PW Facility - Office Trailer	1,792	SqFt *	O & M Office
Fueling Facility			Vehicle Fueling inside covered equipment storage building
Total	26,108	SqFt	

*These facilities are also counted in the main office inventory above.

Table 3: City Undeveloped Land Inventory

Location / Description	Land Area		Owned or Leased	Uses
High School Rd. near Madison	1.42	Ac	Owned	No use specified
Head of the Bay	30.77	Ac	Owned	Wellhead protection
Off Madison near Wyatt	0.43	Ac	Owned	Future pocket park
Lumpkin Property	11.00	Ac	Owned	Open space / park
Suzuki Property	15.00	Ac	Owned	No use specified
Salter Property	5.00	Ac	Owned	Open space
Johnson Farm	14.51	Ac	Owned	Open space
Suyematsu Farm	15.00	Ac	Owned	Agricultural Land
County Gravel Pit ("Lovgren Pit")	17.00	Ac	Owned	No use specified
Council Site ("Road Shed")	2.00	Ac	Owned	No use specified
Council Site ("Myers Pit")	6.00	Ac	Owned	No use specified
Vincent Road Landfill	40.00	Ac	Owned	Solid Waste Transfer Station
Manitou Beach ("Kane")	1.36	Ac	Owned	Open space / Habitat restoration
M & E Tree Farm	13.00	Ac	Owned	Open space
Morales Property	4.74	Ac	Owned	Open space
Crawford Property	2.30	Ac	Owned	Open space
Near Schel-Chelb ("Cool Property")	0.74	Ac	Owned	Open space
Ft. Ward Estates - 5 lots	1.61	Ac	Owned	Future Park
Ft. Ward Parade Ground - 2 lots	0.28	Ac	Owned	Future Park
Lost Valley Trail	8.06	Ac +	Owned	Open space
Yama Property	7.50	Ac	Owned	Open space
Blossom - Pt White Drive	0.88	Ac	Owned	Open space
Blossom - Sullivan Road	3.32	Ac	Owned	Open space
Unocal Site	1.03	Ac	Owned	Future Park
Strawberry Plant	4.20	Ac	Owned	Future Park
Bentryn Property	11.50	Ac	Owned	Agricultural Land

Pritchard Park Phase II - East	27.18	Ac	Owned	Future Park
Meigs Farm (Cool) & Lowery	24.85	Ac	Owned	Future Park
William Property	3.81	Ac	Owned	Future Park
Misc. unimproved land	2.24	Ac	Owned	No use specified
Total	276.73	Ac		
Open Space & Future Park Land Included in Above:			163.72	Ac

Parks & Trails

Most of the parks and trails on Bainbridge Island are owned and managed by the Bainbridge Island Metropolitan Park and Recreation District. The City has a few parks which are generally maintained (with the exception of Waterfront Park) by the Park District under contract to the City. During the past several years, the City has acquired or helped the Park District acquire a large amount of open space and park lands. Plans for this land have generally not yet been developed and the City is in the process of transferring title to several parcels to the Park District. The City has adopted the Bainbridge Island Park and Recreation District Comprehensive Plan, which establishes levels of service for park and recreation facilities for the Island as summarized below. A summary inventory of existing park and recreation facilities is also provided below.

Table 4: Park Facility Levels of Service

Park Type	Definition of Park / Facility	Level of Service
Neighborhood Park	¼ to ½ mile service area & minimum size 5 acres	.9 acres / 1000
Community Park	½ to 3 mile service area & minimum size 20 acres	2.1 acres / 1000
Island-Wide Park	within ½ mile drive and minimum size 100 acres	5.3 acres / 1000
Parks - All Categories	All parks except State parks	46 acres / 1000
Tennis / Multi-use	Asphalt or concrete courts with nets	1 court / 2000
Ball Fields - 200' +	Areas designed for softball and baseball	1 field / 2000
Ball Fields - 300' +	Areas designed for adult baseball	1 field / 8000
Soccer Fields	Areas designed for soccer including goals & nets	1 field / 2000
Swimming Pools	Covered pool suitable for year-round use	1 pool / 10000
Volleyball Courts	Outdoor court with net and sand / soil mixture	1 court / 5000
Mini-Parks/Tot Lots	Not Defined	Not Specified
Spec Use Facilities	Public art, parkways, historic sites, etc.	Not Determined
Linear Parks / Trails	Elongated area with lengthwise road or trail	Not Determined
Equestrian Facilities	Areas primarily used by equestrians	Not Determined

Table 5: Parks & Trails Inventory

Park Site	Owner	Facilities	Size (Acres)
<i>Resource Conservancy :</i>			
Meigs Park	Park District	None as yet	67.0
W. Port Madison Preserve	Park District	Trails, picnic shelters, beach access	13.8
Manzanita Park	Park District	Horse & pedestrian trails	120.0
The Grand Forest	Park District	Horse & pedestrian trails	240.0
Gazzam Lake Preserve (Close, Peters and Veterane)	Park District	Horse & pedestrian trails Beach Access	444.6
Battle Point Park, North	Park District	Fishing pond, trails, picnicking	45.3
Rockaway Beach Parcels	Park District	None as yet - undesignated	0.5
Hawley Cove Park (Eagle Harbor)	Park District	None as yet - undesignated	11.7
Ted Olson Park	Park District	Trails	17.0
<i>Athletic Parks/Playgrounds :</i>			
Battle Point Park, South	Park District	Sport courts, fields, play area, trails, horse arena, maintenance facility	45.0
Strawberry Hill Park	Park District	Sport courts, field sports, classrooms, skate park , picnicking, administrative offices	17.8
Aaron Tot Park	City Park	Children's play structure	0.3
Eagledale Park	Park District	Sport courts, play structure, covered picnic shelter, art center	6.7
Gideon Park	Park District	Trail and playground	2.5
Hidden Cove Park	Park District	Ballfields and trails	7.8
Rotary Park	Park District	Ballfields & children's' play structure	9.8
Sands Road Park	School District	Ballfields	10.0
<i>Resource Activity Parks :</i>			
Camp Yeomalt	Park District	Multi-use bldg, trail, picnicking	3.0
Waterfront Park	City Park	Boat launch, picnicking, tennis courts, playground	8.1
T'Chookwop Park	City Park	Picnicking	0.3
Fay Bainbridge Park	State Park	Picnicking, camping, boat launch, volleyball, sandy beach	16.8
Fort Ward Park	State Park	Boat launch, picnicking, trails, beach access	137.0
Hidden Cove Park (Spargur)	Park District	Shoreline and boat access - to be designed	6.1
Pritchard Park	Park District & City	Shoreline access, WWII Japanese - American Memorial	21.9
Blakely Harbor Park	Park District	Picnicking, hand-carry boat access, shoreline	39.0
<i>Recreation Centers :</i>			
Island Center Park	Park District	Community hall, picnicking	2.5

Linear Park / Trail :			
Fairy Dell Trail Park	Park District	Trail and beach access	2.5
South End Trails	Park District	Trails, easements, trail implementation	4 linear miles
Forest to Sky Trails	Park District	Trails, easements, trail implementation	10.7
Special Use Facility :			
B. I. Aquatic Center	Park District (leased)	Aquatic Center	1.5
Point White Dock	Park District	Dock, fishing, clamming	0.3
Other :			
City Open Space	City	None - Designated for Open Space / Ag	163.72
Total (Acres)			1,470.72

Transportation Facilities (Roads, Bike Lanes, Sidewalks, Trails)

Of the many types of capital facilities that are constructed, operated and maintained by the City, the most costly and most familiar to citizens are the transportation facilities. Where there are facility needs that involve SR305 or the ferries, the Washington State Department of Transportation assumes the costs. Kitsap Transit pays for facilities that support transit service.

The transportation system outside of historic Winslow has suffered from "deferred maintenance". The Pavement Management System (PMS) study conducted for the City in 1992/1995 indicated the wearing surface of many of the roads to be at or near failure, especially the smaller suburban roads. Since many of the Island's roads were initially only scraped and then a thin layer of asphalt applied, the maintenance performed by the City is usually more extensive, and costly, than normal maintenance of "paved" roads. Many roads, having no substantial base before placing asphalt, need considerable base preparation. The PMS study indicated a need for \$600,000 per year for 10-12 years in the annual roads maintenance and repaving program to maintain the roads at the then current status; but that study assumed a normal road base. The City has attempted to "reconstruct" some of the roads, rather than just "maintain" their wearing surface, and while it is more time consuming and more costly (initially), the life-cycle costs will be less, and the citizens will have better roads to travel over. The \$600,000 amount has proven inadequate to cover the more extensive "reconstruction" as well as normal repaving. In 1998 the City Council increased the annual amount for repaving to about \$1,000,000; but that amount has often not been available. Also, in 1998 the City began a program using a "chip-seal" which has allowed many more lane miles to be recovered for the same cost as asphalt overlays. Chip-sealing the roads to halt their deterioration is intended to buy the City time to accomplish the needed reconstruction before the failure of more of the Island's roads.

A complete inventory of the Island's transportation facilities is contained in the Island-wide Transportation System Study and a complete inventory of the Island's non-motorized transportation facilities is contained in the Non-Motorized Transportation Plan. A summary of those facilities follows:

Table 6: Transportation Facilities Inventory

Type of Facility	Description	Example	Length	
FRC 1 *	State Highway	SR305	6.8	miles
FRC 2 *	Secondary Arterial	Miller Road	35.2	miles
FRC 3 *	Collectors	Oddfellows Road	42.3	miles
FRC 4 *	Residential Urban	Wood Avenue	21.7	miles
FRC 5 *	Residential Suburban	Spargur Loop Road	38.3	miles
FRC 6 *	Unimproved City Roads (gravel)	Walden Lane	10.2	miles
Subtotal			154.4	miles
Without SR305 & gravel roads			137.5	miles
Bike lanes**	Shared roadway on paved shoulders	High School Road	23.5	miles
Sidewalks	Paved walkway	Madison Ave.	7.6	miles
Trails	pedestrian, bike, equestrian, etc.	The Grand Forest	6.9	miles

*FRC = Functional Road Classification; Source: Public Works Department, Pavement Management Program (Klohn Leonoff)

** With the exception of SR305, bike lanes on Bainbridge Island are three to five foot paved shoulders. Bike lanes are reported in lane miles. SR305 is included here.

Water

Domestic drinking water is supplied by the City of Bainbridge Island, Kitsap County P.U.D. No. 1, South Bainbridge Water Company, numerous smaller public water systems (2 or more hookups), and over 1,000 private single-dwelling wells.

The levels of service in the Water Element for water systems on Bainbridge Island are the minimum design standards and performance specifications provided in the 1992 Kitsap County Coordinated Water System Plan. Fire flow requirements were adopted by Ordinance 98-30 and Resolution 98-34 and are tiered based on zoning and type of construction. Residences can satisfy deficiencies by installing individual sprinkler systems. Levels of service are as follows:

Table 7: Water System Levels of Service

Pressure	30 psi residual
Pipe sizing	8" diameter min. (where fire system is required)
Storage	"Sizing Guidelines for Public Water Systems"
Quality	Federal and State minimum standards
Fire Flow	Residential Zone R.04 & R.1 = 500 gpm or sprinkler
Fire Flow	Residential Other Zones = 1,000 gpm or sprinkler
Fire Flow	Commercial & LM = 1,000 gpm or don't build

The Bremerton-Kitsap County Health District records indicate approximately 170 water systems on the Island that have 2 or more households connected. The number of Group A & B systems are listed below and following is a summary of systems with more than 100 connections.

Table 8: Group A & B Water Systems

Group A systems	(15 or more connections)	44
Group B systems	(under 15 connections)	124

Table 9: Waters Systems with over 100 Connections (2005/2006)

System	# Connections	Capacity		Storage
		(ERU)	(MGD)	Volumes (gal.)
Island Utility	140	455	0.43	400,000
PUD #1	1,688	2,028	0.36	860,000
Meadowmeer (MWSA)	279	283	.45	200,000
South Bainbridge	1,395	1,415	0.90	562,000
Winslow (City)	2,184	4,727	1.00	2,800,000
Total	3,791	6,540	2.43	3,597,000

Most existing water systems were established under state and local guidelines and generally provide high quality water at an adequate pressure and flow rate for residential use. However, because of the number of systems on the Island, it must be concluded that there are systems that may not be in compliance with Department of Health water quality requirements and may not meet minimum requirements of pressure and reliability. It is also concluded that most of the smaller systems have poor or nonexistent fire protection designed into their systems due to the cost of providing large diameter pipes and storage tanks.

Winslow Water System

The Winslow Water System is owned and operated by the City of Bainbridge Island under the direction and control of the Department of Public Works. It serves an area similar to the historic Winslow city limits plus Fletcher Bay and Rockaway Beach. The system gets all of its water from the eleven wells owned by the City as noted below. Water is pumped into the distribution system both directly from the well pumps and by booster pump stations. A detailed inventory is provided in the Winslow Water System Plan, which is currently being updated and is expected to be adopted in 2007.

Table 10: Winslow Water System Well Inventory

Name	Capacity		Depth		Present Yield	
Head of Bay #1	50	gpm	135	ft.	32	gpm
Head of Bay #1A	150	gpm	145	ft.	135	gpm
Head of Bay #2	215	gpm	50	ft.	184	gpm
Head of Bay #3	100	gpm	50	ft.	270	gpm
Head of Bay #4	138	gpm	150	ft.	115	gpm
Head of Bay #5	96	gpm	160	ft.	111	gpm
Head of Bay #6	110	gpm	70	ft.	91	gpm
Lower Weaver *	80	gpm	135	ft.	47	gpm
Fletcher Bay	688	gpm	1,050	ft.	500	gpm

Sands Ave. #1	288	gpm	1,055	ft.	365	gpm
Sands Ave. #2	600	gpm	1,055	ft.	400	gpm
Commodore Well	100	gpm	190	ft.	47	gpm
Taylor Avenue	80	gpm	600	ft.	56	gpm
Total	2,615	gpm			2,297	gpm

*Not a potable source - used for construction

Under Washington law, water purveyors, including the City, need water rights in order to be assured that it can continue to provide water. The City has "primary" water rights for 2,054 acre-foot per years and "allocated instantaneous capacity" for 3,037 gpm (about 60% over the City's present capacity).

According to the existing Winslow Water System plan, the system's capacity is adequate to serve the needs of the potential build-out population under existing zoning and build-out to the highest density possible (to R-28) in the Land Use Element. The available sources are adequate to serve a potential population of approximately 7,900 or approximately 4,000 units. The system currently serves a population of 3,500 and approximately 3,500 residential equivalent units. There are, however, upgrades necessary to provide adequate fire flow in areas, more efficiently use existing storage capacity, rehabilitate existing wells, and improve system reliability.

Sanitary Sewage Disposal

The City of Bainbridge Island provides for the collection, treatment, and disposal of effluent in the Winslow service area. The Kitsap County Sewer District #7 treatment plant north of Fort Ward Park serving customers within the District's service area in Fort Ward and the City's sewer service areas in the Emerald Heights, Point White, North Pleasant Beach, and Rockaway Beach neighborhoods and Blakely School. All other residents not within the service areas of the above districts rely upon on-site septic systems that require approval from the Bremerton-Kitsap County Health District.

Levels of service for wastewater treatment systems are typically expressed as the number of gallons of flow per capita per day and the level of treatment provided by the treatment plant. The current and proposed level of service for the Winslow service area follow the Department of Ecology guidelines of 100 gallons per capita per day (flow) and secondary treatment. In areas not served by treatment plants, on-site septic systems must be built to Bremerton-Kitsap County Health District standards that consider combinations of lot size, soil type, infiltration capacity, depth to hardpan, and proximity to surface water among others.

The Winslow sanitary sewer system consists of two separate parts: the collection system, and the treatment plant.

Table 11: Winslow Sewer Facility Inventory

Collection system	15 miles gravity sewer (pipes 8 inches to 12 inches diameter)
	12 miles pressure sewer (pipes 4 inches to 12 inches diameter)
	16 pumping stations (300 to 2,300 gallons per minute)
Treatment plant	Secondary treatment facility located on Donald Place NE (3.9 million gallon per day and 2642 ppd BOD)

The existing system will be able to accommodate projected population growth in the Winslow area through approximately 2018 if maintenance and periodic facility upgrades are performed timely. The sewer system plan was last updated in 1994 and should be updated, or a new sewer system plan should be prepared by the City within the coming 2 to 4 years to document the existing system and needs for new facilities and replacement or upgrading existing facilities during the coming decade. The system plan or a separate study should be done to assess infiltration and inflow (I/I) in the collection system so that an I/I reduction program can be undertaken. All pumping stations are now connected to a Supervisory Control/Data Acquisition (SCADA) system that is operated by the City’s utility operations team. The SCADA system allows monitoring and operation of pumping equipment and response to alarms from a central station located at the Winslow Wastewater Treatment Plant (WWTP). Additionally, all of the City’s sewer pumping stations are now equipped with emergency generators so that operations continue during power interruptions.

The existing WWTP was designed for a population equivalent of 10,000 and began operation in 1978. The WWTP will have an excess “population equivalent” capacity (including commercial and multi-family customers converted to a level population equivalent) of approximately 1600 for flow and 4260 for BOD at the conclusion of the current improvements. The WWTP was upgraded in 1994 at a cost of \$2.5 million. An engineering assessment in 2003 identified a number of additional upgrades necessary to meet regulatory requirements for effluent disinfection, energy efficiency and for process reliability and redundancy. Some of the identified upgrades (replacing effluent pumps and controls, and conversion from chlorine-based to ultraviolet-based disinfection) were designed and constructed between 2004 and 2007. Engineering and construction documents for the remaining upgrades to the WWTP process, including enhanced odor control, was completed in 2007 and construction in early 2008. This work will be completed in early 2010 at a cost of approximately \$13.9 million, including engineering and construction management.

An engineering study of the WWTP outfall to Puget Sound was completed in 2008. Planning and decisions regarding future modification of the outfall and related decisions regarding additional WWTP process enhancements, including upgrading the WWTP process to produce Class A effluent and biosolids for discharge or re-use, are proposed future activities.

Surface & Storm Water Management

In the Winslow urban area and a few smaller areas, stormwater is managed by a combination of piped collectors, roadside ditches and natural stream channels. All other watersheds and sub-basins on the Island are drained by natural streams and roadside ditches only. The existing natural drainage system consists of wetlands, streams, springs, ditches, and culverts crossing roadways and is labor intensive to maintain. Surface and storm water is management by the City

as a utility. A recent Surface and Stormwater Management Plan and ongoing system evaluation are used to identify capital projects. In addition, the City places priority on the improvement and restoration of natural stream channels, particularly undersized or perched culverts, for the improvement of fish passage and fish habitat.

III. FINANCIAL CAPACITY ANALYSIS/ SIX-YEAR CAPITAL IMPROVEMENT PLAN

Provided below is the Six-Year Financial Capacity Analysis and Capital Improvement Plan (CIP) for the City of Bainbridge Island. This CIP list shows the anticipated expense and timing of each project and contains a project description, if available, and the results of the Comprehensive Plan consistency review and level of service (LOS) deficiency analysis. The CIP lists for the special districts on Bainbridge Island are provided in the appendices attached to this document. The City conducts a financial capacity analysis in order to evaluate the City's ability to fund capital expenditures along with general operations. The financial capacity analysis is presented first with assumptions and the CIP list follows. The CIP is divided into three parts. 1) 6 Year CIP with details on funding 2) All project proposed for the twenty year planning horizon. Projects not proposed in the twenty year planning horizon are located in appendix A.