STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

REPORT OF EXAMINATION FOR CHANGE TO A PORTION OF A WATER RIGHT CLAIM

TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

☒ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

☐ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CLAIM NUMBER
1888			158498

THIS CHANGE AUTHORIZATION SPLITS OFF A PORTION OF THE SUBJECT WATER RIGHT CLAIM. THE PORTION OF THE WATER RIGHT CLAIM SPLIT OFF BECAUSE OF THIS CHANGE WILL BE TRACKED AS CG1-158498CL@113 AND WILL BE REFERRED TO AS RECORD DK

RECORD DK

NAME
George E. and Susan Howison

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
4338 E. Mercer Way	Mercer Island	Washington	98040

PUBLIC WATERS TO BE APPROPRIATED

SOURCE
Lake Washington

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND (CFS)	MAXIMUM GALLONS PER MINUTE (GPM)	MAXIMUM ACRE FEET PER YEAR (AFY)
0.031	14	0.5

QUANTITY, TYPE OF USE, PERIOD OF USE

Irrigation of 0.23 acres – during irrigation season (April 15 through October 31)

Diverting from the lake under this water right record can only occur between 3:00 AM and 4:59 AM on ODD numbered days, during the irrigation season. The total gallons of water per year allowed to be used under this change are 162,925 gallons.

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION--WITHDRAWAL
Approximately 2,245 feet south and 475 feet west from the NE corner of Section 18, T24N, R5E, W.M.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, (E. OR W.) W.M.	W.R.I.A.	COUNTY
SE 1/4 NE 1/4	18	24N	5E	8	King

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)
1		Adams Lake Washington

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

King County Tax Parcel Number 0046100009 (0.38 acres) located in the SE 1/4 NE 1/4, Section 18, T24N, R5E, W.M. The following map shows the approximate location of Parcel Number 0046100009. Attachment 1 also shows the point of diversion and place of use.

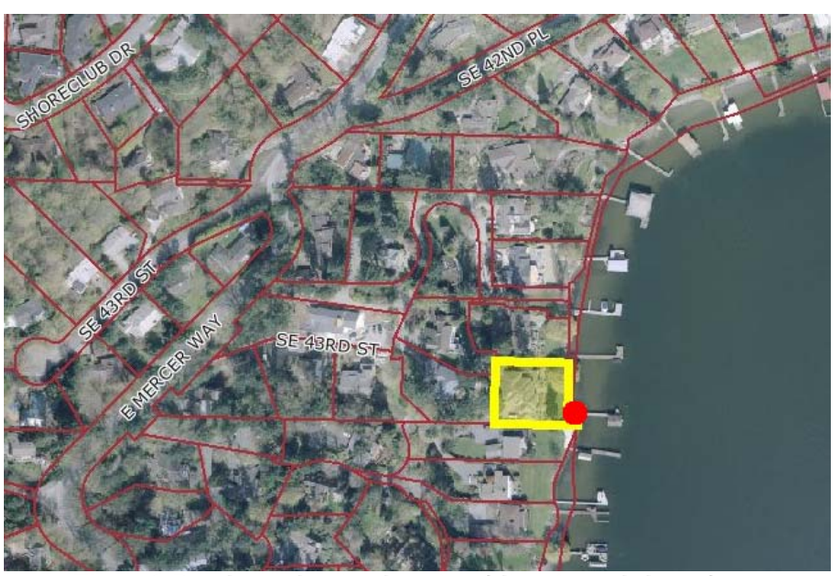


Figure 1. Parcel map showing the point of diversion and place of use.

Table 1. Summary of Water Right Documents Currently Relating to Water Right Claim 158498				
WATER RIGHT TRACKING NUMBER	**OWNER**	**QI (GPM)**	**QA (AFY)**	**DOCUMENT TYPE*** (Report of Examination or Certificate of Change)
Original 158498 before any changes	KCWD NO. 1	293.6 (tentative determination)	473.6 (tentative determination)	
158498B	ROBERT AND KATHLEEN TRIMBLE	19	0.7	ROE
158498C	CARL STORK	36	1.3	ROE
158498D	CITY OF KIRKLAND	142	41.8	CERTIFICATE of CHANGE
158498E	THOMAS J. MILLER	14	0.7	ROE
158498F	DAN NORDSTROM	18	1.3	ROE
158498G	SGT, LLC	20	1.0	ROE
158498H	GARY W. SERGEANT	20	1.4	ROE
158498I	CKK	19	0.7	ROE
158498J	FLEMING	24	1.0	ROE
158498K	TRIMBLE	13	0.4	ROE
158498L	THOMPSON	70	4.0	ROE
158498M	BRUCE JONES	20	0.73	ROE
158498N	GARY JONES	18	1.0	ROE
158498O	BETH POST	18	1.0	ROE
158498P	WILMA HAGEN	15	0.6	ROE
158498Q	RPW PARTNERSHIP	15	0.6	ROE
158498R	ROSS REVOCABLE TRUST	15	0.6	ROE
158498S	DORIS J. HART	15	0.27	ROE
158498T	ROBERT F. ABRAMSON, JR.	14	0.5	ROE
158498U	JAN & PRICILLA BREKKE RESIDENCE TRUST	19	2.8	ROE
158498V	ROBERT D. BISHOP	16	1.3	ROE
158498W	CASCADE TRUST, ELLEN CONEDERA DIAL, TRUSTEE	32.6	6.0	ROE
158498X	WILLIAM HUNT	10	0.4	ROE
158498Y	WILLIAM & GERI FRANTZ	18	1.0	ROE
158498Z	WILLIAM & GERI FRANTZ	19	1.4	ROE
158498AA	ELIZABETH FREEMAN	14	0.5	ROE
158498AB	CHARLES WALLACE	15	0.3	ROE
158498AC	SEATTLE YACHT CLUB	20	1.8	ROE
158498AD	WILLIAM BOETTCHER	18	1.0	ROE
158498AE	MAX A. GURVICH	18	0.3	ROE
158498AF	SCHIRO REVOCABLE TRUST	27	1.5	ROE
158498AG	SCHIRO REVOCABLE TRUST	22	2.0	ROE
158498AH	CITY OF MERCER ISLAND (PARKS DEPT.)	40	4.5	ROE
158498AI	RALPH AND KATHARINE BRINDLEY	17	0.6	ROE
158498AJ	OKI DEVELOPMENT	16	0.9	ROE
158498AK	OKI DEVELOPMENT	27	3.0	ROE
158498AL	RODNEY, JANICE OLSON	22	1.2	ROE
158498AM	P.A. HASHISAKI	14	0.5	ROE
158498AN	STEVEN SIMON	13.6	0.5	ROE
158498AO	DOUGLAS GAMBLE	25	1.0	ROE
158498AP	JAMES AND ELIZABETH REID	18	0.7	ROE
158498AQ	PETER AND JULIEANN BRAMAN	18	0.3	ROE
158498AR	JOHN TORODE	14	1.0	ROE
158498AS	RICK, JACQUE DOANE	18	1.0	ROE
158498AT	JASON SANDMAIER	22	1.2	ROE
158498AU	CITY OF BELLEVUE	90	10.1	ROE
158498AV	DONALD W LEVTHOLD	22	1.2	ROE
158498AW	EDWARD TORKELSON AND KATHY KEARNEY	15	0.3	ROE
158498AX	KIRK & JILL CALLISON	12	0.4	ROE
158498AY	MARY ELLEN & LAWRENCE HUGHES	18	2	ROE
158498AZ	ROBERT ANDREWS/DAWN BOVA	33	1.2	ROE
158498BA	DONALD ANDERSON	18	1.3	ROE
158498BB	SVEN & MELINDA BITNERS	10	0.2	ROE
158498BC	GATIS & JOANNA ROZE	20	0.7	ROE
158498BD	GARY SCHULZE	22	1.6	ROE
158498BE	JOSEPH & LAURIE BLATTNER	18	0.7	ROE
158498BF	ANNE MARIE PICKLES	22	1.2	ROE
158498BG	DONALD & DEANNE ETSEKSON	18	0.3	ROE
158498BH	MAREN GILLILAND	12	0.66	ROE
158498BI	EDWARD G PAVLIN	18	0.7	ROE
158498BJ	STEPHEN & CHRISTINA POORE	15	0.8	ROE
158498BK	TOWN OF YARROW POINT	49	11.4	ROE
158498BL	HUBERT & ALISON KOLDE	15	0.3	ROE

158498BM	ROBERT & MARGARET PHILBRICK	17	0.9	ROE
158498BN	SAMUEL LeCLERCQ	20	0.4	ROE
158498BO	DONALD L. NOTHSTEIN	15	0.6	ROE
158498BP	NICHOLAS & CAROL WESTLUND	14	0.8	ROE
158498BQ	O'NEIL FAMILY REVOCABLE TRUST	18	0.7	ROE
158498BR	EDWARD G PAVLIN	18	0.7	ROE
158498BS	WILLIAM P & MARGARET M DORSEY	18	0.3	ROE
158498BT	GEORGE W AKERS	18	0.3	ROE
158498BU	ALAN & LESLIE ROSEN	10	0.2	ROE
158498BV	ALFRED W. FINCH	20	1.1	ROE
158498BW	GLENHOME WATER ASSOCIATION	41	1.51	ROE
158498BX	DAVID SANDWITH	20	2.9	ROE
158498BY	JOHN T. AND LYNN B. HUTTENLOCHER	12	0.4	ROE
158498BZ	DAN M. MADIGAN JR.	14	0.5	ROE
158498CA	GORDON A. & PATRICIA COHEN	18	0.3	ROE
158498CB	MILTON T. ENGLISH	40	3.0	ROE
158498CC	WILLOUGHBY LLC	15.9	1.2	ROE
158498CD	THOMAS G. & SARMITE DAVIDSON	22	0.9	ROE
158498CE	HAL & JOAN GRIFFITH	20	1.5	ROE
158498CF	CARMEN A. SEPIC	14	0.8	ROE
158498CG	MICHAEL & SUSAN CERO	18	0.7	ROE
158498CH	TODD W. & POLLY E. GARDNER	18	1.0	ROE
158498CI	YARROW BAY YACHT BASIN & MARINA, LLC / MARINA SUITES, LLC	18	1.0	ROE
158498CJ	DIANE MARIE WILCOX	17	0.9	ROE
158498CK	HOWARD & LYNN BEHAR	20	0.4	ROE
158498CL	SANFORD & CYNTHIA LEVY	20	0.4	ROE
158498CM	RICHARD & LESLIE WEST	21	0.8	ROE
158498CN	ROBERT & DORIS LAWLER	21	0.8	ROE
158498CO	STEPHEN & ELIZABETH ROSENMAN	17	0.6	ROE
158498CP	BRUCE F. TALL	17	0.6	ROE
158498CQ	PHILIP & CLAUDIA ROBBS	22	1.2	ROE
158498CR	JOHN B. & LINDA MASON	14	0.5	ROE
158498CS	JOHN B. & LINDA MASON	14	0.5	ROE
158498CT	GIVAN RESIDENCE TRUST	16	0.6	ROE
158498CU	GERALD & PENELOPE PEABODY	17	0.6	ROE
158498CV	BENJAMIN CROPP	19	0.7	ROE
158498CW	PAUL & NANCY ETSEKSON	18	0.3	ROE
158498CX	CRAIG E. TALL	21	0.8	ROE
158498CY	TIMOTHY C. & JOANNA R. COLLINS	17	0.6	ROE
158498CZ	MATTHEW ANDERSON	14	0.5	ROE
158498DA	RICHARD A. GALANTI	25	1.4	ROE
158498DB	BRIAN & RANDY POLLOCK	20	0.4	ROE
158498DC	TERRY & SUSAN MOSS	14	0.5	ROE
158498DD	SUZANNE L. MCGILL AND MR. & MRS SINEGAL	21	1.2	ROE
158498DE	JAMES D. & JANET L. SINEGAL	27	2.0	ROE
158498DF	CANLIS FAMILY LIVING TRUST	21	0.8	ROE
158498DG	ELIZABETH L GALLAUGHER	20	0.4	ROE
158498DH	GARY FELDMAN	17	0.6	ROE
158498DI	LOWERY C MOUNGER, JR.	15	0.8	ROE
158498DJ	JANE A. MEYER	20	0.7	ROE
158498DK	GEORGE E & SUSAN HOWISON	14	0.5	ROE

* The instantaneous and annual rates given for Report of Examination documents are the maximum authorized; the values given for certificates of change are the values that have actually been reperfected after the change.

Table 2. Managing the Instantaneous Diversion Rate from Lake Washington Under Water Right Claim 158498

	Water Right Record with individual diversion rates in gpm in () and combined rate in gpm			
ODD DAYS				
Time	January 1–April 14	April 15–October 31	November 1–December 31	Comments
12:00–12:59 am	0	D(142), AU(90), AZ(33), CR(14), CS(14) 293	0	Only 0.6 GPM still available
1:00 – 1:59 am	0	D(142), AU(90), AZ(33), CR(14), CS(14) 293	0	Only 0.6 GPM still available
2:00 – 2:59 am	0	B(19), C(36), D(142), E(14), AU(82.6), 293.6	0	Fully Allocated
3:00 – 3:59 am	0	B(19), C(36), D(142), E(14), W(32.6), CC(15.9), DJ(20), **DK(14) 293.5**	0	Only 0.1 GPM still available
4:00 – 4:59 am	0	D(142), E(14), W(32.6), AR(14), AY(18), BC(20), CC(15.9), DJ(20), **DK(14) 290.5**	0	Only 3.1 GPM still available
5:00 – 5:59 am	0	D(142), E(14), W(32.6), AG(22), AN(13.6), AR(14), AY(18), BC(20), BJ(15) 291.2	0	Only 2.4 GPM still available
6:00 – 6:59 am	0	D(142), W(32.6), AD (18), AG(22), AJ(16),	0	Only 2.4 GPM

		AN(13.6), AR(14), AY(18), BJ(15) 291.2		still available
7:00 – 7:59 am	0	N(18),AD (18), AG(22), AJ(16), AR(14), AT(22), AY(18), BG(18), BJ(15), BL(15), BO(15), BS(18), BT(18), BU(10), CZ(14), DG(20) 271	0	
8:00 – 8:59 am	0	G(20), K(13), N(18), AD (18), AG(22), AJ(16), AK(27), AM(14), AO(25), AP(18), AS (18), AT(22), AX(12), AY(18),CZ(14)275	0	
9:00 – 9:59 am	0	G(20), K(13), N(18), Q(15),X(10), AG(22), AK(27), AL(22), AM(14), AO(25), AP(18), AQ(18), AS (18), AT(22),AX(12),AY(18)292	0	Only 1.6 GPM still available
10:00–10:59 am	0	G(20), O(18), Q(15), X(10), AF(27), AK(27), AL(22), AO(25), AS (18), CD(22) 204	0	
11:00–11:59 am	0	O(18), AF(27), AK(27), AL(22), BI(18), BR(18), BV(15), CD(22) 167	0	
12:00–12:59 pm	0	O(18), AF(27), AK(27), BI(18), BR(18), BV(15), CD(22) 145	0	
1:00 – 1:59 pm	0	AK(27), DC(14), DE(27) 68	0	
2:00 – 2:59 pm	0	BY(12), DC(14), DE(27) 53	0	
3:00 – 3:59 pm	0	BY(12), DE(27) 39	0	
4:00 – 4:59 pm	0	BZ(14), CY(17), DE(27) 58	0	
5:00 – 5:59 pm	0	BK(49), BZ(14), CY(17) 80	0	
6:00 – 6:59 pm	0	R(15), W(32.6), BK(49), CU(17), DD(21) 134.6	0	
7:00 – 7:59 pm	0	R(15), W(32.6), BK(49), CU(17), DD(21) 134.6	0	
8:00 – 8:59 pm	0	W(32.6), BK(49), DA(25), DD(21) 127.6	0	
9:00 – 9:59 pm	0	W(32.6), BK(49), BW(41), DA(25) 147.6	0	
10:00–10:59pm	0	W(32.6), BK(49), BW(41), DA(25) 147.6	0	
11:00–11:59 pm	0	D(142), W(32.6), AU(90), BN(20) 284.6	0	Only 9 GPM still available

EVEN DAYS				
Time	January 1 – April 14	April 15 – October 31	November 1 – December 31	Comments
12:00 – 12:59 am	0	D(142), AH(40), AU(90), BX(20) 292	0	Only 1.6 GPM still available
1:00 – 1:59 am	0	D(142), AH(40), AU(90), BX(20) 292	0	Only 1.6 GPM still available
2:00 – 2:59 am	0	D(142), AH(40), AU(90), BX(20) 292	0	Only 1.6 GPM still available
3:00 – 3:59 am	0	D(142), AC(20), AH(40), BX(20), CC(15.9), CK(20), CL(20) 277.9	0	
4:00 – 4:59 am	0	D(142), F(18), Y(18), Z(19), AC(20), AH(40), BX(20), CC(15.9) 292.9	0	Only 0.7 GPM still available
5:00 – 5:59 am	0	D(142), F(18), Y(18), Z (19), AC(20), AH(40), AW(15), BB(10), 282	0	
6:00 – 6:59 am	0	D(142), F(18), P(15), T(14), Y(18), Z(19), AC(20), AI(17), CW(18) 281	0	
7:00 – 7:59 am	0	F(18), L(70), P(15), T(14), V (16,) Y(18), Z(19), AB(15), AC(20), AI(17), BD(22), BF(22), BO(15) 281	0	
8:00 – 8:59 am	0	H(20), I(19) J(24), L(70), M(20), V(16), BA(18), BD(22), BF(22), CA(18), CQ(22), DB(20) 291	0	Only 2.6 GPM still available
9:00 – 9:59 am	0	H(20), I(19) J(24), L(70), M(20), V(16), AV(22), BA(18), BD(22), BE(18), BF(22), CQ(22) 293	0	Only 0.6 GPM still available
10:00–10:59 am	0	H(20), U(19), V(16), AE(18), AV(22), BA(18), BD(22), BE(18), BX(20), CQ(22) 195	0	
11:00–11:59 am	0	H(20), U(19), AV(22), BA(18), BX(20), CE(20), CT(16) 135	0	
12:00–12:59 pm	0	U(19), BM(17), BP(14), BQ(18), BX(20), CE (20), CT(16), DF(21) 145	0	
1:00 – 1:59 pm	0	U(19), BM(17), BP(14), BQ(18), CE(20), CX(21), DF(21), DI(15) 145	0	
2:00 – 2:59 pm	0	U(19), BM(17), BP(14), CE(20), CH(18) CJ(17). CP(17), CX(21), DI(15) 158	0	
3:00 – 3:59 pm	0	U(19), CH(18), CI(18), CJ(17), CN(21), CO(17), CP(17), DI(15) 142	0	
4:00 – 4:59 pm	0	U(19), AA(14), CH(18), CI(18), CJ(17), CN(21), CO(17) 124	0	
5:00 – 5:59 pm	0	U(19), AA(14), BK (49), CI(18), DH(17) 117	0	
6:00 – 6:59 pm	0	S(15), BK(49), CG(18), CM(21),	0	

		DH(17) 120		
7:00 – 7:59 pm	0	BH(12), BK(49), CG(18), CM(21) 100	0	
8:00 – 8:59 pm	0	BH(12), BK(49), CB(40) 101	0	
9:00 – 9:59 pm	0	BH(12), BK(49), CB(40), CF(14), CV(19) 134	0	
10:00–10:59 pm	0	BK(49), CB(40), CF(14), CV(19) 122	0	
11:00 – 11:59 pm	0	D(142), AU(90), CB(40), CF(14) 286	0	Only 7.6 GPM still available
*****No time period may exceed 293.6 gpm*****				

DESCRIPTION OF PROPOSED WORKS

The water supply system will consist of a screened intake pipe, located off a dock in Lake Washington, a pump, a meter, an irrigation control system and irrigation piping. The system will comply with the requirements of this report of examination and the requirements of the Department of Fish and Wildlife.

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE:	COMPLETE PROJECT BY THIS DATE:	WATER PUT TO FULL USE BY THIS DATE:
January 15, 2010	January 15, 2011	January 15, 2014

REPORT

BACKGROUND INFORMATION

On May 16, 1974, the Department of Ecology received a water right claim form from the King County Water District No. 1 signed by John R. Adams on May 12, 1974. This water right claim was assigned number 158498 by Ecology. The details of the information attested to on the water right claim form are contained in the section below.

On April 21, 2008, the Department of Ecology accepted a change application from George E. & Susan Howison on water right claim 158498. Ecology assigned this change application the tracking number CG1-158498CL@113.

Attributes of the Original Claim

Name on Claim:	King County Water District No. 1
Priority Date:	1888
Quantity Claimed	
Instantaneous Quantity:	900 gallons per minute (gpm)
Annual Quantity:	1440 acre-feet per year (afy)
Quantity Presently Used	
Instantaneous Quantity:	250 gallons per minute (gpm)
Annual Quantity:	400 acre-feet per year (afy)
Point of Withdrawal:	NW¼, Section 17, Township 25 North, Range 5 East, W.M.
Purpose of Use:	Municipal Supply
Period of Use:	Continuously
Place of Use:	Replat of Yarrow Section 18, Township 25 North, Range 5 E. W. M.

Proposed Change Made to a Portion of the Water Right Claim

Name of Applicant:	George E. & Susan Howison
Date of Application for Change:	April 21, 2008
Point of Diversion:	SE¼ NE¼, Section 18, Township 24 North, Range 5 East, W.M.
Purpose of Use:	Irrigation
Period of Use:	During the Irrigation Season (April 15 through October 31)
Place of Use:	King County Tax Parcel No. 0046100009 (Lot 1, Adams Lake Washington) in the SE¼ NE¼, Section 18, Township 24 North, Range 5 East, W.M.
Notice of Publication:	Mercer Island Reporter on June 18, 2008 and June 25, 2008
Protests:	None received during the statutory 30-day protest period.

Purpose of the Change Application

King County Water District No. 1 (WADOH Water System Id. 38650) has entered into an interlocal agreement with the City of Bellevue under which the City has assumed the District's water system and service area and the District will eventually dissolve. The District must sell it assets, including water rights, to pay the costs of upgrading the water system and interconnecting with the City of Bellevue's water system. The property that contained the original points of withdrawal for this water right claim was sold to the City of Kirkland, minus the water right. The District has adopted a resolution offering to sell shares of its water rights to its existing residents and, to the extent of availability, to other lakefront property owners for irrigation of lawns and gardens.

INVESTIGATION

In considering this application, my investigation included, but was not limited to research and/or review of:

- The State Water Code
- The State Environmental Policy Act (SEPA)
- Washington State Department of Fish and Wildlife Comments
- Existing water rights on file for King County Water District No. 1 and the applicants property
- Notes from site visits on January 13, 2006, February 23, 2006, and October 17, 2008

- Correspondence from Thomas M. Pors (attorney for King County Water District No. 1), and Robert Trimble (current president of the board for King County Water District No. 1)
- Topographic maps, local area maps, and aerial photos
- Report of Hydrogeologic Services, Hydrogeologic Assessment, King County Water District No. 1 Well Field, Kirkland, Washington (GeoEngineers, November 7, 1995)
- Report, Wellhead Protection Study, Kirkland Well Field (GeoEngineers, March 3, 2000)
- Hydrologic Report for Change Applications Relating to the Transfer of Water Originally Withdrawn Under Ground Water Claim 158498 and Being Changed to Points of Diversion out of Lake Washington for Irrigation (Andrew B. Dunn, January 23, 2006)
- State of Washington Irrigation Guide, 1985, amended 1990 and 1992
- Guidance 1210, Department of Ecology - Water Resources Program, Effective Date 10/11/2005
- *A Point in Time, A History of Yarrow Point, Washington* (by the citizens of Yarrow Point, 2002)
- *Yarrow a Place, An Historical Commentary of Lives and Times During the Early Development of Yarrow Point* (Jeanne L. Whiting, 1976)

State Water Code

Chapters 90.03, 90.14, and 90.44 RCW authorize the appropriation of public water for beneficial use and describe the process for obtaining water rights including the process to amend or change existing rights. Laws specifically governing the water right permitting process are RCW 90.03.250 through 90.03.340 and RCW 90.44.060. Changes or amendments to these rights are covered primarily under RCW 90.03.380 and RCW 90.44.100.

State Environmental Policy Act (SEPA)

This water right change application is categorically exempt under SEPA WAC 197-11-305 and WAC 197-11-800(4).

Washington Department of Fish and Wildlife Comments

On August 8, 2005, the Department of Ecology received a letter from the WDFW stating that, "Lake Washington is inhabited by sockeye, Chinook, coho, steelhead, cutthroat, and numerous native and non-native fish species." It also requested that this water right should be subject to established lake levels, if any. The new water right holder would need to obtain a Hydraulic Project Approval (HPA) from the Washington State Department of Fish and Wildlife for work performed in or near the water and during that process they would require them to screen their intake structure. This letter received from WDFW was designed to apply to all change applications of this nature for water right claim 158498.

Existing Rights for the Applicant

No water right documents were identified on the Howison property prior to this water right change.

Other Water Rights in the Vicinity

The identification of nearby water rights is undertaken so that the hydrogeologist/report writer is aware of those nearby water rights when determining if the new point of diversion will impair any of those rights. Due to the size of Lake Washington, and the pumping rate of the proposed diversion, it was deemed unnecessary to identify other water rights in the vicinity since this pumping rate will not cause a measurable change in the water level of Lake Washington and can therefore automatically be determined that it will not cause impairment.

Site Visit

A site visit was conducted on October 17, 2008. The applicants were not home. The existing irrigation system currently uses city water and is being converted to use water from the lake. The proposed diversion line will be located off a dock on the property. I noted the location with GPS. I left a copy of the Department of Fish and Wildlife requirements for water intakes from Lake Washington with the applicant and they should contact DFW to make sure the system is constructed in accordance with these requirements.

Topographic and Local Area Maps

The Kirkland USGS 1:24,000 scale topographic map and the King County Assessor's maps and aerial photos, accessed through their iMap website (http://www.metrokc.gov/gis/mapportal/iMAP_main.htm#) were used during this investigation.

Tentative Determination as to Extent and Validity of Water Right Claim 158498

A Tentative Determination Analysis for the original water right claim, prior to any portion of the water right claim being sold off, is attached to this report (see Attachment 2). It concluded that 293.6 gpm and 473.6 acre-feet per year were perfected for year round municipal use and no portion of that was lost due to statutory relinquishment or common law abandonment.

Annual Quantity Determination

George and Susan Howison plan on irrigating turf (0.08 acres) and landscape plants (0.15 acres) on a total of 0.23 acres. The State of Washington Irrigation Guide (1992 update) calculates the crop irrigation requirement, with a 2-year return interval (every other year the crop will experience a shortage of water), for pasture/turf at the Seattle-Tacoma station as being 20.02 inches per year. In this guide, the irrigation of pasture/turf runs from April through September.

$$TIR = \frac{CIR}{E} * 100$$

TIR – Total Irrigation Requirement
CIR – Crop Irrigation Requirement
E – Irrigation System Efficiency in percent

For Pop-up impact sprinklers, estimates for efficiency are 60-85% with 75% being the average (Ecology Water Resources Program Guidance 1210). An efficiency of 75% was assumed for this calculation.

$$TIR = \frac{20.02 \text{ inches}}{75} * 100$$

TIR = 26.69 inches

On the website for the Irrigation Water Management Society (http://www.iwms.org/seattle_area.asp), it estimates that the amount of water needed for landscape plant irrigation is approximately 70% of that required for turf. Taking 70% of 26.69 inches equates to a total irrigation requirement of 18.68 inches for the landscape plant acreage.

Turf: Using a TIR of 26.69 inches, the volume pumped to irrigate 0.08 acres of turf is calculated as 0.18 afy.

Landscape Plants: The volume of water needed to irrigate 0.15 acres with a TIR of 18.68 inches is calculated as 0.23 afy.

Total Irrigation: The calculated irrigation requirement for the entire 0.23 acres of irrigation is 0.41 afy. The applicant purchased 0.5 afy from King County Water District #1 for irrigation. The requested 0.5 afy for irrigation of turf and landscape plants is based solely on the instantaneous pumping rate and duration of pumping utilized by the system.

Final Acre-Feet Per Year: The applicant proposes to irrigate from April 15 to October 31 on ODD number days during the irrigation season. The annual quantity cannot be greater than 0.5 acre feet. The acre feet assigned to the final Certificate of Change to G1-158498CL@113 will be the actual number of afy that have been perfected by the applicant (this final annual quantity may be less than what was requested). This final annual quantity will be based upon meter readings and will take into account any limitations on the pumping rate, and days and hours of pumping. All unperfected quantities will be returned to the state.

Irrigation Season Determination

The applicant requested an irrigation season of April 15th through October 31st. This time period brackets the dates when a water right for irrigation purposes can be exercised. In looking at the Seattle-Tacoma and Seattle U of W stations in the State of Washington Irrigation Guide (1985 and 1992), the period of time during which irrigation is required to satisfy the CIR for a variety of crops starts in April and runs into October. Given the weather conditions in the Seattle area, it is not likely that an irrigator will have to irrigate over this entire duration in a typical year. However, the proposed irrigation season of April 15th through October 31st seems reasonable to set the outer bounds on the irrigation season and account for possible needs during drought years.

A graph of historic water use (http://www.seattle.gov/util/About_SPU/Water_System/Water_Supply/COS_004041.asp) by Seattle Public Utilities was analyzed to determine when water use occurs for irrigation, which should be represented as an increase in use compared with background winter-time in-house domestic use. This analysis suggests that the proposed irrigation season will capture the observed high water use period.

Given the management scheme that has been set up for the number of anticipated water right changes to water right claim 158498, all irrigation rights derived from this claim must have the same season of use. Therefore, it makes sense to set an irrigation season that will capture all extremes of weather, plants, and irrigation needs.

Discussion of Annual Volume Available for Change from Year Round Use to Seasonal Use

This change application proposes to change the purpose of use from municipal supply to irrigation. The irrigation season, as defined by the change application is April 15th through October 31st. This is a period of 200 days, which equates to approximately 55% of the year. So, applying that percentage to the 473.6 acre-feet per year, we arrive at 259.5 acre-feet per year that could be utilized during the period of April 15th through October 31st. The remainder (214.1 acre-feet per year) was historically utilized during the non-irrigation season months and would not be available for use during the irrigation season.

Hydrology and Hydrogeology (Summarized from Dunn, 2006)

Greater Lake Washington, including the Lake Washington Ship Canal, Salmon Bay, and Lake Union, is approximately 22,250 acres in size and is separated from the marine waters of Puget Sound by the Hiram M. Chittenden Locks operated by the U.S. Army Corps of Engineers.

The points of withdrawal utilized by the District were located at the western edge of the Vashon Advance Outwash aquifer. Ground water flowing in this aquifer that is not captured by the wells discharges as springs to form the headwaters of Carillon Creek. Carillon Creek proceeds to flow down hill through Carillon Point and finally into Lake Washington.

All of the historic points of withdrawal and this proposed point of diversion are located in WRIA 8.

FINDINGS

In accordance with state law, the following considerations must be addressed during the process of evaluating this change request:

- Will the change create an enlargement of the original right?
- Does the new point of diversion tap the same source as the original right?
- Will the change cause impairment to other existing rights?
- Will the public interest be impaired?
- Is the new purpose of use considered a beneficial use of water?
- Is the season of use changing?
- What are the protestors concerns?

Potential for Enlargement

This water right claim will not be enlarged because of this change application as long as the rate and volume of water withdrawn/diverted after the change application is not greater than what was historically perfected by King County Water District No. 1. That means that under this claim, including portions that are broken off of the original claim through change applications, the rate of water being pumped from Lake Washington can not exceed 293.6 gpm at any point in time and the amount of water pumped during the irrigation season of April 15 through October 31 can not exceed 259.5 acre-feet per year.

Same Source of Water

Diverting water from Lake Washington, including the Lake Washington Ship Canal, Salmon Bay, and Lake Union, should be considered to be the same source as withdrawing water from the wells used by the KCWD No. 1 for the following reasons:

1. Both the wells and Lake Washington are located in WRIA 8.
2. Ground water not captured by the wells, under this water right claim, will naturally discharge from the aquifer, flow down a short surface water drainage named Carillon Creek, and ultimately discharge into Lake Washington.

Impairment of Other Rights

Since the water that was originally captured by the wells and piped to Yarrow Point for domestic use will now naturally discharge from the aquifer and flow into Lake Washington. Lake Washington will not experience any decrease in the amount of water entering it, being stored in it, or draining from it. Therefore, this water right change will not cause impairment of any existing rights.

Public Interest

No detriment to the public interest could be identified during the investigation of this application for change.

Beneficial Use

According to RCW 43.27A.020, RCW 90.14.031, and RCW 90.54.020, irrigation is considered a beneficial use of water.

Season or Period of Use

Since the purpose of use is being changed from a year round use (municipal) to a seasonal use (irrigation) the season of use is automatically changed to reflect this.

Protests

No protests were received during the statutory 30-day protest period.

RECOMMENDATIONS

I recommend the request for change to a portion of Ground Water Claim 158498 be approved, subject to the provisions listed below:

The amount of water granted is a maximum limit that shall not be exceeded and the water user shall be entitled only to that amount of water within the specified limit that is beneficially used and required.

Metering Provision:

An approved measuring device shall be installed and maintained for the diversion of the source identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", Chapter 173-173 WAC.

Water use data shall be recorded twice a month. Data shall be maintained by the property owner and promptly submitted to Ecology upon request. Recording and retention of data by the water right holder are required to inform the water users about how much water is used, to prove reperfection of the water right after the change, when the water is used, and to assist users in efficient water management.

Chapter 173-173 WAC describes the requirements for data accuracy, device installation and operation, and information reporting. It also allows a water user to petition Ecology for modifications to some of the requirements. Installation, operation, and maintenance requirements are enclosed as a document entitled "Water Measurement Device Installation and Operation Requirements”.

Department of Ecology personnel, upon presentation of proper credentials, shall have access at reasonable times, to the records of water use that are kept to meet the above conditions, and to inspect at reasonable times any measuring device used to meet the above conditions.

Washington Department of Fish and Wildlife provision:

The intake shall be screened at all times in accordance with Department of Fish and Wildlife screening criteria. This water right is issued subject to Washington Department of Fish and Wildlife Hydraulic Project Approval.

Shoreline Management Act:

Nothing in this authorization shall be construed as excusing the permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations including those administered by local agencies under the Shoreline Management Act of 1971.

Irrigation scheduling:

This water right can only divert water from Lake Washington between 3:00 AM and 4:59 AM on ODD numbered days, during the irrigation season. To prevent an enlargement of the water right, the water right holder shall install an automatic irrigation timer capable of restricting the time of pumping from Lake Washington to the period described above.

Department of Ecology personnel, upon presentation of proper credentials, shall have access at reasonable times, to the automatic irrigation timer to verify that water is only being diverted during the time period indicated above.

If it can be shown that the requested change has a detrimental effect on existing rights, it shall be the responsibility of the water right holder to mitigate for this impact and/or alter or cease withdrawal of water.

The applicant is advised that a certificate of change will issue for only that quantity of water that has been diverted and applied to actual beneficial use. Such quantity applied to actual beneficial use shall not exceed the quantity specified in this report of examination and will be calculated based on the best information available to Ecology, including metering data.

A certificate of change will not be issued until a final investigation is made.

CONCLUSIONS

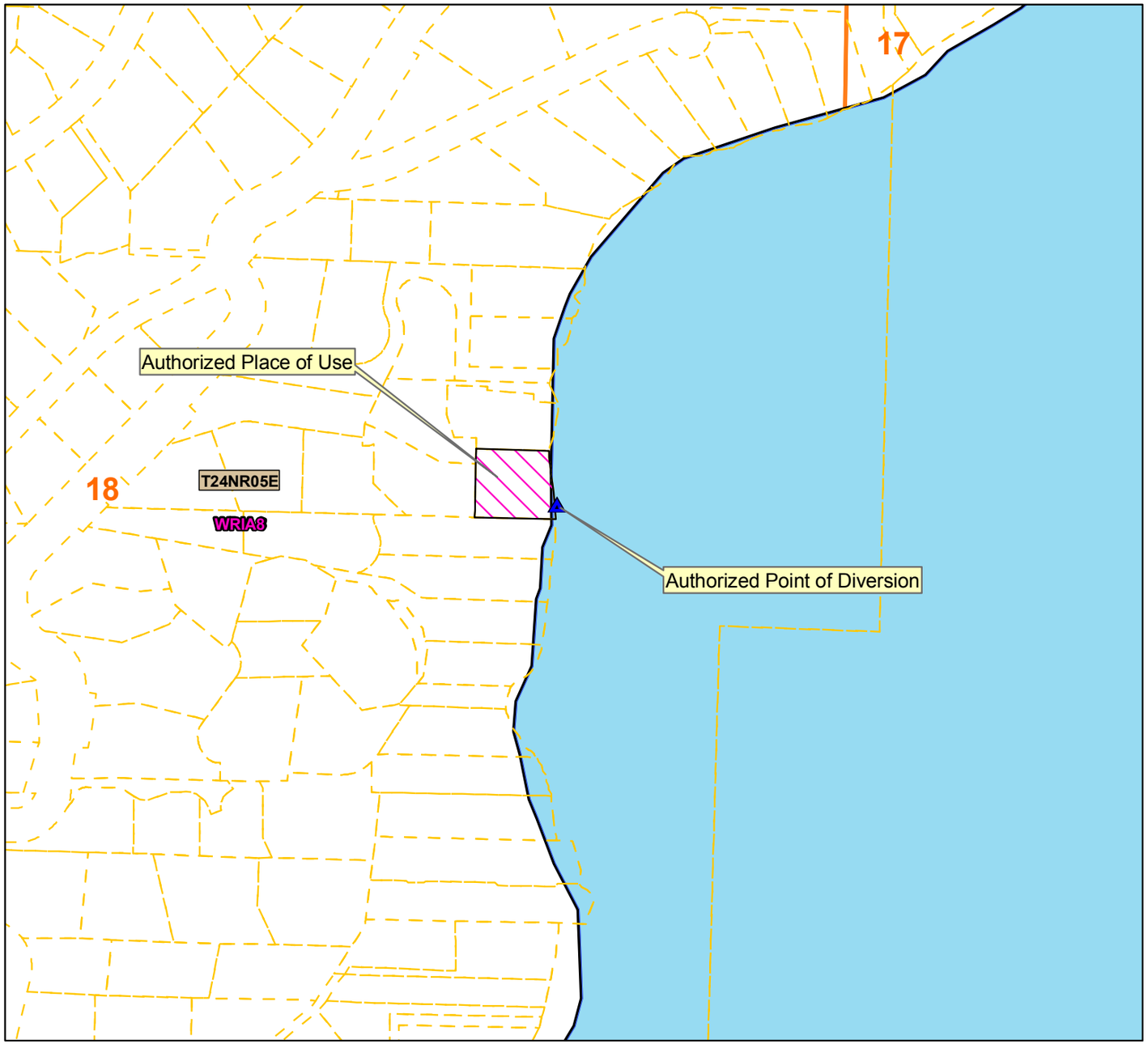
In accordance with chapters 90.03, 90.14, and 90.44 RCW, I conclude that Water Right Claim 158498 is in good standing and is eligible for change. I have determined that the change to Water Right Claim 158498 will not enlarge the claim and the water use will be beneficial. Approval of this change request will not cause impairment of existing rights or be detrimental to the public interest. Based on these conclusions, this change request should be approved subject to existing rights and the above-indicated provisions and a certificate of change should be issued once the change has been perfected.

REPORT BY: _____ DATE: __March 24, 2009_____

Melisa Snoeberger

George & Susan Howison
Water Right Number CG1-158498CL@113
Sec. 18, T 24N R 05E W.M.
WRIA 8 - King County

DEPARTMENT OF ECOLOGY
State of Washington



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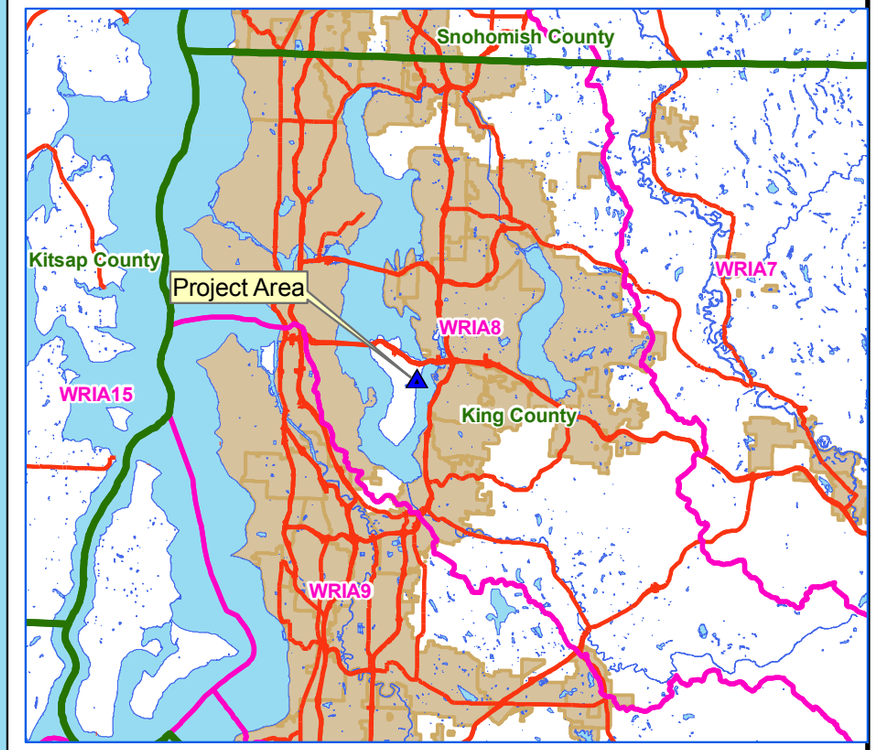

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Legend

- County
- WRIA
- cities
- Highways
- Local Roads
- Townships
- Sections
- Authorized Point of Diversion
- Authorized Place of Use

Place of use and point(s) of diversion/withdrawal are as defined on the cover sheet under the headings, 'LOCATION OF DIVERSION/WITHDRAWAL' and 'LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED.'

Attachment 1