

Cane Engineering

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Memo

To: Jeff Aschenbrenner, Elgerwood Maintenance Association

From: Gregory R. Cane, P.E. *GRC*

Date: July 21, 2015

Re: Water System Consolidation Study
Data Gathering Phase

Cc: Camano Water Association
King Water Co.

This is in follow-up to our meeting of April 22, 2015, wherein the Water System Consolidation Study was reviewed with several water systems in the south-central Camano Island area. As I reflected at that meeting, the project will have two primary phases. The first phase (see PowerPoint slide from the presentation, below) will include data gathering. The second phase will be for analysis and report preparation. With your cooperation, I would like to begin the onsite data gathering phase. It is my hope to visit two or three water systems during each site visit.

During my site visit, I would appreciate the opportunity to talk to one or more of your Board members, as well as your Water Manager (if available).

At your earliest convenience I would appreciate if you could complete the attached questionnaire; it will help me greatly in being better prepared prior to my site visit. I have included a SASE for your convenience. Please drop the questionnaire in the mail when it is completed. We would like to have these back by August 7.

My thanks in advance. If you have questions, or need additional information, please don't hesitate to contact me at 360-279-0615, or greg@caneengineering.com.

Data Gathering Phase

- ✓ Initial Information From Sentry Website
- ✓ Forward to Systems w/ Questionnaire
 - Questionnaire:
 - Accuracy of Sentry Info?
 - Ideas on Resource Sharing, Interties, Etc.?
 - Suggested Days for Site Visit?
 - Maps / Reports Available?
 - OK for Photos?
- ✓ Site Visit
 - Can do Three Systems Each Day
 - Borrow Maps / Reports for Copying

Questionnaire:

- 1) The Sentry website of the Washington State Department of Health (WSDOH) (<https://fortress.wa.gov/doh/eh/portal/odw/si/Intro.aspx>) has excellent water system data. It sometimes, however, has outdated or inaccurate information. I have attached the Water System File Report and Sentry information for your water system (Enclosures **E-1** to **E-6**). Please review the information and let me know if there are inaccuracies in the data.

- 2) Future cooperation between water systems in our area could take many forms. It will, as a minimum, hopefully increase the amount of mutual aid amongst nearby systems (“We’ve got an emergency and our reservoir is dry; can we borrow your generator?”). Additionally, however, there may be opportunities over the long-term to work on capital improvement projects which would serve the needs of two or more water systems. Are there capital projects that you foresee that could be a shared value to two, or more, systems (For example, two components which can often be shared by adjacent systems are reservoir storage and well source. Do you anticipate that your water system may make significant improvements to either of these facilities in the next five years)?

- 3) It looks like I will be on Camano Island for site visits on the afternoons of Wednesday, August 12; Friday, August 14 and Thursday, August 27. Would one of these dates work better for your schedule? Once we have the initial responses back from the water systems, I will contact you so that we can refine the date/time.

- 4) One of my jobs for this project will be to see how adjacent water systems might function if combined. Such questions as :
 - If a water main is installed to intertie two adjacent water systems, what will be the pressure and volume available to the water customers?

or

- If the well from Water System A were used to jointly serve Water Systems A and B, what size pipe would be needed to share this well supply between the two systems?

It would greatly help my work in answering these types of questions if I could receive copies of previously prepared plans, maps, and reports related to your water system. If these are available, I could make copies and return the originals to you. Or, if you prefer, there is some money in the project budget available for copying. We could reimburse your system for reproduction fees if you would like to make copies yourself. (Please let me know the approximate cost of the reproduction prior to making the copies). Does your water system have copies of plans, maps and reports that could be made available for my use?

- 5) During my visit, it would be very useful for me to take photographs of the various water system components. Would this be acceptable?

Water System File Report

ELGERWOOD MAINTENANCE ASSOCIATION

ID# 09131 ISLAND COUNTY

Contact: SANDRA BODAMER, CONTACT

Ph: (360) 678-5336 (Current as of 7/1/2015)

Print Date: July 01, 2015

Page 1 of 1

Type	Project Name	Sub Date	Approval Date	Construct Date	Sub #	Lots Created	Comments
	INITIAL PROJECT APPROVAL				81-1501		March 24, 1981 - Original system approved with water softener for removal of iron (1.5 mg/l). Revised system approved with greensand filtration for iron and high turbidity. Neither piece of equipment was noted as installed on the as-builts. As-builts indicated two booster pumps only. As-builts were accepted w/o questioning why treatment was not put in place.
	SYSTEM MODIFICATION				90-1401		November 5, 1990 - 3 pressure tanks added to system
	TELEPHONE MEMO				91-1401		Ozonation/filtration installed in 1991 but there are no submittals or approvals for system. Ozone system was by Environmental Water Solutions. Memo indicates that EWS would be contacted for the engineering design criteria - there is no indication in the file that this was ever done.
	INITIAL REVIEW 4/24/96				96-1310	44	SOURCE: WELL, 356' DEEP, 5HP 50 GPM @317' TDH; FE = 1.5, MN = 0.055 MG/L TREATMENT: APPROVED BUT NOT INSTALLED, MOST RESIDENCES HAVE INSTALLED HOME TREATMENT UNITS. DISTN: (1) 2 HP CONTINUOUS RUN PUMP WITH FLOW VALVE BACK TO RESERVOIR 50 GPM, (2) 3 HP FF PUMPS 275 GPM @ 69" TDH EA, ALTERNATING; 4", 6" PVC PIPE, ALL HYDRANTS ON 6" MAIN, 44 LOTS

Approved Capacity: 47 Existing Connections: 46 Total Lots Created: 44

- B Engineering Report AND Plans and Specs
- CC Corrosion Control
- CT Contact Time Study
- ER Engineering Report
- GROUP B Group B Approval
- GW1 Groundwater under the influence of surface water
- OM Operations and Maintenance Manual



WATER FACILITIES INVENTORY (WFI) FORM

ONE FORM PER SYSTEM

Quarter: 2
 Updated: 03/04/2014
 Printed: 7/19/2015

WFI Printed For: On-Demand
 Submission Reason: Annual Update

RETURN TO: Central Services - WFI, PO BOX 47822, Olympia WA 98504-7822

1. SYSTEM ID NO.	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
09131 0	ELGERWOOD MAINTENANCE ASSOCIATION	ISLAND	A	Comm

6. PRIMARY CONTACT NAME & MAILING ADDRESS	7. OWNER NAME & MAILING ADDRESS	8. Owner Number 008938
SANDRA V. BODAMER [CONTACT] KING WATER CO PO BOX 2243 OAK HARBOR, WA 98277	ELGERWOOD MAINTENANCE ASSOCIATION JEFF ASCHENBRENNER 1992 ELGER BAY RD - PMB# 506 CAMANO ISLAND, WA 98282	TITLE: PRESIDENT
STREET ADDRESS IF DIFFERENT FROM ABOVE	STREET ADDRESS IF DIFFERENT FROM	
ATTN ADDRESS CITY STATE ZIP	ATTN ADDRESS CITY STATE ZIP	

9. 24 HOUR PRIMARY CONTACT INFORMATION	10. OWNER CONTACT INFORMATION
Primary Contact Daytime Phone: (360) 678-5336	Owner Daytime Phone: (360) 387-1856
Primary Contact Mobile/Cell Phone: (360) 969-1019	Owner Mobile/Cell Phone:
Primary Contact Evening Phone: (xxx) xxx-xxxx	Owner Evening Phone: (xxx) xxx-xxxx
Fax: E-mail: XXXXXX	Owner Fax Phone: E-mail: XXXXXX

WAC 246-290-420(9) requires that water systems provide 24-hour contact information for emergencies.

11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)
<input type="checkbox"/> Not applicable (Skip to #12) <input type="checkbox"/> Owned and Managed SMA NAME: <u>KING WATER COMPANY</u> SMA Number: <u>128</u> <input checked="" type="checkbox"/> Managed Only <input type="checkbox"/> Owned Only

12. WATER SYSTEM CHARACTERISTICS (mark all that apply)
<input type="checkbox"/> Agricultural <input type="checkbox"/> Hospital/Clinic <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Commercial / Business <input type="checkbox"/> Industrial <input type="checkbox"/> School <input type="checkbox"/> Day Care <input type="checkbox"/> Licensed Residential Facility <input type="checkbox"/> Temporary Farm Worker <input type="checkbox"/> Food Service/Food Permit <input type="checkbox"/> Lodging <input type="checkbox"/> Other (church, fire station, etc.): <input type="checkbox"/> 1,000 or more person event for 2 or more days per year <input type="checkbox"/> Recreational / RV Park

13. WATER SYSTEM OWNERSHIP (mark only one)	14. STORAGE CAPACITY (gallons)
<input checked="" type="checkbox"/> Association <input type="checkbox"/> County <input type="checkbox"/> Investor <input type="checkbox"/> Special District <input type="checkbox"/> City / Town <input type="checkbox"/> Federal <input type="checkbox"/> Private <input type="checkbox"/> State	32,000

15 Source Number	16 SOURCE NAME	17 INTERTIE	18 SOURCE CATEGORY										19 USE	21 TREATMENT						22 DEPTH	23 CAPACITY (GALLONS PER MINUTE)	24 SOURCE LOCATION					
			WELL	WELL FIELD	WELL IN A WELL	SPRING	SPRING IN OPEN FIELD	SEA WATER	SURFACE WATER	RANNEY / INF.	OTHER	PERMANENT		SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION			FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN INTERVAL IN FEET	1/4, 1/4 SECTION	SECTION NUMBER
S01	AGA695 Well		X											X	Y		X	X			X	341	57	NW NW	32	31N	03E

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID 09131 0	2. SYSTEM NAME ELGERWOOD MAINTENANCE	3. COUNTY ISLAND	4. GROUP A	5. TYPE Comm
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	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE CONNECTIONS	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)	0	46	47
A. Full Time Single Family Residences (Occupied 180 days or more per year)	44		
B. Part Time Single Family Residences (Occupied less than 180 days per year)	2		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied more than 180 days/year	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied less than 180 days/year	0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	0
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	0
28. TOTAL SERVICE CONNECTIONS		46	47

29. FULL-TIME RESIDENTIAL POPULATION	
A. How many residents are served by this system 180 or more days per	110

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?	1	1	1	1	1	1	1	1	1	1	1	1
B. How many days per month are they present?	5	5	5	5	5	5	5	5	5	5	5	5

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?						2	2	2	2			
B. How many days per month is water accessible to the public?						30	31	31	30			

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	1	1	1	1	1	1	1	1	1	1	1	1

35. Reason for Submitting WFI:

Update - Change
 Update - No Change
 Inactivate
 Re-Activate
 Name Change
 New System
 Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: _____

DATE: _____

PRINT NAME: _____

TITLE: _____



Pre - Adequacy Data Summary

As of: 7/19/2015

Page 1 of 2
Report Date: 7/19/2015

Administrative Data

"Mailing Information:"

ELGERWOOD MAINTENANCE ASSOCIATION , 09131

Sandra V Bodamer

(360) 678-5336

King Water Co

PO Box 2243

Oak Harbor, WA 98277

Last WFI Update:3/4/2014

Group.....: A

Type.....: Comm

DOH Region.....: Northwest

County.....: ISLAND

Connections:

Active Connections.....: 46

Approved Connections.: See approved numbers - 47

Ownership:

Owner Type.: Other

Owner Name.: ELGERWOOD MAINTENANCE ASSOCIATION

Operating Permit Description

Current and Valid Operating Permit (Yes/No) - Yes

Permit Category Color.: Green

DOH Recommendation:

Green: Systems in this category are considered adequate for existing uses and new service connections up to the number of approved service connections.

Water Quality Violations

Incident Date Severity

*** No Current Violation Found for Water System ***

Operator Certification Requirement

In Compliance

Water System Plan Requirement

Not Required

Compliance Actions

Action	Status	Issue Date	Reason
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*** No Current Compliance Actions Found ***

Regional Staff Comments

Disclaimer

This is a DOH Pre - Adequacy Data Summary for this water system that is based on information available at this time. Other entities such as Local Building, Planning and Health Jurisdictions, or financial institutions have alternative authority to make final decisions involving development, building permits and financing.

**** End of Report ****

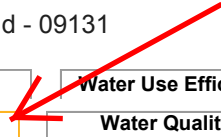


Division of Environmental Health Office of Drinking Water

Help

Individual System View - ELGERWOOD MAINTENANCE ASSOCIATION - Water System Id - 09131

Compliance Actions	Operating Permits	Operators	Reports	Water Use Efficiency
General Information	Source Information	Samples	Exceedances	Water Quality Monitoring Schedule



Type	Source ▲	DOE Source	Collect Date	Analyte	Result Quantity	Units	Test Panel	Analyte Group	Sample Number	Lab Number
MCL2	01	06G249	4/20/2004	COLOR	50.0	CU	IOC	IOC	04995	046
MCL2	01	06G249	4/20/2004	IRON	3.05	mg/L	IOC	IOC	04995	046
MCL2	01	06G249	4/20/2004	MANGANESE	0.060	mg/L	IOC	IOC	04995	046
MCL2	01	06G249	4/3/2001	IRON	1.94	mg/L	IOC	IOC	02641	046
MCL2	01	06G249	4/3/2001	MANGANESE	0.054	mg/L	IOC	IOC	02641	046
MCL2	01	06G249	4/22/1998	IRON	0.920	mg/L	IOC	IOC	02658	046
MCL2	01	06G249	7/8/1996	IRON	1.56	mg/L	IOC	IOC	02586	046
MCL2	01	06G249	7/8/1996	MANGANESE	0.060	mg/L	IOC	IOC	02586	046
MCL2	01	06G249	7/30/1993	COLOR	25.0	CU	ICHEM	IOC	02788	046
MCL2	01	06G249	7/30/1993	IRON	0.870	mg/L	ICHEM	IOC	02789	046
MCL2	01	06G249	7/30/1993	IRON	1.29	mg/L	ICHEM	IOC	02788	046
MCL2	01	06G249	7/30/1993	MANGANESE	0.079	mg/L	ICHEM	IOC	02788	046
MCL2	01	06G249	1/1/1990	IRON	0.930	mg/L	ICHEM	IOC	01026	081
MCL2	01	06G249	3/16/1987	COLOR	75.0	CU	ICHEM	IOC	02931	081
MCL2	01	06G249	3/16/1987	IRON	1.20	mg/L	ICHEM	IOC	02931	081
P	Distribution		9/16/2009	TOTAL COLIFORM	Present	/100ml	COLI_AP	MICRO	30629	164
P	Distribution		6/5/2006	TOTAL COLIFORM	Present	/100ml	COLI_AP	MICRO	14341	164
P	Distribution		1/6/2003	TOTAL COLIFORM	Present	/100ml	COLI_AP	MICRO	92519	058
P	Distribution		6/24/2002	TOTAL COLIFORM	Present	/100ml	COLI_AP	MICRO	84857	058
P	Distribution		6/24/2002	TOTAL COLIFORM	Present	/100ml	COLI_AP	MICRO	84859	058
P	Distribution		6/19/2002	TOTAL COLIFORM	Present	/100ml	COLI_AP	MICRO	84728	058
P	Distribution		6/19/2002	TOTAL COLIFORM	Present	/100ml	COLI_AP	MICRO	84730	058
P	Distribution		6/19/2002	TOTAL COLIFORM	Present	/100ml	COLI_AP	MICRO	84731	058
P	Distribution		6/17/2002	TOTAL COLIFORM	Present	/100ml	COLI_AP	MICRO	84645	058
P	Distribution		5/7/2002	TOTAL COLIFORM	Present	/100ml	COLI_AP	MICRO	83034	058

Records 1 - 25 of 30

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