

**ORDINANCE NO. 2007-24**

AN ORDINANCE of the City of Bainbridge Island, Washington, relating to the Comprehensive Plan; amending Policies WR 3.6, 3.7 and "drinking water conditions and future needs" section and repealing Appendix A of the Water Resources Element of the Comprehensive Plan.

**WHEREAS**, the City of Bainbridge Island (the "City") adopted a Comprehensive Plan on September 1, 1994, which establishes goals and policies for managing the land, shorelines and resources of Bainbridge Island, including drinking water; and

**WHEREAS**, the City adopted an updated Comprehensive Plan on December 8, 2004; and

**WHEREAS**, the City of Bainbridge Island operates a few of the many public water utilities serving Bainbridge Island, all of which must be consistent with the City's Comprehensive Plan; and

**WHEREAS**, the City intends to clarify the Comprehensive Plan by removing specific references to the Winslow Water System; now, therefore

**THE CITY COUNCIL OF THE CITY OF BAINBRIDGE ISLAND, WASHINGTON, DOES ORDAIN, AS FOLLOWS:**

Section 1. Policies WR 3.6 and WR 3.7 of the Water Resources Element of the City of Bainbridge Island Comprehensive Plan are amended to read as follows:

**"WR 3.6**

~~The City's water service areas shall be depicted on a map administered by the Public Works Department. Modification to the City's water service area by the Public Works Director shall consider the following:~~

All purveyors of public water systems shall depict water service areas on maps and evaluate modifications to their system boundaries based on the following criteria:

- A. There is sufficient capacity to serve the area; and
- B. The service area modification does not limit the system from providing service to targeted growth areas; and
- C. Modification will serve a public need or the water system will benefit by such modification; and
- D. An analysis of the cumulative impacts to the water system resulting from providing service on an individual basis to single parcels beyond the current service area is provided.

~~Discussion: The Public Works Department will develop a two-level review and approval process for amendments to the City water service areas. Major expansions of an area-wide basis will require a City Council decision, while minor service extension to individual properties served off existing or planned water lines will be a Public Works Director's decision.~~

#### **WR-3.7**

~~All purveyors of public water systems shall evaluate modifications to their system boundaries based on the criteria provided in WR-3.6"~~

Section 2. The "drinking water conditions and future needs" section of the Water Resources Element of the City of Bainbridge Island Comprehensive Plan is amended to read as follows:

### ***"Drinking Water Conditions and Future Needs***

#### **Background**

Bainbridge Island's potable water is provided from well water supplies drawn from the Island's aquifers -- no water is obtained from off-Island sources.

Domestic drinking water is supplied by the City of Bainbridge Island, North Bainbridge Water Company, South Bainbridge Water Company, numerous smaller public water systems (two or more hookups), and over 1,000 private single-dwelling wells. Information was obtained from the *Bainbridge Island Water System Plan* prepared for the Winslow Water System by R.W. Beck and Associates in 1993 (updated by Gray & Osborne), the 1992 *Kitsap County Coordinated Water System Plan* (CWSP), the *Kitsap County Groundwater Management Plan*, 1991 (GWMP), and the *Bainbridge Island Level II Assessment*, 2000, completed by Kato & Warren working with Robinson & Noble.

Under the federal Clean Water Act, the State required regional planning administered by the Department of Ecology and the Department of Health.

Through this process, Kitsap County Commissioners declared Bainbridge Island to be a Critical Water Supply Service Area in accordance with state authorizing statutes. The declaration invokes the Public Water System Coordination Act that requires procedures be established, subject to county approval, to identify all existing and future service areas for public water utilities.

The County Commissioners, in accordance with the Act, established exclusive water utilities service areas throughout the county with minimum domestic supply and fire flow requirements and standards for construction of temporary and permanent improvements. All developments must abide by Kitsap County and Bainbridge Island standards and the standards that the authorizing water utility may append within the service areas, regardless of whether the user will connect to the system at the time of development. Projects that propose to use satellite or stand-alone water supply systems for an interim period must also abide by the standards and agree to contract the operation of the system from the designated water purveyor. The CWSP is currently being updated and is expected to be approved and adopted in late 2004 or early 2005.

### Level of Service

The levels of service are the minimum design standards and performance specifications provided in the 1992 *Kitsap County Coordinated Water System Plan*. Fire flow requirements are adopted by ordinance and based on zoning and type of construction. Residences can satisfy deficiencies by installing individual sprinkler systems. Levels of service are as follows:

Pressure	30 pounds per square inch (psi) residual
Pipe sizing	8-inch minimum diameter where a fire system is required
Storage	"Sizing Guidelines for Public Water Systems"
Quality	Federal and State minimum standards
Fire flow	Residential zone R-0.4 & R-1 = 500 gallons per minute (gpm) or sprinkler
Fire flow	Residential other zones = 1,000 gallons per minute (gpm) or sprinkler
Fire flow	Commercial & LM = 1,000 gallons per minute or don't build

*Source: 1992 Kitsap County Coordinated Water System Plan (CWSP) – currently being updated in 2004.*

### Island water sources

According to Kitsap Health District records, approximately 170 water purveyors or systems on Bainbridge Island provide consumptive water, of which five systems serve more than 100 connections. The largest

purveyors are the City of Bainbridge Island, North Bainbridge Water Company and South Bainbridge Water Company. There are numerous smaller public water systems (two or more hookups) and another 1,000 private single-dwelling wells. The number of Group A and B systems and a summary of systems with more than 100 connections are listed below.

System Type	Classification Criteria	Number
Group A Systems	15 or more connections	44
Group B Systems	<15 connections	124

Capacity				
System	Connections	ERU	Supply	Storage
Meadowmeer	279	335	530,000	235,000
PUD #1 (North Bainbridge)	1,646	2,028	450,000	860,000
South Bainbridge	788	1,114	900,000	562,000
City of Bainbridge Island	2,100	4,727	1,000,000	2,910,000
<b>Total</b>	<b>4,813</b>	<b>8,204</b>	<b>2,880,000</b>	<b>4,567,000</b>

Capacity: ERU = equivalent residential units, Supply in gallons per day (gd), Storage in gallons

Source: 2004 Draft Kitsap County Coordinated Water System (CWSP) Update

According to the Draft 2004 Kitsap County Coordinated Water System Plan (CWSP) Update, Island sources have a combined "water rights" annual capacity (Qi) of 9,260,000 gallons per day (gpd) and an instantaneous quantity (Qa) capacity of 16,730,000 gallons per day (gpd).

Water records	Certificates	Permits	Claims	Applicants
Bainbridge Island	139	9	1,476	28
Permit/certificate	Qa-afy	Qa-gd	Qi-gpm	Qi-gd
Groundwater	10,282	9,170,000	11,618	16,730,000
Surface water	102	90,000	2.71	0
<b>Total</b>		<b>9,260,000</b>		<b>16,730,000</b>

Qa = annual quantity in acre-feet per year (afy), Qi = instantaneous quantity in gallons per minute (gpm) or gallons per day (gd)

Source: Draft 2004 Kitsap County Coordinated Water System Plan (CWSP) and Washington State Department of Ecology's Water Right Application Tracking System (WRATS), December 2001

It should be noted that the "water rights" listed above do not reflect actual current usage of the water resource – they only identify the potential maximum legal appropriations that can be made under the water rights granted by the Washington Stated Department of Ecology (DOE).

Most existing water systems were established under state and local guidelines and for the most part provide high quality water at an adequate pressure and flow rate. Because of the high number of systems on the Island, however, there are likely to be systems that are not in compliance with Washington State Department of Health (DOH) water quality requirements, and may not meet minimum requirements for pressure and reliability. Many of the smaller systems have poor or nonexistent fire protection due to the cost of providing large diameter pipes and storage tanks.

## **Wells**

The majority of the systems on the Island take water from wells or spring systems. Bainbridge Island wells penetrate several of the aquifers identified above to withdraw drinking water for individual homeowners and municipal water purveyors. Most individual household wells penetrate to depths of less than 300 feet. Some residents are still using hand-dug wells less than 40 feet deep, completed into the permeable sediments known as the Vashon Recessional Outwash. Groundwater found at this level also feeds the base flow for Island streams.

High capacity wells have been drilled as deep as 1,200 feet to find adequate marketable quantities of water for public and private water purveyors. While few in number, these wells produce a large portion of the Island's potable water. The Blakely Formation, a sediment bedrock, dominates the ecology on the southern end of the Island, limiting groundwater production in this area.

According to the 1996 *Kitsap County Groundwater Management Plan (GWMP) Update*, Washington State Department of Ecology (DOE) has approved permitted water rights for 3,580,000 gallons per day (4,008 acre-feet per year). Private wells that produce less than 5,000 gallons per day are exempt from permit filing requirements.

## ***Well-head Protection***

A well-head is the area defined around a well site that denotes the amount of time it would take contaminants to enter the surface of subsurface surrounding the well or well field to reach the underlying water resources.

In 2003 the City completed a wellhead protection plan for the City-owned well sites only, including land use restrictions. The Washington State Department of Health has approved the plan.

## **Island Water Quality**

A 1986 water quality survey conducted by Kitsap County indicated 77% of the county population was served by a Class 1 system providing more than 100 connections or Class 2 system providing from 10-99 connections. Of the systems

surveyed by Kitsap County, 50% of all systems in each class failed to submit any or all of the bacteriological samples.

Because of the number of systems on Bainbridge Island, Kitsap County concluded that there are likely to be numerous systems that may not be in compliance with Washington State Department of Health (DOH) requirements.

Beginning in July 1993, Bainbridge Island established a lead and copper monitoring program based on federal Environmental Protection Agency (EPA) regulations that required tap water samples from high-risk homes.

### Island Water Requirements

The *Kitsap County Coordinated Water System Plan (CWSP)* developed future water usage projections and water requirements for Bainbridge Island using different per capita consumption rates and peaking factors for the rural, semi-urban/rural, and urban areas.

According to the CWSP projections, the water requirement will grow from 1,800,000 gallons per average day in 1995 to 2,430,000 by the year 2012 when the Island population reaches 24,280 persons. The drinking water requirement will depend on whether the actual capacity of a "hypothetical aquifer" can yield 4,800,000 gallons per day or 8,000,000 gallons per day. The lower capacity will require Island water purveyors to generate additional water sources; the latter indicates the Island has a more than sufficient reserve.

<b>Projected Island water usage</b>	<b>1995</b>	<b>2002</b>	<b>2012</b>
Population	17,800	20,527	24,280
Gallons per average day	1,800,000	1,980,000	2,430,000
Peak gallons per day	5,420,000	5,960,000	7,270,000
<b>Average day water capacity</b>	<b>1995</b>	<b>2002</b>	<b>2012</b>
Hypothetical aquifer yield	4,800,000- 8,000,000	4,800,000- 8,000,000	4,800,000- 8,000,000
Less water rights	(3,600,000)	(3,600,000)	(3,600,000)
Water available	1,200,000- 4,400,000	1,200,000- 4,400,000	1,200,000- 4,400,000
Less average daily demand	(1,800,000)	(1,980,000)	(2,430,000)
<b>Water capacity available/required</b>	<b>(600,000)- 2,600,000</b>	<b>(780,000)- 2,420,000</b>	<b>(1,230,000)- 1,970,000</b>

Assumes 100 gallons per capita per day (gpcd) for rural areas and 140 gallons per capita per day (gpcd) for semi-urban/rural areas with a 3.0 peaking factor and 175 gallons per consumptive day (gpcd) for urban areas with a 2.3 peaking factor.

Source: *Kitsap County Coordinated Water System Plan (CWSP)* updated for current population estimates.

## City Water System

The City's water system is managed as a utility. Information regarding the City's water system, including production capacity, storage capacity, and its distribution network is provided in the City's Water System Plan, which is updated at least every six years.

## ~~Winslow Water System~~

~~The City of Bainbridge Island owns the Winslow Water System that serves an area similar to the historic Winslow city limits plus the area served by the Fletcher Bay well.~~

~~In 1993 and 1995, R.W. Beck & Associates prepared and updated a Bainbridge Island Water System Plan in accordance with Washington State Department of Health (DOH) requirements as part of the Kitsap County Coordinated Water System Plan (CWSP). The City is updating the city water system plan, which will examine the service facility and demands and make updates as necessary.~~

## ~~Winslow Drinking Water Capacity~~

~~Under Washington law, water purveyors, including the City of Bainbridge Island, need water rights to be assured so that the City can continue to provide water to resident users. The City has "primary" water rights for 3,456 acre-feet per year and an "allocated instantaneous capacity for 2,564 gallons per minute (gpm) about 60% over the City's present capacity. The Winslow system has an estimated total yield of 2,564 gallons per minute (gpm).~~

~~According to a 1995 survey by R.W. Beck, the Winslow Water System currently serves 3,500 equivalent residential units (ERU), or a population of 6,500. At a peak day demand of 570 gallons per dwelling unit, existing supplies could service the demand for 4,000 dwelling units or approximately 7,900 residents—or enough to accommodate a build-out population under existing zoning to the highest allowable density (R-28).~~

~~According to the Draft 2004 Kitsap County Coordinated Water System Plan Update, in 2000 the Winslow Water system produced 263,630 gallons of water, selling 205,490 gallons (78%) of which 143,890 gallons (55%) of the production was sold to residential users.~~

<del>Year 2000</del>	<del>Annual Sales (gallons)</del>
<del>Single family residential</del>	<del>107,280</del>
<del>Multifamily residential</del>	<del>36,610</del>
<del>Commercial/industrial</del>	<del>53,590</del>
<del>Irrigation</del>	<del>8,020</del>
<del>Total sold</del>	<del>205,490</del>
<del>Wholesale</del>	<del>0</del>

Non-revenue	-58,150
<b>Total</b>	<b>263,630</b>

Source: Draft 2004 Kitsap County Coordinated Water System Plan (CWSP) Update

The Winslow system has an estimated total yield of 1,690,000 gallons per minute (gpm) or 2,400,000 gallons per day (gpd) from the three main well sources based on City records. The wells have not experienced unusual draw-downs, though recent reports indicate a higher than normal sand content in the water from Fletcher Bay well possibly requiring installation of a sand trap.

Well	Permit-control	Qi (afy)	QA (gpm)
Head of Bay #1A	G1-24349G	224	200
Head of Bay #2 & #3	C-5597-A	88	55
Head of Bay #4 & #5	C-7410-A	336	300
Head of Bay #6	G1-22248C	160	75
Fletcher Bay	G1-20706C	1168	730
Sands Avenue #1	G1-25264C	336	300
Sands Avenue #2	G1-25614P	564	564
Lower Weaver #1	C-3170-A	160	100
Lower Avenue #2 & #3	C-3171-A	80	50
Commodore	G1-23678C	32	120
Commodore	C-6025-A	32	20
Wing Point Well	C-1011-D	11	7
Wing Point Well	C-3786-A	21	13
Winslow Fox Well	C-4786-A	48	30
Winslow (Surface Water Right)	C-7943	196	0
<b>Total</b>		<b>3,456</b>	<b>2,564</b>

Capacity and yield in gallons per minute (gpm)

Source: Public Works Department

### ***Head of the Bay Wells***

Head of the Bay wells include seven wells located at the west end of Wyatt Avenue ranging in size from 6 to 10 inches in diameter, between 100 and 150 feet deep, and 40 to 100-gallon per minute capacities. The city uses wells number 1, 1A, 2, 3, 4, 5, and 6. Well water is pumped to a central 10,000-gallon tank at the Head of the Bay and then chlorinated and pumped into the upper zone. The booster pump has two 40-horsepower pumps, with a total capacity of 94 gallons per minute (gpm) that can be used to pump into the lower zone. The pumps are not currently used.

### ***Lower Weaver Well***

The Lower Weaver well is located at the northeast corner of Weaver Road NW and Shepard Way about 2,000 feet east of the Head of the Bay at a depth of 150 feet with a 12-inch casing located 95 feet below grade. The well can produce 60 gallons per minute (gpm) of water high in sulfates, and thus of limited drinking quality. The well is used to provide contractors with non-potable water.

### ***Sand Avenue Wells***

The Sands Avenue wells are located on the west side of Sands Avenue, about midway between High School Road NE and New Brooklyn Road. The first well, drilled in 1989, is 1,023 feet deep with an 8-inch casing rated to produce 200 gallons per minute (gpm). The second well, drilled in 1990, is 1,055 feet deep with a 12-inch casing rated to produce 600 gallons per minute (gpm) with a water right perfected in early 1995. Well water is chlorinated at the well sites and pumped to the high zone storage reservoirs.

### ***Fletcher Bay Well***

The Fletcher Bay well was purchased from Kitsap County PUD #1. Drilled in 1977, it is 1,550 feet deep with a 12-inch casing, pumped to a 40,000 gallon below-grade reservoir, and chlorinated on-site. Well water is pumped along New Brooklyn Road to the City's high zone storage tanks on the high school property. Water entering the Winslow area is measured at a meter near the intersection of Sportsman Club Road and New Brooklyn. The well also serves approximately 90 homes in the Fletcher Bay area.

### **Winslow Drinking Water Requirements**

Washington State Department of Health (DOH) source production standards require a minimum 800 gallons per day (0.556 gallons per minute) per equivalent residential unit (ERU) connection for areas to be provided with residential, commercial, and industrial potable water and fire flow. Maximum day demand is defined as the greatest volume of per day flow into the system for any day of the year.

<b>Dwelling units</b>	<b>2012</b>
Dwelling units existing	8,268
Dwelling units capacity	9,565
Difference over existing number	1,297
Difference over existing percent	16%
<b>Water supply requirements</b>	
Gallons per ERU	675
Supply requirement currently	5,580,900
Supply requirement at build-out	6,456,375

*\* ERU – equivalent residential unit per Washington State Department of Health guidelines for maximum day demand (MDD). Note – a standard of 600-675 gallons/ERU consistent with rural use patterns.*

### **Winslow Distribution**

Over 20 miles of 1 to 12 inch diameter asbestos cement, ductile iron, and PVC pipes distribute the City-owned water system. Most of the system is 6 inch or less asbestos cement pipe – at least 8 inch ductile iron and PVC pipe are used for replacement pipe projects and new system additions.

Pipe that is less than 6 inch in diameter creates pressure problems during high demand periods in the summer. Pressure problems are most evident in the eastern part of Winslow near Wing Point and the golf course where the pipe diameters are less than 4 inches, causing significant head loss in the system.

The water distribution system is divided into low and high pressure zones. The low pressure zone is located generally south of Knechtel Way, running along the bay including Wing Point and the Yeomalt Point area up to about 110 feet in elevation.

The high pressure zone is located north of the low zone and is supplied by gravity from the Commodore Lane Standpipes. The high pressure zone serves areas above 110 feet in elevation, and based on the minimum operating level of the Commodore Lane standpipes, can serve up to approximately 210 feet in elevation.

The two pressure zones are connected by pressure reducing valves on Madison, Eriksen, and Grow Avenue that allow the high zone to fill the lower zone reservoirs.

A hydraulic modeling and operational analysis of the Winslow water system identified the following deficiencies in the existing distribution system:

### **Hydraulic Deficiencies**

**Areas with elevations above 145 feet in the low zone** have pressures below the minimum 30 pounds per square inch (psi) requirement. Low zone reservoirs would have to remain full to maintain the 30 psi requirement in areas of the low zone with elevations between 145 to 160 feet.

**Areas in the high zone near the reservoirs** drop just below the 30 pounds per square inch (psi) requirement under 2012 peak hour demand conditions.

**Isolated residential areas** are unable to meet the 1,000 gallons per minute (gpm) fire flow requirement while maintaining 20 pounds per square inch (psi) system wide.

**Isolated light manufacturing areas** are unable to meet the 1,500 gallon per minute (gpm) requirement while maintaining 20 pounds per square inch (psi) system wide.

*Source: 2003 Winslow Water System Engineering Program & Analysis*

### **Winslow Storage**

Three storage reservoirs equalize water flows and provide standby supply in case of source interruption and fire flow demands. The two primary storage reservoirs with capacities of 1,000,000 and 1,500,000 gallons are located in the high zone next to Bainbridge Island High School.

In addition, a 10,000 gallon reservoir is located at the Head of the Bay Well Field at an elevation of 18 feet. The low elevation of the reservoir requires the water to be pumped from the reservoir into either the high or low pressure zones.

Reservoir storage	Total capacity	Useable capacity	Overflow elevation
High School	1,000,000	610,000	330
High School	1,500,000	0	330
Grand Avenue	300,000	160,000	230
Knechtel Way	200,000	0	230
Total	3,000,000	770,000	

Source: Draft 2004 Kitsap County Coordinated Water System Plan (CWSP) Update

### **Storage Requirements**

Water is stored to:

- 1) Equalize storage to provide water to meet peak flows during a maximum day;
- 2) Provide fire flow storage to meet fire demands; and
- 3) Standby storage in case of an interruption in the source of supply due to power failure, pipeline rupture, or contamination.

Storage requirements are determined by the variation in daily demand as well as the capacity of the pumps supplying the reservoirs. Storage requirements are also affected by the capacity of the water source, system reliability, and the peak day fluctuations in demand.

Equalizing Storage Requirements are typically 25% of the peak-day demand for diurnal water demand curves and pump capacities equal to the peak-day demand. As pump capacities increase relative to the peak demand, the equalizing storage requirements decrease. Regardless of pump capacity, however, most water storage systems function better with some equalizing storage with a minimum requirement of usually about 10% of the peak-day demand. For Winslow's water storage planning requirements, equalizing storage was assumed to be 20% of the peak-day demand.

Fire Flow Storage Requirements are defined by the Insurance Service Office (ISO) represented in Washington State by the Washington Survey & Rating Bureau. Water requirements for fire fighting purposes are specified in the rate of flow in gallons per minute for a minimum amount of time in minutes. The Bureau recommends storage be provided to supply the following fire flows:

- Rural/transitional areas— 500 gallons per minute for 60 minutes.
- Urban/suburban areas— 1,000 gallons per minute for 60 minutes.
- Schools— 3,000 gallons per minute for 180 minutes.
- Winslow— 3,000 gallons per minute for 180 minutes.

Insurance Service Office (ISO) standards are determined on a building or area basis and account for specific types of construction material, floor area, and other factors. Generally, peak fire flow requirements for buildings found within an urban area vary from 1,500 to 3,000 gallons per minute (gpm) for a 2-3 hour duration.

~~Standby Storage Requirements are estimated to meet demands during an emergency when a pump station is out of service, during failure of a transmission line, or during other interruption of supply. Washington State Department of Health (DOH) requirements for storage, when there is a single source of supply, are 800 gallons per dwelling unit. The standby storage requirement may be reduced per dwelling unit if there are multiple sources available in the event the single largest supply source is out of service, though the minimum requirement is 200 gallons per equivalent residential unit equivalent. Winslow's supply is sufficient to allow a storage requirement of 200 gallons per equivalent residential unit.~~

**Composite Requirements**

~~Bainbridge Island water storage requirements accounting for Washington State Department of Health (DOH) connection standards, equalization storage requirements, and minimum fire flow needs is 1,700,000 gallons. At the current time, Bainbridge Island has 3,000,000 gallons of usable storage capacity, or 1,300,000 more gallons than the storage requirement for the year 2012 needs.~~

~~However, due to limited pressure problems, only 275,000 gallons of this storage capacity can actually be considered available until or unless the City replaces the undersized distribution pipelines in the system.~~

<b>Dwelling Units</b>	<b>2012 Need</b>
Dwelling-unit capacity	4,000
<b>Water Storage Requirement</b>	
DOH at 200-gallons/unit	700,000
Equalization storage at +20% peak day flow	440,000
Fire flow at 3,000 gpm for 3 hours	540,000
Storage requirement currently	1,993,000
Existing storage capacity*	3,000,000
Storage requirement existing	(1,300,000)

~~\*Only 275,000 gallons of the 3,000,000 capacity is actually available to the system without significantly lowering pressures at the higher elevations of the storage zones.~~

~~Source: Draft 2004 CWSP~~

**Winslow Water System Plan Recommendations**

~~Many of the recommendations provided in the 1995 R.W. Beek and Associates study of the Water System Plan have been implemented.~~

~~Additional water storage should be added to the system. The preferred locations are above the downtown area in the low zone, and on a high knoll north of New Brooklyn Road between Fletcher Bay and Bainbridge High School in the high zone. The recommended high zone location would allow use of a lower profile ground level tank rather than a standpipe or elevated tank.~~

~~An 8-inch line should be installed along Sands Avenue between the well and New Brooklyn Road.~~

~~A wellhead protection program has been developed, including a hydrogeologic delineation of each well's influence zones.~~

~~Undersized (under 6-inch in diameter) distribution pipes should be replaced to correct pressure problems in the system and increase utilization of the existing water storage capacity, modeling results including:~~

- ~~• A 12-inch replacement line on Winslow Way between Grow and Ferncliff for downtown business district fire flow requirements;~~
- ~~• A 12-inch replacement line on Madison Avenue; and~~
- ~~• An 8-inch replacement line service Wing Point.~~

### **~~Water System Financing Costs and Charges~~**

~~Under state law, water utilities may charge new service hookups the full cost of the connection plus a system "participation fee" to purchase a share of the capital cost of the system.~~

### **~~Rockaway Beach Water System—Taylor Avenue Well~~**

~~In 1995 the City acquired a water system providing water to 65 residences at Rockaway Beach. As part of the acquisition, the City replaced the system's original well in a Superfund site. The replacement system was provided by the City with funding from a local improvement district (LID) and grants from the U.S. Environmental Protection Agency (EPA) and Washington State Department of Ecology (DOE).~~

~~The Taylor Avenue Well (Permit #G1-26704P) has rights for 34 acre-feet per year (Q<sub>i</sub>-afy) and is currently pumped at 80-gallons per minute (Q<sub>A</sub>-gpm).~~

### **~~All Other Water Systems~~**

~~The existing water systems were presumably established under state and local guidelines and, for the most part, provide high quality water at an adequate pressure and flow rate. Because of the number of systems on Bainbridge Island, it is concluded that there are systems on the Island that may not be in compliance with Department of Health requirements, and may not meet minimum requirements of pressure and reliability. It is also concluded that many 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."~~

Section 3. Appendix A of the Water Resources Element of the City of Bainbridge Island Comprehensive Plan is repealed.

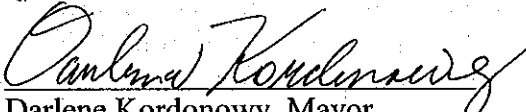
Section 4. If any section, sentence, clause or phrase of this ordinance shall be held to be invalid or unconstitutional by a court of competent jurisdiction, such invalidity or

unconstitutionality shall not affect the validity or constitutionality of any other section, sentence, clause or phrase of this ordinance.

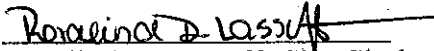
Section 5. This ordinance shall take effect on and be in force five (5) days from and after its passage, approval, and publication as required by law.

PASSED BY THE CITY COUNCIL this 28<sup>th</sup> day of November 2007.

APPROVED BY THE MAYOR this 30<sup>th</sup> day of November 2007.

  
Darlene Kordonowy, Mayor

ATTEST/AUTHENTICATE:

  
Rosalind D. Lassoff, City Clerk

FILED WITH THE CITY CLERK:	October 2, 2007
PASSED BY THE CITY COUNCIL:	November 28, 2007
PUBLISHED:	December 5, 2007
EFFECTIVE DATE:	December 10, 2007
ORDINANCE NO:	2007-24