Paradise Estates Water System
ID No. 66125-T
Small Water System Management Program

Executive Summary

Water System Overview

Paradise Estates is an older, well-established Community Group A Water System serving 197 connections on the south shore of Mason Lake in Mason County. Of those connections, approximately 112 connections are used as year-round residences, and 85 connections are for vacation homes. The system is supplied by two active wells (S02 and S03), both of which pump to storage reservoirs, and one emergency-only source (S01), physically disconnected from the system. The two storage reservoirs provide 114,000 gallons of storage and are equipped with float switches to control the cycling of the S02 and S03 well pumps. Pressurization is provided by a booster station equipped with three pumps. No water treatment is provided. In 2009, the distribution system was replaced and service meters were installed. Since the initiation of service meter reading in May 2010, the system has billed its customers with an inclining block rate structure to encourage water conservation.

Purpose of the SWSMP

The Paradise Estates Water System Small Water System Management Program (SWSMP) has been prepared in accordance with Washington Administrative Code (WAC) 246-290-105 and the Washington Department of Health (DOH) guidelines. As noted by the DOH, this document may serve several purposes including providing:

- a central filing system for numerous water system records,
- a process to evaluate present and future system deficiencies and improvements necessary for continued water system operation, and
- a list of operation and maintenance duties that can be reviewed, used, and improved as necessary by existing and future water system personnel so they may effectively manage and operate the water system.

The SWSMP addresses 18 elements of water system operation. Some of the important issues identified during the preparation of this SWSMP are summarized briefly below.

Element 6 – Cross Connection Control Program

The 2007 sanitary survey report for the Paradise Estates Water System notes that a Cross Connection Control Program is needed. The Cross Connection Control Program documents have been prepared by Northwest Water Systems and copies are included in the SWSMP. The policy statement needs to be signed. Please return a signed copy of the policy statement to NWS.

Element 11 – Water Right

- **Quarterly monitoring of static water levels.** In accordance with the provisions of the water right certificate, the state requires the monitoring of quarterly static water levels in the water system's wells. A copy of the water right certificate is included in Element 11 of the SWSMP.

- **Proof of appropriation.** As stated in a letter from the State of Washington Department of Ecology dated April 29, 2002, the Paradise Estates Water System must contact the Department of Ecology by November 1, 2011 if the requirement for full beneficial use of this water has not been met. On or before November 1, 2011, the Paradise Estates Water System

must submit a letter to the Department of Ecology noting that full beneficial use of this water has not been met because full construction of Paradise Estates has not been completed.

Element 14 – Water Conservation Program

- **Distribution system leakage (DSL).** Based on data available since the replacement of the distribution system and installation of service meters (May-December 2010), the calculated DSL ranges from 10.4% to 29.0%. System leakage of this volume seems inconsistent with a one-year-old, pressure-tested distribution system. It is possible that one or both of the source meters may not be functioning properly. After the source meters are calibrated, DSL will be re-calculated to determine if the leakage is actually occurring in the distribution system. Leak detection will be initiated if necessary. Recordkeeping and estimation of authorized water consumption uses will continue to account for waterline flushing.
- **Public meeting to set water conservation goal.** As part of the SWSMP, a water conservation program has been prepared for the Paradise Estates Water System. This program is consistent with the state Water Use Efficiency (WUE) requirements (chapter 246-290 Washington Administrative Code (WAC). In addition to the preparation of this water conservation program, the water system is also required to set its conservation goals through a public process (WAC 246-290-830(4)(a)) at least every 6 years. If the Paradise Estates Water System has not already set a conservation goal with public input, a public meeting should be scheduled for that purpose. The WUE program included in the SWSMP lists a goal and one measure. The goal and measure may need to be modified depending on the outcome of the public input process for establishing a goal.
- **Annual report due July 1.** The WUE requirements also include annual WUE reporting. The annual report must be submitted through the Department of Health online reporting database and distributed to customers by July 1 every year. Information about the amount of water pumped, amount of water consumed, and progress toward achieving water savings goals must be included in the annual report.

Element 16– System Improvements

- **Screened vent on S02.** As noted in the 2007 sanitary survey of the water system, a screened vent is needed on S02.

Element 17 - Budget

A six-year budget has been prepared for inclusion in the SWSMP (see Element 17). With the information currently available regarding income and expenses, it would appear that expenses are lower than anticipated and the reserve funds are growing at a faster rate than expected. It is our understanding that Paradise Service Associates plans to prepare a capital improvement program for inclusion in the next update to the SWSMP in 2016. At that time, a more detailed financial analysis can be completed.

Table of Contents

Water Facilities Inventory

The Water Facilities Inventory (WFI) for Paradise Estates was revised. See the attached WFI to see the changes made. The updated WFI was emailed to Brad Brooks, WFI Program Coordinator for DOH Southwest Drinking Water Operations on May 11, 2011.

Peggy Ulman

From: Peggy Ulman [Peggy@nwwatersystems.com]
Sent: Wednesday, May 11, 2011 9:55 AM
To: 'Brad.Brooks@doh.wa.gov'
Subject: Request for WFI Update Paradise Estates Water System (66125-T)
Attachments: Paradise Estates 66125T WFI Update.pdf

Brad Brooks
WFI Program Coordinator
DOH – Southwest Drinking Water Operations

Please find attached a request for an update to the WFI for the Paradise Estates water system (ID # 66125-T).

Thank you,

Peggy Ulman
Engineering Support / Planner
Northwest Water Systems
360-876-0958

WATER FACILITIES INVENTORY (WFI) FORM

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

ONE FORM PER SYSTEM

Quarter: 2
Updated: 07/22/2010
Printed: 5/10/2011
WFI Printed For: On-Demand
Submission Reason: Source Update

RETURN TO: Southwest Regional Office, PO Box 47823, Olympia, WA, 98504

1. SYSTEM ID NO.	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
66125 T	PARADISE ESTATES	MASON	A	Comm

6. PRIMARY CONTACT NAME & MAILING ADDRESS
JONATHAN (JON) P. WILEY [SMA 119]
NORTHWEST WATER SYSTEMS, INC.
PO BOX 123
PORT ORCHARD, WA 98366-0123

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS 7245 BETHEL BURLEY RD SE
CITY PORT ORCHARD STATE WA ZIP 98367

7. OWNER NAME & MAILING ADDRESS
PARADISE SERVICE ASSN
261 E SHORE DR
GRAPEVIEW, WA 98546

8. Owner Number 004412
TITLE:OWNER CONTACT

STREET ADDRESS IF DIFFERENT FROM
ATTN
ADDRESS
CITY STATE ZIP

9. 24 HOUR PRIMARY CONTACT INFORMATION	10. OWNER CONTACT INFORMATION
Primary Contact Daytime Phone: (360) 876-0958	Owner Daytime Phone: (360) 426-3972
Primary Contact Mobile/Cell Phone: (360) 340-8058	Owner Mobile/Cell Phone:
Primary Contact Evening Phone: (xxx) xxx-xxxx	Owner Evening Phone: (xxx) xxx-xxxx
Fax:(360) 876-4196 | E-mail: jon@nwwatersystems.com	Owner Fax Phone: | E-mail: kat-a-lak@lycos.com

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

11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)

- ☐ Not applicable (Skip to #12)
- ☐ Owned and Managed
- ☒ Managed Only
- ☐ Owned Only

SMA NAME: Northwest Water Systems, Inc. SMA Number: 119

12. WATER SYSTEM CHARACTERISTICS (mark all that apply)

☐ Agricultural	☐ Hospital/Clinic	☒ Residential
☐ Commercial / Business	☐ Industrial	☐ School
☐ Day Care	☐ Licensed Residential Facility	☐ Temporary Farm Worker
☐ Food Service/Food Permit	☐ Lodging	☐ Other (church, fire station, etc.):
☐ 1,000 or more person event for 2 or more days per year	☒ Recreational / RV Park	

13. WATER SYSTEM OWNERSHIP (mark only one)

☒ Association	☐ County	☐ Investor	☐ Special District
☐ City / Town	☐ Federal	☒ ~~Private~~	☐ State

14. STORAGE CAPACITY (gallons)
114,000

15	16	17	18										19		20	21					22	23	24			
	SOURCE NAME	INTERTIE	SOURCE CATEGORY										USE			TREATMENT					DEPTH		SOURCE LOCATION			
Source Number	LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELL	SPRING	SPRING FIELD	SPRING IN SURFACE WATER	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	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	WELL #1 AHA991		X												X	Y						116	42	SE NE	08	21N	02
S02	WELL #2-P AAE349		X										X			Y						~~240~~ 218	178	SE NE	08	21N	02
S03	WELL #3 ALH962		X										X			Y						174	60	SE NE	08	21N	02

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
66125 T	PARADISE ESTATES	MASON	A	Comm

	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	156	167
A. Full Time Single Family Residences (Occupied 180 days or more per year)	~~156~~	112	
B. Part Time Single Family Residences (Occupied less than 180 days per year)	~~0~~	85	
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~~ 1	3	0
28. TOTAL SERVICE CONNECTIONS		159	167

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or more days per ~~170~~ 280

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?	50	50	50	50	100	100	100	100	100	50	50	50
B. How many days per month are they present?	15	15	15	15	30	30	30	30	30	15	15	15

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?				~~750~~	~~1500~~	~~1500~~	~~3000~~	~~3000~~	~~1500~~	~~750~~		
B. How many days per month is water accessible to the public?				~~30~~	~~30~~	~~30~~	~~30~~	~~30~~	~~30~~	~~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?					2	2	2	2	2			
B. How many days per month are they present?					15	15	15	15	15			

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: [signature]

DATE: MAY 10, 2011

PRINT NAME: KELLY AUSIP

TITLE: OPERATION SUPERVISOR

Water Quality Monitoring Program

Task	Completed
Attach copy of the Water Quality Monitoring Report	3/3/2010
Transfer testing dates to other system documents	
Agreement to revise testing schedule upon new follow-up testing requirements or waivers	
Attach copy of Coliform Monitoring Plan	3/1/2011

Water Quality Data Attached:

Parameter	Source 01 (emergency use) [1]	Source 02 (primary)	Source 03 (primary)
	Date Tested		
Coliform (see management file)	NA	ongoing	ongoing
Nitrate	7/31/2007	7/22/2010	7/22/2010
Inorganic Chemical Analysis	8/17/2004	10/21/2003	7/23/2009
Volatile Chemical Analysis	7/18/2006	4/21/2009	10/7/2008
Synthetic Chemical Analysis		10/7/2003 11/18/2003	
Radionuclide Analysis	10/4/2005	6/9/2009	6/9/2009

[1] Source 01 was transferred from primary use to emergency use after the construction of Source 03 in 2007.

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

W/C TASK

Water Quality Monitoring Report for the Year 2011

System: PARADISE ESTATES PWSID: 66125 T Report Date: 03/02/2011
Contact: JONATHAN (JON) P. WILEY Group: A - Comm County: MASON Region: SOUTHWEST
SMA Id: 119 SMA Name: Northwest Water Systems, Inc.

MAR 17 2011

Part 1: List of Active Sources with Water Quality Monitoring Requirements

DOH Source#	Name	Type	Use	Susceptibility Rating
S02	WELL #2-P AAE349	Well	Permanent	Moderate
S03	WELL #3 ALH962	Well	Permanent	Unknown

Part 2: Sampling Schedule for the Year 2011

Coliform Sampling (Routine)	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
	1	1	1	1	1	1	1	1	1	1	1	1

* Indicates the requirement is an exception from WAC 246-290.

- If the coliform (bacteriological) sampling schedule listed at the bottom of the current Water Facilities Inventory (WFI) form for your system is different from the schedule listed above, follow the schedule on the current WFI.
- Samples must be collected from representative points throughout the distribution system.
- Repeat samples are required following an unsatisfactory sample. In addition, collect a sample from each operating groundwater source
- A minimum of 5 routine samples are required the month following one or more unsatisfactory samples in accordance with your system's Coliform Monitoring Plan.

Lead and Copper Distribution Sampling

- Lead and copper samples must be collected from indoor faucets within the distribution system after the water has sat unused in the pipes for at least 6 hours but no more than 12 hours.
- Sample faucets should be flushed with cold water the evening prior to collecting the sample.
- Part 2 indicates the month in which samples should be collected. Part 4 indicates the total number of sample required.
- If you are required to sample annually or once every 3 years, samples must be collected between June and September.

Chemical Sampling Requirements

- Source water chemical samples must be taken from a location as near to the source as possible, but after all treatment, and before entering the distribution system.
- Nitrate, nitrite and arsenic are included as part of a complete IOC.

Month	Source	Monitoring Requirement	Test Panel
January		*No source chemical sampling required this month*	
February		*No source chemical sampling required this month*	
March		*No source chemical sampling required this month*	
April		*No source chemical sampling required this month*	

Water Quality Monitoring Report for the Year 2011

Month	Source	Monitoring Requirement	Test Panel
May		*No source chemical sampling required this month*	
June		*No source chemical sampling required this month*	
July	S02	NITRATE	NITRATE
July	S03	NITRATE	NITRATE
August		LEAD / COPPER	LCR
September		*No source chemical sampling required this month*	
October		*No source chemical sampling required this month*	
November		*No source chemical sampling required this month*	
December		*No source chemical sampling required this month*	

Part 3: State Waivers

- Automatically granted to all sources based on DOH assessment of conditions within the state.
- No waiver application, or fee required.
- State waivers granted for the 2011 - 2013 compliance period are listed in Part 4.

Part 4: Water Quality Monitoring Frequency

- Although waivers may be granted for your system, there may be some monitoring required as a condition of the waiver your system was granted.

Monitoring Group	Test Panel	Sample Location	Schedule/Status
Asbestos	ASB	Distribution	State Waiver Thru Dec 2019
Bacteriological	Coli	Distribution	See routine sample schedule in part 2
Dioxin	Dioxin	All sources	State Waiver Thru Dec 2013
Endothall	Endo	All sources	State Waiver Thru Dec 2013
EDB and other soil fumigants	Fumigant	S02	State Waiver Thru Dec 2013
EDB and other soil fumigants	Fumigant	S03	State Waiver Thru Dec 2013
Glyphosphate	Glyphs	All sources	State Waiver Thru Dec 2013
Herbicides	Herbs	S02	1 sample between Jan 2011 - Dec 2013
Herbicides	Herbs	S03	1 sample between Jan 2011 - Dec 2013
Insecticides	Insect	S02	1 sample between Jan 2011 - Dec 2013
Insecticides	Insect	S03	1 sample between Jan 2011 - Dec 2013
Inorganic Contaminants	IOC	S02	1 sample between Jan 2011 - Dec 2013
Inorganic Contaminants	IOC	S03	1 sample between Jan 2011 - Dec 2013
Lead Copper *	LCR	Distribution	LCR 1 Set of 5 samples between Jan 2009 - Dec 2011
Nitrate *	NIT	S02	Collect 1 sample(s) every 1 year
Nitrate *	NIT	S03	Collect 1 sample(s) every 1 year

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

Water Quality Monitoring Report for the Year 2011

MAR 17 2011

Monitoring Group	Test Panel	Sample Location	Schedule/Status
General Pesticides	Pest1	S02	1 sample between Jan 2011 - Dec 2013
General Pesticides	Pest1	S03	1 sample between Jan 2011 - Dec 2013
Diquat	Diquat	All sources	State Waiver Thru Dec 2013
Volatile Organic Contaminants	VOC	S02	1 sample between Jan 2011 - Dec 2013
Volatile Organic Contaminants	VOC	S03	1 sample between Jan 2011 - Dec 2013

* *These contaminant monitoring groups do not have waiver options under the SDWA.*

Water Quality Monitoring Report for the Year 2011

Part 5: Regional Water Quality Monitoring Contact

Southwest Regional Office

For Further information call the Southwest Regional Office Sophia Petro Phone: (360) 236-3046

For questions regarding Disinfection ByProducts (DBP) monitoring, contact: Regina Grimm, p.e. (360) 236-3035

Special Note

For Group A Community Systems Only: Your Consumer Confidence Report, summarizing the results of your 2010 water quality monitoring requirements is due before July 1, 2011 . For further information visit www.doh.wa.gov/ehp/dw/Our_Main_Pages/consumer.htm or contact the CCR Coordinator at your Regional Office.

JONATHAN (JON) P. WILEY
PARADISE ESTATES
PO BOX 123
PORT ORCHARD WA 98366-0123

Coliform Monitoring Plan

Water System Name: **Paradise Estates**
System ID Number: **66125T**
Population Served: **280**
Active Connections: **197**
Storage Capacity: **114,000** gallons
Treatment Process: **None** Purpose of treatment: **n/a**

Source:
DOH Source No: **S02+S03**
Category: **Well**
Well Depth: **S02 = 218 ft**
S03 = 174 ft

Number of Routine Samples Required by Regulations:		1/month	Number of Sample Sites Needed to Represent the Distribution System:	4
		Site Number	Location	
SITE GROUP I	Routine	X1	510 E. Mason Lake Drive	By Corner of Garage
	Repeat	X2	30 E. Shore Drive	By Driveway
	Repeat	X3	181 E. Shore Drive	Northside of driveway
	Repeat	X4	381 E. Olympic Drive	By Carport on Lot Line
	Repeat	X5	Pumphouse	Sample Tap
SITE GROUP II	Routine	X2	30 E. Shore Drive	By Driveway
	Repeat	X1	510 E. Mason Lake Drive	By Corner of Garage
	Repeat	X3	181 E. Shore Drive	Northside of driveway
	Repeat	X4	381 E. Olympic Drive	By Carport on Lot Line
	Repeat	X5	Pumphouse	Sample Tap
SITE GROUP III	Routine	X3	181 E. Shore Drive	Northside of driveway
	Repeat	X1	510 E. Mason Lake Drive	By Corner of Garage
	Repeat	X2	30 E. Shore Drive	By Driveway
	Repeat	X4	381 E. Olympic Drive	By Carport on Lot Line
	Repeat	X5	Pumphouse	Sample Tap
SITE GROUP IV	Routine	X4	381 E. Olympic Drive	By Carport on Lot Line
	Repeat	X5	Pumphouse	Sample Tap
	Repeat	X1	510 E. Mason Lake Drive	By Corner of Garage
	Repeat	X2	30 E. Shore Drive	By Driveway
	Repeat	X3	181 E. Shore Drive	Northside of driveway

For maximum coverage of the system, the routine samples will be rotated as indicated below:

Month	Site	Month	Site	Month	Site
January	X1	May	X1	September	X1
February	X2	June	X2	October	X2
March	X3	July	X3	November	X3
April	X4	August	X4	December	X4

If an unsatisfactory sample is taken at a site, four additional samples will be taken at the following locations: (1) the unsatisfactory site; (2) 1 upstream (within 5 active connections); (3) 1 downstream (within 5 active connections); and (4) 1 from source or reservoir. Three samples required the following month for each routine positive at: (1) the unsatisfactory site; (2) 1 upstream (within 5 active connections); and (3) 1 downstream (within 5 active connections).

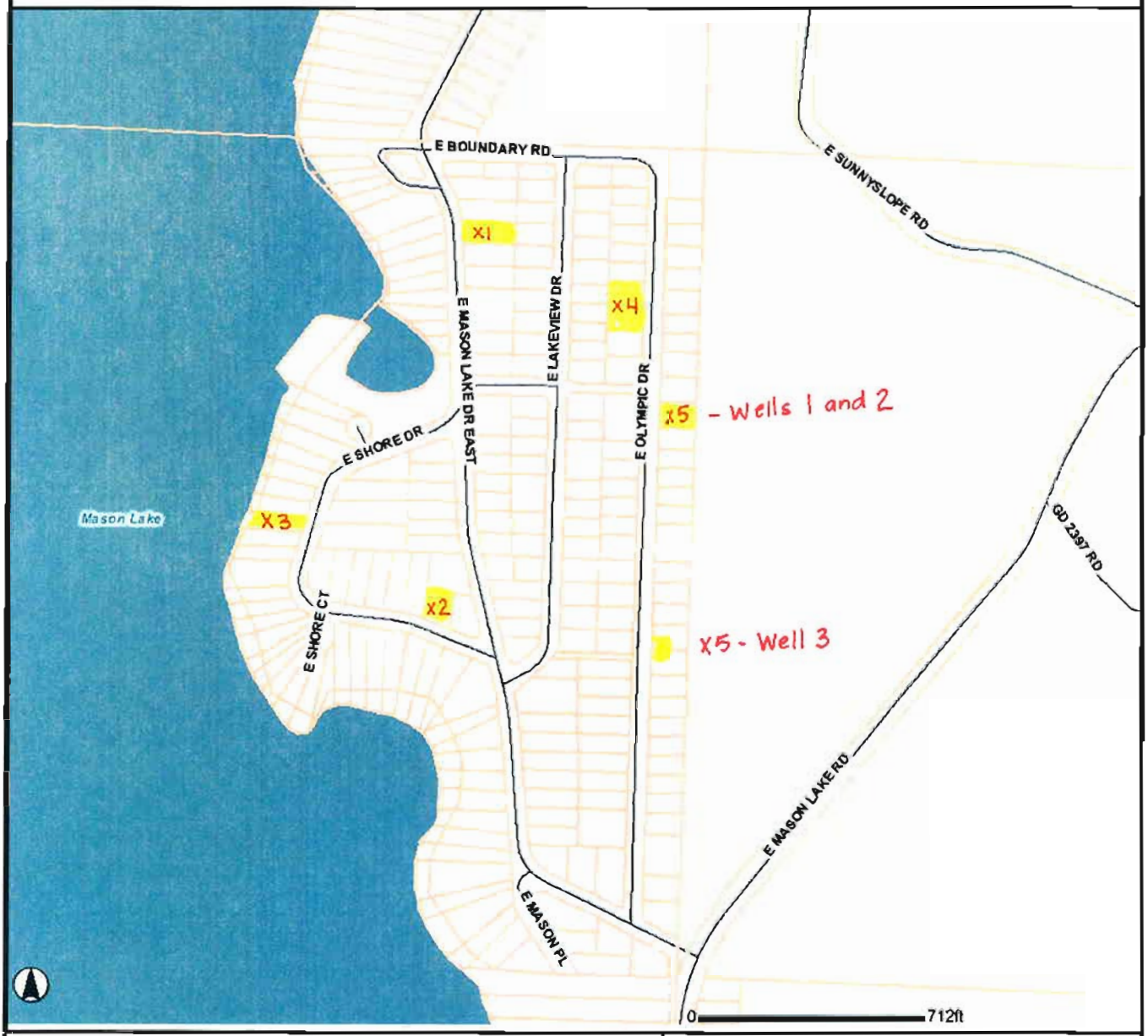
Users shall be notified of positive acute samples within 24 hours, and of non-acute samples within 30 days. Nofity DOH of acute samples immediately. Public notification requirements and forms are on file with NWS.

Report Prepared By: N W Water Systems
24-hr Phone #: 360-876-0958

DOH 24-hr Emergency 1-877-481-4901
DOH Business 1-360-236-3030
DOH web: www.doh.wa.gov/ehp/dw

Reviewed by: _____
Date: _____

Paradise Estates



LEGEND

Roads
Highways
Rivers & Streams
Parcels
Sections
Townships
Federal Lands
City of Shelton
County Boundary (DNR)
Commissioner Districts
Lakes
Puget Sound & Major Lakes

X1 510 E. Mason Lake Drive
X2 30 E. Shore Drive
X3 181 E. Shore Drive
X4 381 E. Olympic Drive

Washington State Department of Health

Division of Environmental Health
Office of Drinking Water

Help

View Sample Detail - WSID 66125T - PARADISE ESTATES

Collect Date	7/18/2006
Lab Number	089
Lab Name	Water Management Laboratory Inc
Sample Number	73405
Source	01
Analyte Group	VOC-VOLATILE ORGANIC CONTAMINANTS
Test Panel	VOC1-VOLATILE ORGANIC
Sample Location	whd

Analyte DOH Num	Analyte Name	Result Range	Result Quantity	Maximum Contaminant Level	Units	State Reporting Limit
0027	CHLOROFORM	LT	0.5000		ug/L	0.5000
0028	BROMODICHLOROMETHANE	LT	0.5000		ug/L	0.5000
0029	DIBROMOCHLOROMETHANE	LT	0.5000		ug/L	0.5000
0030	BROMOFORM	LT	0.5000		ug/L	0.5000
0045	VINYL CHLORIDE	LT	0.5000	2.0000	ug/L	0.5000
0046	1,1 DICHLOROETHYLENE	LT	0.5000	7.0000	ug/L	0.5000
0047	1,1,1 TRICHLOROETHANE	LT	0.5000	200.0000	ug/L	0.5000
0048	CARBON TETRACHLORIDE	LT	0.5000	5.0000	ug/L	0.5000
0049	BENZENE	LT	0.5000	5.0000	ug/L	0.5000
0050	1,2 DICHLOROETHANE	LT	0.5000	5.0000	ug/L	0.5000
0051	TRICHLOROETHYLENE	LT	0.5000	5.0000	ug/L	0.5000
0052	1,4 DICHLOROBENZENE	LT	0.5000	75.0000	ug/L	0.5000
0053	CHLOROMETHANE	LT	0.5000		ug/L	0.5000
0054	BROMOMETHANE	LT	0.5000		ug/L	0.5000
0055	CHLOROETHANE	LT	0.5000		ug/L	0.5000
0056	METHYLENE CHLORIDE (DICHLOROMETHANE)	LT	0.5000	5.0000	ug/L	0.5000
0057	TRANS- 1,2 DICHLOROETHYLENE	LT	0.5000	100.0000	ug/L	0.5000
0058	1,1 DICHLOROETHANE	LT	0.5000		ug/L	0.5000
0059	2,2 DICHLOROPROPANE	LT	0.5000		ug/L	0.5000
0060	CIS- 1,2 DICHLOROETHYLENE	LT	0.5000	70.0000	ug/L	0.5000
0062	1,1 DICHLOROPROPENE	LT	0.5000		ug/L	0.5000
0063	1,2 DICHLOROPROPANE	LT	0.5000	5.0000	ug/L	0.5000
0064	DIBROMOMETHANE	LT	0.5000		ug/L	0.5000
0065	CIS- 1,3 DICHLOROPROPENE	LT	0.5000		ug/L	0.5000
0066	TOLUENE	LT	0.5000	1000.0000	ug/L	0.5000

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Washington State Department of Health

Division of Environmental Health
Office of Drinking Water

Help

View Sample Detail - WSID 66125T - PARADISE ESTATES

Collect Date	7/18/2006
Lab Number	089
Lab Name	Water Management Laboratory Inc
Sample Number	73405
Source	01
Analyte Group	VOC-VOLATILE ORGANIC CONTAMINANTS
Test Panel	VOC1-VOLATILE ORGANIC
Sample Location	whd

Analyte DOH Num	Analyte Name	Result Range	Result Quantity	Maximum Contaminant Level	Units	State Reporting Limit
0067	1,1,2 TRICHLOROETHANE	LT	0.5000	5.0000	ug/L	0.5000
0068	TETRACHLOROETHYLENE	LT	0.5000	5.0000	ug/L	0.5000
0069	TRANS- 1,3 DICHLOROPROPENE	LT	0.5000		ug/L	0.5000
0070	1,3 DICHLOROPROPANE	LT	0.5000		ug/L	0.5000
0071	CHLOROBENZENE	LT	0.5000	100.0000	ug/L	0.5000
0072	1,1,1,2 TETRACHLOROETHANE	LT	0.5000		ug/L	0.5000
0073	ETHYLBENZENE	LT	0.5000	700.0000	ug/L	0.5000
0074	M/P XYLENES (MCL FOR TOTAL)	LT	0.5000		ug/L	0.5000
0075	O- XYLENE (MCL FOR TOTAL)	LT	0.5000		ug/L	0.5000
0076	STYRENE	LT	0.5000	100.0000	ug/L	0.5000
0078	BROMOBENZENE	LT	0.5000		ug/L	0.5000
0079	1,2,3 TRICHLOROPROPANE	LT	0.5000		ug/L	0.5000
0080	1,1,2,2 TETRACHLOROETHANE	LT	0.5000		ug/L	0.5000
0081	O- CHLOROTOLUENE	LT	0.5000		ug/L	0.5000
0082	P- CHLOROTOLUENE	LT	0.5000		ug/L	0.5000
0083	M- DICHLOROBENZENE	LT	0.5000		ug/L	0.5000
0084	1,2 DICHLOROBENZENE	LT	0.5000	600.0000	ug/L	0.5000
0085	TRICHLOROFLUOROMETHANE	LT	0.5000		ug/L	0.5000
0086	BROMOCHLOROMETHANE	LT	0.5000		ug/L	0.5000
0087	ISOPROPYLBENZENE	LT	0.5000		ug/L	0.5000
0088	N-PROPYLBENZENE	LT	0.5000		ug/L	0.5000
0089	1,3,5 TRIMETHYLBENZENE	LT	0.5000		ug/L	0.5000
0090	TERT- BUTYLBENZENE	LT	0.5000		ug/L	0.5000
0091	1,2,4 TRIMETHYLBENZENE	LT	0.5000		ug/L	0.5000
0092	SEC- BUTYLBENZENE	LT	0.5000		ug/L	0.5000

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View Sample Detail - WSID 66125T - PARADISE ESTATES

Collect Date	7/18/2006
Lab Number	089
Lab Name	Water Management Laboratory Inc
Sample Number	73405
Source	01
Analyte Group	VOC-VOLATILE ORGANIC CONTAMINANTS
Test Panel	VOC1-VOLATILE ORGANIC
Sample Location	whd

Analyte DOH Num	Analyte Name	Result Range	Result Quantity	Maximum Contaminant Level	Units	State Reporting Limit
0102	EDB (ETHYLENE DIBROMIDE)	LT	0.5000	0.0500	ug/L	0.5000
0103	DBCP	LT	0.5000	0.2000	ug/L	0.5000
0093	P-ISOPROPYLTOLUENE	LT	0.5000		ug/L	0.5000
0094	N-BUTYLBENZENE	LT	0.5000		ug/L	0.5000
0095	1,2,4 TRICHLOROBENZENE	LT	0.5000	70.0000	ug/L	0.5000
0096	NAPHTHALENE	LT	0.5000		ug/L	0.5000
0097	HEXACHLOROBUTADIENE	LT	0.5000		ug/L	0.5000
0098	1,2,3 TRICHLOROBENZENE	LT	0.5000		ug/L	0.5000
0104	DICHLORODIFLUOROMETHANE	LT	0.5000		ug/L	0.5000
0154	1,3 DICHLOROPROPENE	LT	0.5000		ug/L	0.5000
0160	TOTAL XYLENES	LT	0.5000	10000.0000	ug/L	0.5000

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View Sample Detail - WSID 66125T - PARADISE ESTATES

Collect Date	8/17/2004
Lab Number	089
Lab Name	Water Management Laboratory Inc
Sample Number	69453
Source	01
Analyte Group	IOC-INORGANIC CONTAMINANTS
Test Panel	IOC-COMPLETE INORGANIC ANALYSIS
Sample Location	WHD

Analyte DOH Num	Analyte Name	Result Range	Result Quantity	Maximum Contaminant Level	Units	State Reporting Limit
0008	IRON	EQ	0.4500	0.3000	mg/L	0.1000
0010	MANGANESE	EQ	0.0100	0.0500	mg/L	0.0100
0015	HARDNESS	EQ	55.0000		mg/L	10.0000
0016	CONDUCTIVITY	EQ	117.0000	700.0000	Umhos/cm	70.0000
0017	TURBIDITY	EQ	2.0000		NTU	0.1000
0020	NITRATE-N	EQ	0.3000	10.0000	mg/L	0.2000
0021	CHLORIDE	EQ	2.0000	250.0000	mg/L	20.0000
0004	ARSENIC	LT	0.0020	0.0104	mg/L	0.0030
0005	BARIUM	LT	0.1000	2.0000	mg/L	0.4000
0006	CADMIUM	LT	0.0020	0.0050	mg/L	0.0020
0007	CHROMIUM	LT	0.0100	0.1000	mg/L	0.0200
0009	LEAD	LT	0.0020		mg/L	0.0010
0011	MERCURY	LT	0.0005	0.0020	mg/L	0.0004
0012	SELENIUM	LT	0.0050	0.0500	mg/L	0.0100
0013	SILVER	LT	0.0100	0.1000	mg/L	0.1000
0014	SODIUM	LT	5.0000		mg/L	5.0000
0018	COLOR	LT	5.0000	15.0000	CU	15.0000
0019	FLUORIDE	LT	0.2000	4.0000	mg/L	0.5000
0022	Sulfate	LT	1.0000	250.0000	mg/L	50.0000
0023	COPPER	LT	0.0200		mg/L	0.0200
0024	ZINC	LT	0.2000	5.0000	mg/L	0.2000
0110	BERYLLIUM	LT	0.0030	0.0040	mg/L	0.0008
0111	NICKEL	LT	0.0400	0.1000	mg/L	0.1000
0112	ANTIMONY	LT	0.0050	0.0060	mg/L	0.0060
0113	THALLIUM	LT	0.0020	0.0020	mg/L	0.0020

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View Sample Detail - WSID 66125T - PARADISE ESTATES

Collect Date	8/17/2004
Lab Number	089
Lab Name	Water Management Laboratory Inc
Sample Number	69453
Source	01
Analyte Group	IOC-INORGANIC CONTAMINANTS
Test Panel	IOC-COMPLETE INORGANIC ANALYSIS
Sample Location	WHD

Analyte DOH Num	Analyte Name	Result Range	Result Quantity	Maximum Contaminant Level	Units	State Reporting Limit
0114	NITRITE-N	LT	0.2000	1.0000	mg/L	0.2000
0116	CYANIDE	LT	0.0500	0.2000	mg/L	0.0100
0161	TOTAL NITRATE/NITRITE	LT	0.5000		mg/L	0.5000

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View Sample Detail - WSID 66125T - PARADISE ESTATES	
Collect Date	7/31/2007
Lab Number	089
Lab Name	Water Management Laboratory Inc
Sample Number	17770
Source	01
Analyte Group	IOC-INORGANIC CONTAMINANTS
Test Panel	NIT-NITRATE SUITE
Sample Location	whd well

Analyte DOH Num	Analyte Name	Result Range	Result Quantity	Maximum Contaminant Level	Units	State Reporting Limit
0020	NITRATE-N	EQ	0.4000	10.0000	mg/L	0.2000

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Collect Date	10/4/2005
Lab Number	023
Lab Name	DOH Public Health Lab
Sample Number	13158
Source	01
Analyte Group	RAD-RADIONUCLIDES
Test Panel	RAD-RADIONUCLIDES
Sample Location	whd

Analyte DOH Num	Analyte Name	Result Range	Result Quantity	Maximum Contaminant Level	Units	State Reporting Limit
0166	RADIUM 228	LT	1.0000	5.0000	pCi/L	1.0000

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Collect Date	6/9/2009
Lab Number	142
Lab Name	Energy Laboratory, Inc
Sample Number	77001
Source	02
Analyte Group	RAD-RADIONUCLIDES
Test Panel	RAD-RADIONUCLIDES
Sample Location	ng

Analyte DOH Num	Analyte Name	Result Range	Result Quantity	Maximum Contaminant Level	Units	State Reporting Limit
0165	GROSS ALPHA	EQ	0.0500		pCi/L	3.0000
0166	RADIUM 228	EQ	0.8000	5.0000	pCi/L	1.0000

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Collect Date	7/22/2010
Lab Number	010
Lab Name	Twiss Analytical Laboratories, Inc
Sample Number	47107
Source	02
Analyte Group	IOC-INORGANIC CONTAMINANTS
Test Panel	NIT-NITRATE SUITE
Sample Location	yard hyd

Analyte DOH Num	Analyte Name	Result Range	Result Quantity	Maximum Contaminant Level	Units	State Reporting Limit
0020	NITRATE-N	LT	0.5000	10.0000	mg/L	0.2000

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Collect Date	11/18/2003
Lab Number	089
Lab Name	Water Management Laboratory Inc
Sample Number	82426
Source	02
Analyte Group	SOC-SYNTHETIC ORGANIC CONTAMINANTS
Test Panel	INSECT1-CARBAMATE INSECTICIDES
Sample Location	whd

Analyte DOH Num	Analyte Name	Result Range	Result Quantity	Maximum Contaminant Level	Units	State Reporting Limit
0141	3- HYDROXYCARBOFURAN	LT	2.0000		ug/L	2.0000
0142	ALDICARB	LT	1.0000		ug/L	1.0000
0143	ALDICARB SULFONE	LT	0.7000		ug/L	0.7000
0144	ALDICARB SULFOXIDE	LT	1.8000		ug/L	1.8000
0145	CARBARYL	LT	2.0000		ug/L	2.0000
0146	CARBOFURAN	LT	2.0000	40.0000	ug/L	2.0000
0147	METHOMYL	LT	1.0000		ug/L	4.0000
0148	OXAMYL	LT	4.0000	200.0000	ug/L	10.0000
0326	BAYGON	LT	1.0000		ug/L	1.0000
0327	METHIOCARB	LT	4.0000		ug/L	4.0000

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View Sample Detail - WSID 66125T - PARADISE ESTATES

Collect Date	10/7/2003
Lab Number	089
Lab Name	Water Management Laboratory Inc
Sample Number	82390
Source	02
Analyte Group	SOC-SYNTHETIC ORGANIC CONTAMINANTS
Test Panel	HERB1-CHLOROPHENOXY HERBICIDES
Sample Location	whd

Analyte DOH Num	Analyte Name	Result Range	Result Quantity	Maximum Contaminant Level	Units	State Reporting Limit
0037	2,4 - D	LT	0.2000	70.0000	ug/L	0.5000
0038	2,4,5 TP (SILVEX)	LT	0.4000	50.0000	ug/L	1.0000
0134	PENTACHLOROPHENOL	LT	0.0800	1.0000	ug/L	0.2000
0135	2,4 DB	LT	1.0000		ug/L	1.0000
0136	2,4,5 T	LT	0.4000		ug/L	0.4000
0137	DALAPON	LT	2.0000	200.0000	ug/L	5.0000
0138	DICAMBA	LT	0.2000		ug/L	0.2000
0139	DINOSEB	LT	0.4000	7.0000	ug/L	1.0000
0140	PICLORAM	LT	0.2000	500.0000	ug/L	0.5000
0220	BENTAZON	LT	0.5000		ug/L	0.5000
0221	DICHLORPROP	LT	0.5000		ug/L	0.5000
0223	ACIFLUORFEN	LT	2.0000		ug/L	2.0000
0224	CHLORAMBEN	LT	0.2000		ug/L	0.2000
0225	DCPA ACID METABOLITES	LT	0.1000		ug/L	0.1000
0226	3,5 DICHLORBENZOIC ACID	LT	0.5000		ug/L	0.5000
0227	5- HYDROXYDICAMBA	LT	0.3000		ug/L	0.3000
0228	4- NITROPHENOL	LT	0.2000		ug/L	0.5000

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View Sample Detail - WSID 66125T - PARADISE ESTATES

Collect Date	10/7/2003
Lab Number	089
Lab Name	Water Management Laboratory Inc
Sample Number	82390
Source	02
Analyte Group	SOC-SYNTHETIC ORGANIC CONTAMINANTS
Test Panel	PEST1-GENERAL PESTICIDE SUITE
Sample Location	whd

Analyte DOH Num	Analyte Name	Result Range	Result Quantity	Maximum Contaminant Level	Units	State Reporting Limit
0033	ENDRIN	LT	0.0200	2.0000	ug/L	0.0500
0034	LINDANE (BHC - GAMMA)	LT	0.0400	0.2000	ug/L	0.0400
0035	METHOXYCHLOR	LT	0.2000	40.0000	ug/L	10.0000
0036	TOXAPHENE	LT	2.0000	3.0000	ug/L	2.0000
0117	ALACHLOR	LT	0.4000	2.0000	ug/L	0.4000
0118	ALDRIN	LT	0.1000		ug/L	0.1000
0119	ATRAZINE	LT	0.2000	3.0000	ug/L	0.5000
0120	BENZO (A) PYRENE	LT	0.0400	0.2000	ug/L	0.0400
0121	BUTACHLOR	LT	0.4000		ug/L	0.4000
0122	CHLORDANE (TOTAL)	LT	0.4000	2.0000	ug/L	0.4000
0123	DIELDRIN	LT	0.1000		ug/L	0.1000
0124	DI (ETHYLHEXYL) ADIPATE	LT	1.3000	400.0000	ug/L	1.3000
0125	DI (ETHYLHEXYL) PHTHALATE	LT	1.3000	6.0000	ug/L	1.3000
0126	HEPTACHLOR	LT	0.0800	0.4000	ug/L	0.0900
0127	HEPTACHLOR EPOXIDE	LT	0.0400	0.2000	ug/L	0.1000
0128	HEXACHLOROBENZENE	LT	0.2000	1.0000	ug/L	0.5000
0129	HEXACHLOROCYCLO PENTADIENE	LT	0.2000	50.0000	ug/L	0.5000
0130	METOLACHLOR	LT	1.0000		ug/L	1.0000
0131	METRIBUZIN	LT	0.2000		ug/L	0.2000
0132	PROPACHLOR	LT	0.1000		ug/L	0.1000
0133	SIMAZINE	LT	0.1500	4.0000	ug/L	0.1500
0134	PENTACHLOROPHENOL	LT	0.0800	1.0000	ug/L	0.2000
0153	PCB (AS TOTAL AROCHLORS)	LT	0.2000	0.5000	ug/L	0.5000
0173	AROCHLOR 1221	LT	0.5000		ug/L	100.0000
0174	AROCHLOR 1232	LT	0.1000		ug/L	2.5000

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Collect Date	10/7/2003
Lab Number	089
Lab Name	Water Management Laboratory Inc
Sample Number	82390
Source	02
Analyte Group	SOC-SYNTHETIC ORGANIC CONTAMINANTS
Test Panel	PEST1-GENERAL PESTICIDE SUITE
Sample Location	whd

Analyte DOH Num	Analyte Name	Result Range	Result Quantity	Maximum Contaminant Level	Units	State Reporting Limit
0175	AROCHLOR 1242	LT	0.1000		ug/L	1.5000
0176	AROCHLOR 1248	LT	0.1000		ug/L	0.5000
0177	AROCHLOR 1254	LT	0.1000		ug/L	0.5000
0178	AROCHLOR 1260	LT	0.1000		ug/L	1.0000
0179	BROMACIL	LT	0.2000		ug/L	0.2000
0180	AROCHLOR 1016	LT	0.1000		ug/L	0.4000
0183	PROMETON	LT	0.2000		ug/L	0.2000
0190	TERBACIL	LT	0.2000		ug/L	0.2000
0202	DIAZINON	LT	0.2000		ug/L	0.2000
0208	EPTC	LT	0.3000		ug/L	0.3000
0232	4,4 DDD	LT	0.1000		ug/L	0.1000
0233	4,4 DDE	LT	0.1000		ug/L	0.1000
0234	4,4 DDT	LT	0.1000		ug/L	0.1000
0236	CYANAZINE	LT	0.2000		ug/L	0.2000
0239	MALATHION	LT	0.2000		ug/L	0.2000
0240	PARATHION	LT	0.2000		ug/L	0.2000
0243	TRIFLURALIN	LT	0.2000		ug/L	0.2000
0244	ACENAPHTHYLENE	LT	0.2000		ug/L	0.2000
0245	ACENAPHTHENE	LT	0.2000		ug/L	0.2000
0246	ANTHRACENE	LT	0.2000		ug/L	0.2000
0247	BENZO (A) ANTHRACENE	LT	0.2000		ug/L	0.2000
0248	BENZO (B) FLUOROANTHENE	LT	0.2000		ug/L	0.2000
0249	BENZO (G,H,I) PERYLENE	LT	0.2000		ug/L	0.2000
0250	BENZO (K) FLUORANTHENE	LT	0.2000		ug/L	0.2000
0251	CHRYSENE	LT	0.2000		ug/L	0.2000

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View Sample Detail - WSID 66125T - PARADISE ESTATES

Collect Date	10/7/2003
Lab Number	089
Lab Name	Water Management Laboratory Inc
Sample Number	82390
Source	02
Analyte Group	SOC-SYNTHETIC ORGANIC CONTAMINANTS
Test Panel	PEST1-GENERAL PESTICIDE SUITE
Sample Location	whd

Analyte DOH Num	Analyte Name	Result Range	Result Quantity	Maximum Contaminant Level	Units	State Reporting Limit
0252	DIBENZO (A,H) ANTHRACENE	LT	0.2000		ug/L	0.2000
0253	FLUORANTHENE	LT	0.2000		ug/L	0.2000
0254	FLUORENE	LT	0.2000		ug/L	0.2000
0255	INDENO(1,2,3-CD)PYRENE	LT	0.2000		ug/L	0.2000
0256	PHENANTHRENE	LT	0.2000		ug/L	0.2000
0257	PYRENE	LT	0.2000		ug/L	0.2000
0258	BENZYL BUTYL PHTHALATE	LT	0.6000		ug/L	0.6000
0259	DI-N-BUTYL PHTHALATE	LT	0.6000		ug/L	0.6000
0260	DIETHYL PHTHALATE	LT	0.6000		ug/L	0.6000
0261	DIMETHYL PHTHALATE	LT	0.6000		ug/L	0.6000

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Collect Date	4/21/2009
Lab Number	010
Lab Name	Twiss Analytical Laboratories, Inc
Sample Number	15001
Source	02
Analyte Group	VOC-VOLATILE ORGANIC CONTAMINANTS
Test Panel	VOC1-VOLATILE ORGANIC
Sample Location	source hb

Analyte DOH Num	Analyte Name	Result Range	Result Quantity	Maximum Contaminant Level	Units	State Reporting Limit
0027	CHLOROFORM	LT	0.5000		ug/L	0.5000
0028	BROMODICHLOROMETHANE	LT	0.5000		ug/L	0.5000
0029	DIBROMOCHLOROMETHANE	LT	0.5000		ug/L	0.5000
0030	BROMOFORM	LT	0.5000		ug/L	0.5000
0045	VINYL CHLORIDE	LT	0.5000	2.0000	ug/L	0.5000
0046	1,1 DICHLOROETHYLENE	LT	0.5000	7.0000	ug/L	0.5000
0047	1,1,1 TRICHLOROETHANE	LT	0.5000	200.0000	ug/L	0.5000
0048	CARBON TETRACHLORIDE	LT	0.5000	5.0000	ug/L	0.5000
0049	BENZENE	LT	0.5000	5.0000	ug/L	0.5000
0050	1,2 DICHLOROETHANE	LT	0.5000	5.0000	ug/L	0.5000
0051	TRICHLOROETHYLENE	LT	0.5000	5.0000	ug/L	0.5000
0052	1,4 DICHLOROBENZENE	LT	0.5000	75.0000	ug/L	0.5000
0053	CHLOROMETHANE	LT	0.5000		ug/L	0.5000
0054	BROMOMETHANE	LT	0.5000		ug/L	0.5000
0055	CHLOROETHANE	LT	0.5000		ug/L	0.5000
0056	METHYLENE CHLORIDE (DICHLOROMETHANE)	LT	0.5000	5.0000	ug/L	0.5000
0057	TRANS- 1,2 DICHLOROETHYLENE	LT	0.5000	100.0000	ug/L	0.5000
0058	1,1 DICHLOROETHANE	LT	0.5000		ug/L	0.5000
0059	2,2 DICHLOROPROPANE	LT	0.5000		ug/L	0.5000
0060	CIS- 1,2 DICHLOROETHYLENE	LT	0.5000	70.0000	ug/L	0.5000
0062	1,1 DICHLOROPROPENE	LT	0.5000		ug/L	0.5000
0063	1,2 DICHLOROPROPANE	LT	0.5000	5.0000	ug/L	0.5000
0064	DIBROMOMETHANE	LT	0.5000		ug/L	0.5000
0065	CIS- 1,3 DICHLOROPROPENE	LT	0.5000		ug/L	0.5000
0066	TOLUENE	LT	0.5000	1000.0000	ug/L	0.5000

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Division of Environmental Health
Office of Drinking Water

Help

View Sample Detail - WSID 66125T - PARADISE ESTATES

Collect Date	4/21/2009
Lab Number	010
Lab Name	Twiss Analytical Laboratories, Inc
Sample Number	15001
Source	02
Analyte Group	VOC-VOLATILE ORGANIC CONTAMINANTS
Test Panel	VOC1-VOLATILE ORGANIC
Sample Location	source hb

Analyte DOH Num	Analyte Name	Result Range	Result Quantity	Maximum Contaminant Level	Units	State Reporting Limit
0067	1,1,2 TRICHLOROETHANE	LT	0.5000	5.0000	ug/L	0.5000
0068	TETRACHLOROETHYLENE	LT	0.5000	5.0000	ug/L	0.5000
0069	TRANS- 1,3 DICHLOROPROPENE	LT	0.5000		ug/L	0.5000
0070	1,3 DICHLOROPROPANE	LT	0.5000		ug/L	0.5000
0071	CHLOROBENZENE	LT	0.5000	100.0000	ug/L	0.5000
0072	1,1,1,2 TETRACHLOROETHANE	LT	0.5000		ug/L	0.5000
0073	ETHYLBENZENE	LT	0.5000	700.0000	ug/L	0.5000
0074	M/P XYLENES (MCL FOR TOTAL)	LT	0.5000		ug/L	0.5000
0075	O- XYLENE (MCL FOR TOTAL)	LT	0.5000		ug/L	0.5000
0076	STYRENE	LT	0.5000	100.0000	ug/L	0.5000
0078	BROMOBENZENE	LT	0.5000		ug/L	0.5000
0079	1,2,3 TRICHLOROPROPANE	LT	0.5000		ug/L	0.5000
0080	1,1,2,2 TETRACHLOROETHANE	LT	0.5000		ug/L	0.5000
0081	O- CHLOROTOLUENE	LT	0.5000		ug/L	0.5000
0082	P- CHLOROTOLUENE	LT	0.5000		ug/L	0.5000
0083	M- DICHLOROBENZENE	LT	0.5000		ug/L	0.5000
0084	1,2 DICHLOROBENZENE	LT	0.5000	600.0000	ug/L	0.5000
0085	TRICHLOROFLUOROMETHANE	LT	0.5000		ug/L	0.5000
0086	BROMOCHLOROMETHANE	LT	0.5000		ug/L	0.5000
0087	ISOPROPYLBENZENE	LT	0.5000		ug/L	0.5000
0088	N-PROPYLBENZENE	LT	0.5000		ug/L	0.5000
0089	1,3,5 TRIMETHYLBENZENE	LT	0.5000		ug/L	0.5000
0090	TERT- BUTYLBENZENE	LT	0.5000		ug/L	0.5000
0091	1,2,4 TRIMETHYLBENZENE	LT	0.5000		ug/L	0.5000
0092	SEC- BUTYLBENZENE	LT	0.5000		ug/L	0.5000

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View Sample Detail - WSID 66125T - PARADISE ESTATES

Collect Date	4/21/2009
Lab Number	010
Lab Name	Twiss Analytical Laboratories, Inc
Sample Number	15001
Source	02
Analyte Group	VOC-VOLATILE ORGANIC CONTAMINANTS
Test Panel	VOC1-VOLATILE ORGANIC
Sample Location	source hb

Analyte DOH Num	Analyte Name	Result Range	Result Quantity	Maximum Contaminant Level	Units	State Reporting Limit
0103	DBCP	LT	0.5000	0.2000	ug/L	0.5000
0093	P-ISOPROPYLTOLUENE	LT	0.5000		ug/L	0.5000
0094	N-BUTYLBENZENE	LT	0.5000		ug/L	0.5000
0095	1,2,4 TRICHLOROBENZENE	LT	0.5000	70.0000	ug/L	0.5000
0096	NAPHTHALENE	LT	0.5000		ug/L	0.5000
0097	HEXACHLOROBUTADIENE	LT	0.5000		ug/L	0.5000
0098	1,2,3 TRICHLOROBENZENE	LT	0.5000		ug/L	0.5000
0104	DICHLORODIFLUOROMETHANE	LT	0.5000		ug/L	0.5000
0160	TOTAL XYLENES	LT	0.5000	10000.0000	ug/L	0.5000
0031	TOTAL TRIHALOMETHANE	ND		80.0000	ug/L	

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View Sample Detail - WSID 66125T - PARADISE ESTATES

Collect Date	10/21/2003
Lab Number	089
Lab Name	Water Management Laboratory Inc
Sample Number	64682
Source	02
Analyte Group	IOC-INORGANIC CONTAMINANTS
Test Panel	IOC-COMPLETE INORGANIC ANALYSIS
Sample Location	whd / well 2

Analyte DOH Num	Analyte Name	Result Range	Result Quantity	Maximum Contaminant Level	Units	State Reporting Limit
0010	MANGANESE	EQ	0.0100	0.0500	mg/L	0.0100
0014	SODIUM	EQ	3.0000		mg/L	5.0000
0015	HARDNESS	EQ	61.0000		mg/L	10.0000
0016	CONDUCTIVITY	EQ	116.0000	700.0000	Umhos/cm	70.0000
0017	TURBIDITY	EQ	0.2000		NTU	0.1000
0020	NITRATE-N	EQ	0.2000	10.0000	mg/L	0.2000
0021	CHLORIDE	EQ	2.0000	250.0000	mg/L	20.0000
0161	TOTAL NITRATE/NITRITE	EQ	0.2000		mg/L	0.5000
0004	ARSENIC	LT	0.0020	0.0104	mg/L	0.0030
0005	BARIUM	LT	0.1000	2.0000	mg/L	0.4000
0006	CADMIUM	LT	0.0020	0.0050	mg/L	0.0020
0007	CHROMIUM	LT	0.0100	0.1000	mg/L	0.0200
0008	IRON	LT	0.0300	0.3000	mg/L	0.1000
0009	LEAD	LT	0.0020		mg/L	0.0010
0011	MERCURY	LT	0.0005	0.0020	mg/L	0.0004
0012	SELENIUM	LT	0.0050	0.0500	mg/L	0.0100
0013	SILVER	LT	0.0100	0.1000	mg/L	0.1000
0018	COLOR	LT	5.0000	15.0000	CU	15.0000
0019	FLUORIDE	LT	0.2000	4.0000	mg/L	0.5000
0022	Sulfate	LT	1.0000	250.0000	mg/L	50.0000
0023	COPPER	LT	0.0200		mg/L	0.0200
0024	ZINC	LT	0.0500	5.0000	mg/L	0.2000
0110	BERYLLIUM	LT	0.0020	0.0040	mg/L	0.0008
0111	NICKEL	LT	0.0400	0.1000	mg/L	0.1000
0112	ANTIMONY	LT	0.0020	0.0060	mg/L	0.0060

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View Sample Detail - WSID 66126T - PARADISE ESTATES

Collect Date	10/21/2003
Lab Number	089
Lab Name	Water Management Laboratory Inc
Sample Number	64682
Source	02
Analyte Group	IOC-INORGANIC CONTAMINANTS
Test Panel	IOC-COMPLETE INORGANIC ANALYSIS
Sample Location	whd / well 2

Analyte DOH Num	Analyte Name	Result Range	Result Quantity	Maximum Contaminant Level	Units	State Reporting Limit
0113	THALLIUM	LT	0.0010	0.0020	mg/L	0.0020
0114	NITRITE-N	LT	0.2000	1.0000	mg/L	0.2000
0116	CYANIDE	LT	0.0500	0.2000	mg/L	0.0100

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Collect Date	7/22/2010
Lab Number	010
Lab Name	Twiss Analytical Laboratories, Inc
Sample Number	47108
Source	03
Analyte Group	IOC-INORGANIC CONTAMINANTS
Test Panel	NIT-NITRATE SUITE
Sample Location	hb

Analyte DOH Num	Analyte Name	Result Range	Result Quantity	Maximum Contaminant Level	Units	State Reporting Limit
0020	NITRATE-N	LT	0.5000	10.0000	mg/L	0.2000

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Collect Date	7/23/2009
Lab Number	010
Lab Name	Twiss Analytical Laboratories, Inc
Sample Number	73501
Source	03
Analyte Group	IOC-INORGANIC CONTAMINANTS
Test Panel	IOC-COMPLETE INORGANIC ANALYSIS
Sample Location	ph hb

Analyte DOH Num	Analyte Name	Result Range	Result Quantity	Maximum Contaminant Level	Units	State Reporting Limit
0015	HARDNESS	EQ	46.8000		mg/L	10.0000
0016	CONDUCTIVITY	EQ	94.4000	700.0000	Umhos/cm	70.0000
0017	TURBIDITY	EQ	0.4000		NTU	0.1000
0024	ZINC	EQ	0.3500	5.0000	mg/L	0.2000
0004	ARSENIC	LT	0.0030	0.0104	mg/L	0.0030
0005	BARIUM	LT	0.4000	2.0000	mg/L	0.4000
0006	CADMIUM	LT	0.0020	0.0050	mg/L	0.0020
0007	CHROMIUM	LT	0.0200	0.1000	mg/L	0.0200
0008	IRON	LT	0.1000	0.3000	mg/L	0.1000
0009	LEAD	LT	0.0010		mg/L	0.0010
0010	MANGANESE	LT	0.0100	0.0500	mg/L	0.0100
0011	MERCURY	LT	0.0004	0.0020	mg/L	0.0004
0012	SELENIUM	LT	0.0100	0.0500	mg/L	0.0100
0013	SILVER	LT	0.1000	0.1000	mg/L	0.1000
0014	SODIUM	LT	5.0000		mg/L	5.0000
0018	COLOR	LT	15.0000	15.0000	CU	15.0000
0019	FLUORIDE	LT	0.5000	4.0000	mg/L	0.5000
0020	NITRATE-N	LT	0.5000	10.0000	mg/L	0.2000
0021	CHLORIDE	LT	20.0000	250.0000	mg/L	20.0000
0022	Sulfate	LT	50.0000	250.0000	mg/L	50.0000
0023	COPPER	LT	0.0200		mg/L	0.0200
0110	BERYLLIUM	LT	0.0008	0.0040	mg/L	0.0008
0111	NICKEL	LT	0.1000	0.1000	mg/L	0.1000
0112	ANTIMONY	LT	0.0060	0.0060	mg/L	0.0060
0113	THALLIUM	LT	0.0020	0.0020	mg/L	0.0020

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View Sample Detail - WSID 66125T - PARADISE ESTATES

Collect Date	7/23/2009
Lab Number	010
Lab Name	Twiss Analytical Laboratories, Inc
Sample Number	73501
Source	03
Analyte Group	IOC-INORGANIC CONTAMINANTS
Test Panel	IOC-COMPLETE INORGANIC ANALYSIS
Sample Location	ph hb

Analyte DOH Num	Analyte Name	Result Range	Result Quantity	Maximum Contaminant Level	Units	State Reporting Limit
0114	NITRITE-N	LT	0.2000	1.0000	mg/L	0.2000
0116	CYANIDE	LT	0.1000	0.2000	mg/L	0.0100
0161	TOTAL NITRATE/NITRITE	LT	0.5000		mg/L	0.5000

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View Sample Detail - WSID 66125T - PARADISE ESTATES

Collect Date	10/7/2008
Lab Number	010
Lab Name	Twiss Analytical Laboratories, Inc
Sample Number	60601
Source	03
Analyte Group	VOC-VOLATILE ORGANIC CONTAMINANTS
Test Panel	VOC1-VOLATILE ORGANIC
Sample Location	reservoir hb

Analyte DOH Num	Analyte Name	Result Range	Result Quantity	Maximum Contaminant Level	Units	State Reporting Limit
0027	CHLOROFORM	LT	0.5000		ug/L	0.5000
0028	BROMODICHLOROMETHANE	LT	0.5000		ug/L	0.5000
0029	DIBROMOCHLOROMETHANE	LT	0.5000		ug/L	0.5000
0030	BROMOFORM	LT	0.5000		ug/L	0.5000
0045	VINYL CHLORIDE	LT	0.5000	2.0000	ug/L	0.5000
0046	1,1 DICHLOROETHYLENE	LT	0.5000	7.0000	ug/L	0.5000
0047	1,1,1 TRICHLOROETHANE	LT	0.5000	200.0000	ug/L	0.5000
0048	CARBON TETRACHLORIDE	LT	0.5000	5.0000	ug/L	0.5000
0049	BENZENE	LT	0.5000	5.0000	ug/L	0.5000
0050	1,2 DICHLOROETHANE	LT	0.5000	5.0000	ug/L	0.5000
0051	TRICHLOROETHYLENE	LT	0.5000	5.0000	ug/L	0.5000
0052	1,4 DICHLOROBENZENE	LT	0.5000	75.0000	ug/L	0.5000
0053	CHLOROMETHANE	LT	0.5000		ug/L	0.5000
0054	BROMOMETHANE	LT	0.5000		ug/L	0.5000
0055	CHLOROETHANE	LT	0.5000		ug/L	0.5000
0056	METHYLENE CHLORIDE (DICHLOROMETHANE)	LT	0.5000	5.0000	ug/L	0.5000
0057	TRANS- 1,2 DICHLOROETHYLENE	LT	0.5000	100.0000	ug/L	0.5000
0058	1,1 DICHLOROETHANE	LT	0.5000		ug/L	0.5000
0059	2,2 DICHLOROPROPANE	LT	0.5000		ug/L	0.5000
0060	CIS- 1,2 DICHLOROETHYLENE	LT	0.5000	70.0000	ug/L	0.5000
0062	1,1 DICHLOROPROPENE	LT	0.5000		ug/L	0.5000
0063	1,2 DICHLOROPROPANE	LT	0.5000	5.0000	ug/L	0.5000
0064	DIBROMOMETHANE	LT	0.5000		ug/L	0.5000
0065	CIS- 1,3 DICHLOROPROPENE	LT	0.5000		ug/L	0.5000
0066	TOLUENE	LT	0.5000	1000.0000	ug/L	0.5000

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View Sample Detail - WSID 66125T - PARADISE ESTATES

Collect Date	10/7/2008
Lab Number	010
Lab Name	Twiss Analytical Laboratories, Inc
Sample Number	60601
Source	03
Analyte Group	VOC-VOLATILE ORGANIC CONTAMINANTS
Test Panel	VOC1-VOLATILE ORGANIC
Sample Location	reservoir hb

Analyte DOH Num	Analyte Name	Result Range	Result Quantity	Maximum Contaminant Level	Units	State Reporting Limit
0067	1,1,2 TRICHLOROETHANE	LT	0.5000	5.0000	ug/L	0.5000
0068	TETRACHLOROETHYLENE	LT	0.5000	5.0000	ug/L	0.5000
0069	TRANS- 1,3 DICHLOROPROPENE	LT	0.5000		ug/L	0.5000
0070	1,3 DICHLOROPROPANE	LT	0.5000		ug/L	0.5000
0071	CHLOROBENZENE	LT	0.5000	100.0000	ug/L	0.5000
0072	1,1,1,2 TETRACHLOROETHANE	LT	0.5000		ug/L	0.5000
0073	ETHYLBENZENE	LT	0.5000	700.0000	ug/L	0.5000
0074	M/P XYLENES (MCL FOR TOTAL)	LT	0.5000		ug/L	0.5000
0075	O- XYLENE (MCL FOR TOTAL)	LT	0.5000		ug/L	0.5000
0076	STYRENE	LT	0.5000	100.0000	ug/L	0.5000
0078	BROMOBENZENE	LT	0.5000		ug/L	0.5000
0079	1,2,3 TRICHLOROPROPANE	LT	0.5000		ug/L	0.5000
0080	1,1,2,2 TETRACHLOROETHANE	LT	0.5000		ug/L	0.5000
0081	O- CHLOROTOLUENE	LT	0.5000		ug/L	0.5000
0082	P- CHLOROTOLUENE	LT	0.5000		ug/L	0.5000
0083	M- DICHLOROBENZENE	LT	0.5000		ug/L	0.5000
0084	1,2 DICHLOROBENZENE	LT	0.5000	600.0000	ug/L	0.5000
0085	TRICHLOROFLUOROMETHANE	LT	0.5000		ug/L	0.5000
0086	BROMOCHLOROMETHANE	LT	0.5000		ug/L	0.5000
0087	ISOPROPYLBENZENE	LT	0.5000		ug/L	0.5000
0088	N-PROPYLBENZENE	LT	0.5000		ug/L	0.5000
0089	1,3,5 TRIMETHYLBENZENE	LT	0.5000		ug/L	0.5000
0090	TERT- BUTYLBENZENE	LT	0.5000		ug/L	0.5000
0091	1,2,4 TRIMETHYLBENZENE	LT	0.5000		ug/L	0.5000
0092	SEC- BUTYLBENZENE	LT	0.5000		ug/L	0.5000

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Help

View Sample Detail - WSID 66125T - PARADISE ESTATES

Collect Date	10/7/2008
Lab Number	010
Lab Name	Twiss Analytical Laboratories, Inc
Sample Number	60601
Source	03
Analyte Group	VOC-VOLATILE ORGANIC CONTAMINANTS
Test Panel	VOC1-VOLATILE ORGANIC
Sample Location	reservoir hb

Analyte DOH Num	Analyte Name	Result Range	Result Quantity	Maximum Contaminant Level	Units	State Reporting Limit
0103	DBCP	LT	0.5000	0.2000	ug/L	0.5000
0093	P-ISOPROPYLTOLUENE	LT	0.5000		ug/L	0.5000
0094	N-BUTYLBENZENE	LT	0.5000		ug/L	0.5000
0095	1,2,4 TRICHLOROBENZENE	LT	0.5000	70.0000	ug/L	0.5000
0096	NAPHTHALENE	LT	0.5000		ug/L	0.5000
0097	HEXACHLOROBUTADIENE	LT	0.5000		ug/L	0.5000
0098	1,2,3 TRICHLOROBENZENE	LT	0.5000		ug/L	0.5000
0104	DICHLORODIFLUOROMETHANE	LT	0.5000		ug/L	0.5000
0160	TOTAL XYLENES	LT	0.5000	10000.0000	ug/L	0.5000
0031	TOTAL TRIHALOMETHANE	ND		80.0000	ug/L	

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Collect Date	6/9/2009
Lab Number	142
Lab Name	Energy Laboratory, Inc
Sample Number	79001
Source	03
Analyte Group	RAD-RADIONUCLIDES
Test Panel	RAD-RADIONUCLIDES
Sample Location	ng

Analyte DOH Num	Analyte Name	Result Range	Result Quantity	Maximum Contaminant Level	Units	State Reporting Limit
0166	RADIUM 228	LT	1.0000	5.0000	pCi/L	1.0000

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CONSUMER CONFIDENCE REPORT CERTIFICATION FORM

For Calendar Year 2009 Reports due before July 1, 2010

You need to complete the following:

1. Mail or deliver copies of your 2009 CCR to your water system users **before July 1, 2010** File a copy for your records.
2. Submit a copy of your CCR to the regional office for your county **before July 1, 2010**
3. Submit this completed certification form to the regional office **by October 1, 2010.**

Note: You can send both the copy of your 2008 CCR and this certification form to the regional office at the same time. We are better able to identify and properly credit your system when both documents are received together. However, the certification form must be received no later than **October 1, 2010.**

CERTIFICATION FOR:

Water System Name Paradise Estates

Water System ID Number 66125T

Water System County Mason

In compliance with the state Consumer Confidence Reporting regulations, I confirm that this CCR has been distributed to customers who use this water system, (and appropriate notice of availability has been given). I confirm that all information contained in this report is correct. I confirm that the CCR contains compliance monitoring data previously submitted to the Washington State Department of Health, Office of Drinking Water.

CERTIFIED BY:

Signature Carolyn S Kennedy

Printed Name Carolyn S Kennedy

Phone 360-876-0958

Date 3/19/10

PARADISE ESTATES ANNUAL DRINKING WATER QUALITY REPORT FOR 2009 ID#66125T

Is my water safe?
Last year your tap water met all U.S. Environmental Protection Agency (EPA) and state drinking water health standards.

Do I need to take special precautions?
Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

Where does my water come from?
Paradise Estates currently receives its water from three drilled wells located within the community. One of the wells is seasonal and is rarely used.

Source water assessment and its availability
Susceptibility assessments have been conducted for the two wells currently in service. NWS does not have copies of those assessments. However, the Department of Health has rated both wells as being moderately susceptible to contamination.

Why are there contaminants in my drinking water?
Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791). The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity: microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming; pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems; and radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

How can I get involved?
Paradise Estates Water System is a community owned water system. Opportunities to assist with the water system can be explored by contacting a member of the Water Committee.

Water Conservation Tips
Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference – try one today and soon it will become second nature.

- Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons

a month.

- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Water plants only when necessary.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!
- Visit www.epa.gov/watersense for more information.

Variance and Exemptions

The water system operates under several waivers granted by the Department of Health that reduces or eliminates sampling for substances for which there are no sources within the watershed.

Additional Information for Lead

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Paradise Estates is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

Water Quality Data Table

The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or he State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently.

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Range Low	Range High	Sample Date	Violation	Typical Source
Radioactive Contaminants								
Radium (combined 226/228) (pCi/L)	0	5	0.5	ND	0.8	2009	No	Erosion of natural deposits

Contaminants	MCLG	AL	Your Water	Sample Date	# Samples Exceeding AL	Exceeds AL	Typical Source
Inorganic Contaminants							
Lead - action level at consumer taps (ppb)	0	15	2	2009	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Copper - action level at consumer taps (ppm)	1.3	1.3	0.285	2009	0	No	Corrosion of household plumbing systems, Erosion of natural deposits

Unit Descriptions

Term	Definition
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
pCi/L	pCi/L: picocuries per liter (a measure of radioactivity)
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.

Important Drinking Water Definitions	
Term	Definition
MCLG	MCLG: Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
MCL	MCL: Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions	Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	MRDLG: Maximum residual disinfection level goal. The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
MRDL	MRDL: Maximum residual disinfectant level. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level

For more information please contact:

Contact Name: Reg Hearn
Address:
P.O. Box 123
Port Orchard, WA 98366
Phone: 888-881-0958
E-Mail: reg@nwwatersystems.com

Sanitary Survey

Previous Sanitary Survey		
Task	Completion Date	Notes
Date of Survey	6/15/2007	
Received Sanitary Survey Report	7/5/2007	The DOH made three recommendations for improvements based on the sanitary survey (see tasks listed below). The DOH will verify completion of these tasks during the next sanitary survey.
Create a Cross Connection Control Program	4/2009	Program has been prepared and is attached. Policy statement is not signed.
Install a screened vent on Well #2		Improvement will be added during future repairs.
Due to failing status of Well #1, recommend replacing and decommissioning this well.		Since the construction of Well #3 in August 2007, Well #1 has been reserved for emergency use only. Well #1 is physically disconnected from the system.

Preparing for Your Sanitary Survey		
Task	Completed	Notes
System contacted for next Sanitary Survey		
Arrange for appropriate staff to be available		
System records organized and available		
Final preparation completed		
Survey follow-up letter received		
Needed corrections scheduled		
File any additional follow-up correspondence concerning survey		

MASON COUNTY PUBLIC HEALTH

ENVIRONMENTAL HEALTH
4[illegible] Cedar
PO Box 1666
Shelton, WA 98584

PERSONAL HEALTH
303 N. Fourth
PO Box 1666
Shelton, WA 98584

(360) 427-9670 • Fax (360) 427-7798 • Elma (360) 482-5269 • Belfair (360) 275-4467 • www.co.mason.wa.us

Larry Pazaski
P.O. Box 217
Belfair, WA 98528

July 5, 2007

[redacted]

SUBJECT: Paradise Estates ID # 66125T
Mason County
Third Party Sanitary Survey Inspection Report

Dear Water System Manager:

This letter and inspection report serve as a follow-up to the recent sanitary survey physical inspection of your water system facilities, records and operations. This office is duly authorized to perform sanitary survey inspections under Chapter 246-290-416 of the Washington Administrative Code (WAC) under contract to the Washington State Department of Health, Office of Drinking Water.

Thank you for taking the time to meet with me to show me your water system and explain its operations. A copy of the completed Sanitary Survey Checklist Report is enclosed. Please review the report carefully, as it describes deficiencies observed and recommendations for improvements. Unless otherwise noted, all deficiencies need to be taken care of in your routine operations and maintenance work. We will verify completion during our next sanitary survey.

Recommendations:

- ☐ Create a Cross-Connection Control Program.
- ☐ Install a screened vent on Well # 2
- ☐ Due to failing status of Well # 1, recommend replacing and decommissioning this well.

A copy of this letter and checklist is being forwarded to the appropriate Department of Health (DOH) staff for their review. DOH will contact you if they identify any deficiencies of high public health risk that require your immediate attention. Please contact Denise Grant at Southwest Regional Office of the Office of Drinking Water at (360) 236-3028, if you need their assistance.

If you have any questions regarding your Sanitary Survey Checklist Report, please call me at (360) 427-9670 ext. 293.

Sincerely,

Arlene Hyatt
Environmental Health Specialist

Enclosure: Sanitary Survey Checklist Report

cc: DOH Southwest Regional Office, Denise Grant

WASHINGTON STATE DEPARTMENT OF HEALTH
Group A Small Water System Sanitary Survey Checklist Report

System Name: Paradise Estates | Survey Date: June 15, 2007

PWS ID#: 66125T County: Mason County

PWS Representative Attending Inspection: Tony Norris

Other Persons Attending Inspection:

Inspector's Name: Arlene Hyatt QSS ID#: 480

PART A: SUMMARY OF INSPECTION FINDINGS & RECOMMENDATIONS

The following is a completed sanitary survey checklist and summary of inspection findings. Read the report carefully, as it describes deficiencies observed and recommendations for improvements. **You are responsible for correcting all deficiencies.** Bolded checklist questions represent deficiencies that may have a greater potential to affect the water system's capacity to serve safe and reliable water. Department of Health Office of Drinking Water (DOH ODW) regional office serving your county is available to answer questions you may have about this survey. DOH ODW contact information can be found at http://www.doh.wa.gov/ehp/dw/.

Potential High Public Health Risk (HPHR) Deficiencies Observed

Deficiencies that may meet the criteria for potential HPHR are noted below. HPHR deficiencies are items DOH ODW has determined need immediate attention. DOH ODW will review and confirm potential HPHR deficiencies and notify you in writing if any immediate follow-up action is required.

- ☐ None observed.
- ☐ Susceptible sources with high risk sanitary control area threats.
- ☐ Inoperable treatment facilities, when treatment is required by DOH for primary acute contaminants (such as surface water, required disinfection, nitrate remediation).
- ☐ Newly discovered unfiltered surface water sources and/or unapproved groundwater sources in use with no water quality history and not listed on the WFI.
- ☐ Confirmed backflow incidents.
- ☐ Documented cases of fraudulent operation and/or reporting or willful neglect by the operator.
- ☐ Other cases based on professional judgment.

Brief description of potential HPHR deficiencies checked above:

Other Deficiencies Observed

Other deficiencies are items observed during the sanitary survey that **should be corrected as soon as feasible.** Inspectors will check on their completion at the next site visit.

Deficiencies corrected since the last sanitary survey:

1.

2.

3.

Deficiencies that remain from the last sanitary survey:

1.

2.

3.

Other deficiencies observed during this sanitary survey and recommendations for improvements:

DOH Group A Small Water System Sanitary Survey Checklist	PWS ID#: 66125T	Survey Date: 6/15/07

Other Deficiencies Observed (con't)

Other deficiencies observed during this sanitary survey and recommendations for improvements (con't):

2. Well #1 → losing capacity, close to well #2, can't make WR - excessive sand

3.

4.

5. 14,252,100 gal annual usage

6. 233,641 avg annual usage/conn.

7.

8.

10.

11.

12.

13.

14.

15.

16.

DOH Group A Small Water System Sanitary Survey Checklist	PWS ID#: 66125T	Survey Date: 6/15/07

PART B: GENERAL DESCRIPTION OF WATER SYSTEM

General description of the water system including estimated total population and number of connections, direction of flow (from source to distribution), how the controls function, storage, treatment if any, and number of pressure zones.

The water system serves Sixty-eight full time single family residences and one community center with restrooms. The community center is used only by residents with a population of approximately 170 people. There is no treatment and the community is served by two reservoirs with a combined capacity of 114,000 gallons.

PART C: PLANNING & MANAGEMENT DOCUMENTS

2. Has the water system completed the following elements of a Small Water System Management Program (WAC 246-290-105)?

Element 1: Water Facilities Inventory (WFI) Records	☒ Yes ☐ No ☐ Partial
Element 2: Water Quality Monitoring Program (including Coliform Monitoring Plan)	☒ Yes ☐ No ☐ Partial
Element 3: Consumer Confidence Report	☒ Yes ☐ No ☐ Partial
Element 4: Sanitary Survey Records	☒ Yes ☐ No ☐ Partial
Element 5: Annual Operating Permit Records	☒ Yes ☐ No ☐ Partial
Element 6: Cross-Connection Control Program (as per WAC 246-290-490)	☐ Yes ☒ No ☐ Partial
Element 7: Emergency Response Plan	☒ Yes ☐ No ☐ Partial
Element 8: Service Area and Facility Map	☒ Yes ☐ No ☐ Partial
Element 9: Operation and Maintenance Program	☒ Yes ☐ No ☐ Partial
Element 10: Wellhead Protection Program	☒ Yes ☐ No ☐ Partial
Element 11: Water Right Documentation	☒ Yes ☐ No ☐ Partial
Element 12: Record of Source Water Pumped	☒ Yes ☐ No ☐ Partial
Element 13: Water Usage Records	☒ Yes ☐ No ☐ Partial
Element 14: Water Conservation Program	☒ Yes ☐ No ☐ Partial
Element 15: Component Inventory and Assessment	☒ Yes ☐ No ☐ Partial
Element 16: List of System Improvements	☒ Yes ☐ No ☐ Partial
Element 17: Operating Budget	☒ Yes ☐ No ☐ Partial
Element 18: System Management Practices and Processes	☒ Yes ☐ No ☐ Partial

3. Does the system have emergency power? proposed but not in yet ☐ Yes ☒ No

4. If yes to question #3, what type of emergency power is available:

☐ Generator, automatic switchover ☐ Portable with transfer switch ☐ Transfer switch only
☐ Generator, manual switchover ☐ Other:

5. If yes to question #4, frequency of testing: ☐ Monthly ☐ Quarterly ☐ Annually ☐ Infrequently ☐ Never

6. Water system's current and future water quality monitoring plans were reviewed (check all that apply):

☐ Coliform monitoring plan ☐ D/DBP monitoring plan
☐ WQMR monitoring plan ☐ Other

7. According to DOH records, the certified operator for this water system is:

8. If the certified operator on record is not correct, who is the certified operator?

Instruct the operator to contact the DOH Operator Certification Program at 1-800-525-2536 to update their records.
Note, Transient Non-Community water systems are not typically required to have a certified operator.

9. Comments:

DOH Group A Small Water System Sanitary Survey Checklist	PWS ID#: 66125T	Survey Date: 6/15/07

PART D: SOURCE FACILITIES (This page may be reproduced to add more sources)

	SO#	SO# 2
10. DOH Source Number:		
11. Source Name from the WFI: (For example, North Well; Well #2; ABC334.)	~~AHA991~~	
12. Dept of Ecology Well Tag Number: (Use Well tag ID#, None or Not readable)	Well #1	AAE 349 Well #2-P
13. Source Use P - Permanent S - Seasonal E - Emergency	S	
14. If this is an emergency source, is it physically disconnected?	☐Yes ☐No ☐Unknown	☐Yes ☐No ☐Unknown
15. What is the physical location of the source? Use references such as cross street, address or directions to locate in the field.		
SO#	Olympic Dr. in enclosure w/ reservoir etc	
SO#	" " "	
16. Is the source listed on the Water Facilities Inventory (WFI) report?	☒Yes ☐No	☒Yes ☐No
17. If no to question #16, indicate source type:		
SO#	☐ Groundwater ☐ Surface Water ☐ Spring ☐ Intertie	
SO#	☐ Groundwater ☐ Surface Water ☐ Spring ☐ Intertie	
18. Is the source more than 200 feet from surface water AND the top of first open interval is more than 50 feet deep? If no, the source is considered a potential groundwater under the influence of surface water (GWI) and will need additional review by DOH to confirm GWI status.	☒Yes ☐No ☐Unknown	☒Yes ☐No ☐Unknown
19. Is source Sanitary Control Area (SCA) protected from any obvious biological or chemical sources of contaminants? (100 feet of wells and 200 feet of springs and surface water).	~20' to ROW ☐Yes ☒No	~30' to ROW ☐Yes ☒No
20. If no to question #19, use the SCA drawing to locate and describe potential contaminants.		
21. Is the source protected from any obvious risk of being covered by floodwaters?	☒Yes ☐No	☒Yes ☐No
22. Is the area immediately around the wellhead graded to prevent water from ponding around the casing?	☒Yes ☐No	☒Yes ☐No
23. Is the well constructed with a pitless adaptor?	☐Yes ☒No	☐Yes ☒No
24. Is there a properly constructed screened vent on the well cap?	☒Yes ☐No	☐Yes ☒No
25. Is there a watertight, sealed well cap with no unprotected openings?	☒Yes ☐No	☒Yes ☐No
26. Are conduits and junction boxes sealed to prevent contaminants from entering the well casing?	☒Yes ☐No	☒Yes ☐No
27. Does the top of the casing extend at least 6 inches above the floor or ground?	☒Yes ☐No	☒Yes ☐No
28. Is the top of the wellhead located above grade (not in a pit)?	☒Yes ☐No	☒Yes ☐No
29. If no to question #28, is the pit drained to daylight and screened at the discharge end to prevent contaminants from entering?	☐Yes ☐No	☐Yes ☐No
30. Is a raw water sampling tap provided at the source?	☒Yes ☐No	☒Yes ☐No
31. Is the source metered?	☒Yes ☐No	☒Yes ☐No

32. If the water system uses source meters, how often are the meters read:
☒ Daily ☐ Weekly ☐ Monthly ☐ Quarterly ☐ Annually ☐ Infrequently ☐ Never

33. Are well enclosures or buildings constructed or maintained to provide (check all that apply):
☒ Lighting ☒ Venting ☒ Protection from freezing ☒ No storage of toxic or hazardous chemicals
☒ Floor drain with screen at discharge end ☒ Locks to prevent unauthorized entry ☐ Protection from rodent infestation
to Grade sump

34. Are the sources protected from unauthorized access (check all that apply)? ☐Yes ☐No
☐ Locked well cap ☒ Fenced w/ locked gate ☐ Signs ☐ Alarm system ☐ Telemetry

35. Is water supplied from a spring source? If yes, answer questions #36 through #40. ☐Yes ☒No
36. Is the spring enclosed by a structure with watertight seals to keep out surface water? ☐Yes ☐No
37. Is the drain pipe on the collection box screened? ☐Yes ☐No
38. Is the overflow pipe on the collection box screened? ☐Yes ☐No
39. Is direct surface drainage diverted around or away from the spring? ☐Yes ☐No
40. Is the area around the spring fenced to prevent unauthorized entry? ☐Yes ☐No

41. Comments:

PART E: SOURCE PUMPS AND PUMPING FACILITIES (This page may be reproduced to add more pumps)

42. DOH Source Number: 50-1

43. Pump Type:
☒ Submersible ☐ Jet ☐ Vertical or Deep Well Pump Installed 98
☐ Other:

44. Pump make and model:

45. Pump capacity: HP: 7 1/2 GPM: 60

46. Indicate location of the pressure gauge: ☐ On suction line ☐ On discharge line ☐ Both ☐ Not present

47. Pressure reading: Pump Cut In (psi): Pump Cut Out (psi):

48. Pump Controls:
☒ Float Switches ☐ Pressure Switches ☐ Lead/Lag Controls ☐ Sequencers
☐ Run Hour Meters ☐ Pump Protector ☐ Manual ☐ Other:

49. Are backup pumps, motors or other critical spare parts kept on-site? ☐ Yes ☒ No ☐ Unknown

50. Does the purveyor know where to obtain spare parts in an emergency? ☒ Yes ☐ No

51. Are pump records maintained? For example, drawdown; static level; pressure; pump run hours; amp; and repairs. ☐ Yes ☐ No

52. When was this pump installed? Date: 98 ☐ Unknown

53. Is the pump enclosure or building constructed or maintained to provide (check all that apply):
☐ Lighting ☐ Venting ☐ Protection from freezing ☐ No storage of toxic or hazardous chemicals
☐ Floor drain with screen at discharge end ☐ Locks to prevent unauthorized entry ☐ Protection from rodent infestation

54. Comments:

PART E: SOURCE PUMPS AND PUMPING FACILITIES

55. DOH Source Number:

56. Pump Type:
☒ Submersible ☐ Jet ☐ Vertical or Deep Well Pump Inst 97
☐ Other:

57. Pump make and model:

58. Pump capacity: HP: 15 GPM: 178

59. Indicate location of the pressure gauge: ☐ On suction line ☐ On discharge line ☐ Both ☐ Not present

60. Pressure reading: Pump Cut In (psi): Pump Cut Out (psi):

61. Pump Controls:
☒ Float Switches ☐ Pressure Switches ☐ Lead/Lag Controls ☐ Sequencers
☐ Run Hour Meters ☐ Pump Protector ☐ Manual ☐ Other:

62. Are backup pumps, motors or critical spare parts kept on-site? ☐ Yes ☐ No

63. Does the purveyor know where to obtain spare parts in an emergency? ☐ Yes ☐ No

64. Are pump records maintained? For example, drawdown; static level; pressure; pump run hours; amp; and repairs. ☐ Yes ☐ No

65. When was this pump installed? Date: 97 ☐ Unknown

66. Is the pump enclosure or building constructed or maintained to provide (check all that apply):
☐ Lighting ☐ Venting ☐ Protection from freezing ☐ No storage of toxic or hazardous chemicals
☐ Floor drain with screen at discharge end ☐ Locks to prevent unauthorized entry ☐ Protection from rodent infestation

67. Comments:

DOH Group A Small Water System Sanitary Survey Checklist	PWS ID#: 66125T	Survey Date: 6/15/07

PART F: SOURCE TREATMENT

Hypochlorination

68. DOH Source Number:

69. **Does the system have DOH approval to do periodic shock chlorination unrelated to any unsatisfactory coliform samples? If system is not shock chlorinating, skip question.** ☐Yes ☒No ☐Unknown

70. If they do periodic shock chlorination, indicate frequency and reason for shock chlorination:
☐ Periodic shock chlorination ☐ Seasonal shock chlorination ☐ Reason:

71. Is there continuous chlorination at the source? ☐Yes ☐No

72. If the source is continuously chlorinated, identify the reasons for treatment (check all that apply):

☐ Unsatisfactory coliform samples	☐ DOH required disinfection	☐ GWI program requirement
☐ Hydrogen Sulfide	☐ Iron removal	☐ Manganese removal
☐ CT = 6 is required by DOH	☐ WS precautionary	☐ Other:

73. **If Chlorine Contact Time (CT) is required by DOH, does the system provide a minimum CT of 6?** ☐Yes ☐No

74. If DOH requires a free chlorine residual at the entry point, is it maintained at the required level? Required residual level (mg/L): ☐Yes ☐No

75. If DOH requires a chlorine residual in the distribution system, is it maintained at the required level? Required residual level (mg/L): ☐Yes ☐No

76. **Is the chlorine disinfection system functioning properly?** ☐Yes ☐No ☐ Unknown

77. **If no to question #76, have they experienced any of the following problems in the last 2 months (check all that apply)?**

☐ No chlorine residual (0.0 mg/L)	☐ Out of chlorine solution	☐ Hypochlorinator breakdown
☐ Less than minimum entry residual	☐ Chlorine overfeed incident	☐ Chlorine not proportional
☐ Less than minimum distribution residual	☐ Other:	

78. Chlorination Chemical:

☐ 5 1/4% chlorine bleach	☐ Chlorine dioxide	☐ Gas chlorine
☐ 12% sodium hypochlorite	☐ On-site chlorine generation	☐ Chloramines
☐ Calcium hypochlorite	☐ Other:	

79. Is a backup chemical feed pump or other critical spare parts kept on-site? ☐Yes ☐No

80. Are free chlorine residuals monitored and recorded at least 5 days per week? ☐Yes ☐No

81. Are monthly free chlorine residual records submitted to DOH by the 10th of each month? ☐Yes ☐No

82. **Is the purveyor using an approved DPD free chlorine residual test kit and unexpired test chemicals?** ☐Yes ☐No

83. **Is the purveyor using proper testing procedures?** ☐Yes ☐No

84. Please have the purveyor check the free chlorine residual and note test results in Part K, question #152.

85. Comments:

Other Treatment

86. Are all types of active treatment noted on the WFI? ☐Yes ☐No

87. If no to question #86, identify the treatment process and objective using the blank source treatment form.

88. Has any treatment system listed on the WFI been discontinued? ☐Yes ☐No

89 If yes to question #88, are the unused facilities physically disconnected from the rest of the water system? ☐Yes ☐No

Treatment Plant

90. Is the treatment plant for the source associated with other sources? For example, blended or in a well field. ☐Yes ☐No

91 If yes to question #90, list all sources associated with this treatment plant:

92. Comments:

DOH Group A Small Water System Sanitary Survey Checklist	PWS ID#: 66125T	Survey Date: 6/15/07

PART G: BOOSTER PUMP STATIONS

3. Does the system have booster pump stations? ☒ Yes ☐ No

94. If yes to question #93, describe booster pumps:

BP Station # or Name	BP #1	HP/GPM:	5 HP	Location:	in PH @ resV
BP Station # or Name	BP #2	HP/GPM:	5 HP	Location:	in PH @ resV
BP Station # or Name		HP/GPM:		Location:	

PART H: PRESSURE TANKS

95. Are there pressure tanks present? If no, skip to next section. ☒ Yes ☐ No

96. If yes to question #95, where are they located? in PH

97. Type of pressure tanks: ☐ Captive Air / Bladder Tank ☒ Hydropneumatic Tank ☐ Both

98. Make and Model: [illegible]

99. Number and tank size (gals): 1 - 600gal

100. Is there an operable pressure gauge on each pressure tank? ☒ Yes ☐ No

101. Is there a testable ASME pressure relief valve installed between the tank and any shutoff valve? (To protect against catastrophic failure from high vapor pressure, such as steam in case of fire.) ☒ Yes ☐ No

102. Is the air/water level adequate? For example, not waterlogged; no excessive pump cycling; or continuous runtime. ☒ Yes ☐ No

103. Can the tank be isolated with a shut-off valve for repairs or replacement? isolate press. sys. ☒ Yes ☐ No

104. Is there a drain line on each tank? ☐ Yes ☒ No

105. If a hydropneumatic pressure tank is used, how is the air/water level maintained?

☐ Manual (such as a bicycle pump) ☒ Air compressor ☐ Snifter valve (Schrader valve) Other:

106. For hydropneumatic pressure tanks, is there an oil-less air compressor in service? ☒ Yes ☐ No ☐ Unknown

107. Comments:

PART I: DISTRIBUTION SYSTEM

108. Is an adequate map of the distribution system maintained? ☒ Yes ☐ No ☐ Unknown

109. Do any pressure zones experience low pressure? during high use pressure drops ☐ Yes ☒ No ☐ Unknown
but not below 30psi.

110. If yes to question #109, describe:

111. Is the system designed to provide fire flow? ☐ Yes ☒ No

112. If yes to question #111, what is the designed flow rate? For example, 500 gpm for 30 minutes.

113. Are proper procedures followed for disinfection of new construction or repairs? ☐ Yes ☐ No

114. Are there blow-offs to flush system? ☒ Yes ☐ No

115. Are valves periodically exercised? ☒ Yes ☐ No

116. If yes to question #115, frequency: ☒ Monthly ☐ Quarterly ☐ Annually ☐ Other:

117. Is there a flushing program? ☒ Yes ☐ No

118. If yes to question #117, frequency: ☐ Monthly ☒ Quarterly ☐ Annually ☐ Other:

119. Is the system protected from any obvious cross connections observed during the survey? ☐ Yes ☐ No

120. If no to question #119, describe:

121. Is the system protected from any potential high health hazard cross connections requiring premises isolation per Table 9 of WAC 246-290-490? ☐ Yes ☐ No

122. If no to question #121, describe:

123. Are backflow prevention assemblies used, such as reduced-pressure and double check valves. ☐ Yes ☒ No

124. If yes to question #123, are the backflow assemblies tested on an annual basis and records maintained? ☐ Yes ☒ No

125. Check the appropriate box that describes the system layout: ☐ Looped ☐ Branched with dead-ends ☒ Both

126. Comments (Include general condition of distribution system, such as frequency of leaks and repairs.):

installed in 1964 → infrequent breaks

DOH Group A Small Water System Sanitary Survey Checklist	PWS ID#: 66125T	Survey Date: 6/15/07

PART J: FINISHED WATER STORAGE (This page may be reproduced to add more storage facilities)

127. Is there a non-pressurized storage tank? ☒ Yes ☐ No

128. If yes to question #127, identify storage tank type:
☐ Underground or partially buried ☒ Ground level ☐ Elevated ☐ Standpipe

129. Storage tank material:
☒ Concrete ☐ Concrete with wood roof ☐ Steel (welded or bolted) ☐ Plastic or fiberglass
☐ Wood stave ☐ Open reservoir ☐ Other:

130. Storage volume, in gallons: 1 - 79,000 gal 1 - 35,000 gal

131. Is access to top of storage tank protected from unauthorized entry or vandalism? ☒ Yes ☐ No

132. Is the access hatch watertight with an over-lapping lip, framed opening, seal strip, etc.? ☒ Yes ☐ No

133. Is the access hatch locked? ☒ Yes ☐ No

134. Is there a dedicated air vent on the storage tank? ☒ Yes ☐ No

135. If yes to question #134, is the air vent screened with an intact non-corrodible mesh screen (24 mesh for ground level or 4 mesh for elevated tanks and standpipes)? ☒ Yes ☐ No

136. If unable to physically inspect the reservoir hatch or vent, select method used to document their condition:
☒ Review and discussion of maintenance records with purveyor.
☒ Photos to be taken and mailed by purveyor later.
☐ Purveyor unable to document, additional follow-up required.

137. Is the overflow line protected by a screen or flapper valve to prevent contaminants from entering or plugging line? ☒ Yes ☐ No

138. How does the overflow line discharge?
☐ Directly out of the side of the tank ☒ Near ground level directly on the ground ☐ Near ground level onto a splash plate
☐ Into a storm or sewer drain ☐ Into a body of water ☐ Other:

139. If the overflow line discharges into a storm/sewer drain or body of water, is there an approved backsiphonage protection used, such as an air gap or approved backflow preventer assembly? ☐ Yes ☐ No

140. Is there a separate drain line on the tank? ☒ Yes ☐ No

141. Is the drain line protected by a screen or flapper valve to prevent contaminants from entering or plugging line? ☐ Yes ☐ No

142. When was the tank inspected last? ☐ 1 yr or less ☒ 2-4 yrs ☐ 5-10 yrs ☐ Over 10 yrs ☐ Never ☐ Unknown

143. What is the tank cleaning frequency? ☐ Every year ☐ 2-4 yrs ☒ 5-10 yrs ☐ Over 10 yrs ☐ Never ☐ Unknown

144. How is the tank cleaned and disinfected? Liquivision

145. Does the location of the inlet/outlet lines provide for good water turnover in the tank? ☐ Yes ☒ No ☐ Unknown

146. Can the tank be isolated from the system for repairs or cleaning? ☒ Yes ☐ No

147. Is there a water sampling tap provided at the tank outlet? ☐ Yes ☒ No

148. Comments: screen tank drain @ daylight

PART K: OTHER

149. Has this water system received any significant customer complaints within the last 5 years? ☐ Yes ☒ No ☐ Unknown

150. Describe purveyor's method of documenting and responding to customer complaints:
Larry & Jack would investigate and take appropriate action

151. The water system's compliance status: ☐ Was reviewed with purveyor. ☐ Was not reviewed with purveyor.

152. Describe any tests you may have performed during the inspection (such as chlorine residual, pressure, or temperature):

153. Describe any simple repairs the purveyor may have performed during the inspection:

DOH Group A Small Water System Sanitary Survey Checklist	PWS ID#: 66125T	Survey Date: 6/15/07

PART L: PUBLICATIONS HANDED OUT DURING THE SURVEY OR SENT BY MAIL

- ☐ Coliform information packet
- ☐ Coliform health advisory packet
- ☐ Coliform monitoring plan
- ☐ Nitrate information packet
- ☐ Nitrate health advisory packet
- ☐ Monthly nitrate report form
- ☐ Sampling procedure forms
- ☐ Daily chlorination report form
- ☐ Emergency disinfection fact sheet
- ☐ Disinfection standards for water mains and wells
- ☐ SWSMP guide
- ☐ Cross Connection Control guide
- ☐ Existing System Approval package
- ☐ Wellhead Protection Program
- ☐ Water Conservation Program
- ☐ Preparing For A Sanitary Survey booklet
- ☐ Certified Operator information
- ☐ Group A WAC 246-290
- ☐ Regional office staff roster
- ☐ Tech Tips – Openings in Wellhead
- ☐ Tech Tips – Reservoir Vents
- ☐ Tech Tips – Reservoir Hatches
- ☐ Tech Tips – Troubleshooting Pressure Tanks
- ☐ Tech Tips – Chlorine CT For Small Systems
- ☐ Preventative Maintenance Program Guide for Small Systems
- ☐ Start-Up and Shut-down Assistance for Seasonal Non-Community Systems
- ☐ Other:

PART M: FIELD NOTES

Documents submitted with survey report:

☐ Reviewed and signed WFI ☐ Photographs labeled and attached or delivered electronically ☐ Well log

☐ Field system schematic ☐ Field SCA drawing ☐ Coliform monitoring plan ☐ Source treatment process form

☐ Other:

Field Notes:

DOH USE ONLY

DOH Reviewer:

Review Date:

Comments:

DOH Group A Small Water System Sanitary Survey Checklist	PWS ID#: 66125T	Survey Date: 6/15/07

PART N: SOURCE TREATMENT PROCESSES AND OBJECTIVES

the system is practicing treatment not noted on the WFI, use this form to identify the treatment process and objectives. Check the ..eatment objective boxes that apply for each process selected. If needed, provide additional comments below to clarify selections.

Source Name		Source Number	

	Treatment Process	Treatment Objectives *									
		A	B	C	D	E	F	G	H	I	J
1	CHLORAMINES	☐						☐			
2	CHLORINATION, GASEOUS	☐			☐	☐	☐				
3	CHLORINATION, HYPOCHLORITE	☐			☐	☐	☐				
4	CHLORINE DIOXIDE	☐									
5	IODINATION	☐									
6	OZONATION	☐			☐	☐	☐	☐			
7	ULTRAVIOLET RADIATION	☐									
8	RAPID MIX/IN-LINE BLENDER		☐	☐		☐		☐	☐		
9	COAGULATION		☐	☐		☐		☐	☐		
10	FLOCCULATION		☐	☐		☐		☐	☐		
11	SEDIMENTATION		☐	☐	☐	☐		☐	☐		
12	FILTRATION, CARTRIDGE		☐								
13	FILTRATION, DIATOMACEOUS EARTH		☐								
14	FILTRATION, GREENSAND				☐						
15	FILTRATION, PRESSURE SAND		☐	☐	☐			☐	☐		
16	FILTRATION, RAPID SAND		☐	☐	☐	☐		☐	☐		
17	FILTRATION, SLOW SAND	☐	☐								
18	PH ADJUSTMENT		☐	☐	☐	☐		☐	☐	☐	
19	ION EXCHANGE			☐					☐		
20	LIME-SODA SOFTENING			☐				☐	☐		
21	AERATION/AIR STRIPPING				☐	☐	☐	☐			
22	PERMANGANATE				☐	☐	☐				
23	ACTIVATED CARBON, GRANULAR					☐	☐	☐	☐		
24	ACTIVATED CARBON, POWDERED					☐	☐	☐			
25	REVERSE OSMOSIS			☐	☐	☐		☐	☐		
26	DISTILLATION		☐	☐	☐	☐			☐		
27	ELECTRODIALYSIS								☐		
28	SEQUESTRATION			☐	☐				☐	☐	
29	CORROSION INHIBITORS - PHOSP/SILICA									☐	
30	FLUORIDATION										☐
31	REDUCING AGENTS - SULFUR COMPOUNDS					☐	☐				
32	SLUDGE TREATMENT		☐	☐	☐				☐		
33	OTHER PROCESSES/OBJECTIVES	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

* Treatment Objective Types:

A = DISINFECTION
B = PARTICULATE (TURBIDITY) REMOVAL
C = SOFTENING (HARDNESS REMOVAL)
D = IRON & MANGANESE REMOVAL
E = ORGANICS AND COLOR REMOVAL
F = TASTE/ODOR CONTROL & DECHLORINATION
G = DISINFECTON BY-PRODUCTS CONTROL
INORGANICS REMOVAL
CORROSION CONTROL
J = DENTAL HEALTH

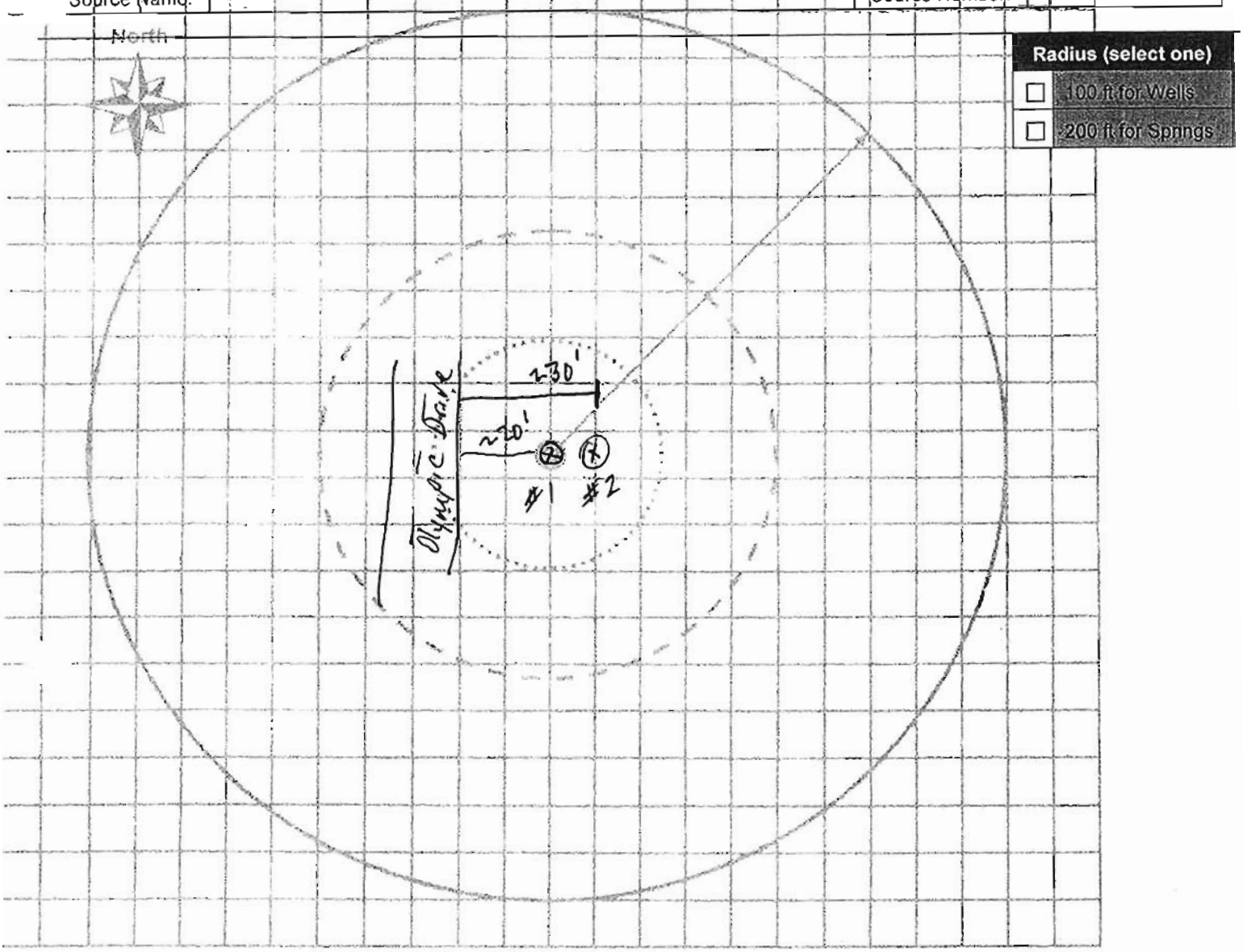
Comments:

Group A S[illegible] Water System Sanitary Survey Ch[illegible]ist Report

PART O: INVENTORY OF POTENTIAL SOURCES OF CONTAMINANTS WITHIN THE SANITARY CONTROL AREA

Use the graph below to locate any potential biological and chemical contaminants found within the source's Sanitary Control Area (SCA). The SCA is the protective area within 100 feet of wells or 200 feet of surface water such as springs, lakes, or rivers.

Source Name:		Source Number:	



Description of Features Shown on the SCA Schematic					
A.		C.		E.	
B.		D.		F.	

Sources of Contamination	Feet	Sources of Contamination	Feet	Sources of Contamination	Feet
Abandoned water wells		Dumpsters		Pesticide storage	
Animal burial		Fuel tanks (above or below ground)		Roads and parking lots	
Biological contaminants		Graveyards		Sewer lines, gravity or pressure	
Buildings		Hazardous waste disposal site		Storm water catch basins	
Chemical contaminants		Hazardous waste facility		Surface water	
nfields and septic tanks		Irrigation canal		Wastewater spray irrigation	
Drug lab		Landfill, dump, disposal area		Other:	
Dry wells		Pesticide application			

Group A S[illegible] Water System Sanitary Survey Ch[illegible]list Report

PART P: WATER SYSTEM FACILITIES FIELD SCHEMATIC

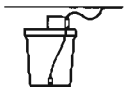
Use the space below to sketch a simple schematic of the water system facilities. You may use the templates shown below to help build your schematic. The sketch should show location of sources, treatment, pressure tanks, booster pumps, storage tanks, and a simple representation of the distribution system. Include direction of flow (directional arrows) and brief description of how the controls function.

Source Name:		Source Number:	

Example templates you can use to build your schematic:

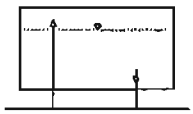

Well w/ Pump


Pressure Switch


Chlorine Injection Point


Pressure Tank


Booster Pump


Reservoir


Distribution System

(X) — Reservoir — Booster pumps — pressure tank — [illegible]

Washington State Department of Health

Division of Environmental Health
Office of Drinking Water

Help

Individual System View - PARADISE ESTATES - Water System Id - 66125

Compliance Actions | Operating Permits | Operators | Reports | Water Use Efficiency

General Information | Source Information | Samples | Exceedances

Last Permit Color Issued: Green Last Permit Issued Date: 9/1/2010

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

Current Color: Green Current Color is what the calculated permit color would be based on information as of 1/27/2011

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

Override Comments:

Current Permit Conditions:

Links to external resources are provided as a public service and do not imply endorsement by the Washington State Department of Health

Department of Health, Office of Drinking Water

Street Address:
243 Israel Road S.E. 2nd floor
Tumwater, WA 98501

Mail:
PO BOX 47822
Olympia, WA 98504-7822

Phone: (360) 236-3100

Send inquiries about DOH and its programs to the Health Consumer Assistance Office
Comments or questions regarding this Web site? Send email to EH Help Desk or call 360-236-3113.

Form 6 - Cross Connection Control Program

Program and policy documents were prepared in 2009. Signed copy of policy statement needs to be included in SWSMP.

Task	Completed
Document Authority to Implement Program	
Conduct Initial System Evaluation	
Obtain DOH-certified CCS	
Establish Administrative and Technical Procedures	
Provide for Consumer Education	
Evaluate Existing and New Facilities	
Implement Process for Ensuring Assembly Testing	
Develop Record Keeping and Reporting System	

PARADISE ESTATES WATER SYSTEM

CROSS CONNECTION CONTROL PROGRAM

Authority: Chapter 246-290-490 of the Washington Administrative Code (WAC) Titled "Cross-Connection Control" requires that the Purveyor, **Northwest Water Systems, Inc.** (Satellite Management Agency # 119) develop and implement a Cross-Connection Control Program (CCCP).

Purpose: The Purpose of this Program is to provide a basis for implementing the State Drinking Water Regulations, enacted to ensure safe drinking. It will protect the system from the possibility of contamination by isolating within its customers' internal distribution system such contaminants which could backflow into the public water supply system. It will promote the elimination or control of existing cross-connections between its customers, non-potable systems, and plumbing fixtures. It will provide for the maintenance of a continuing program of cross-connection control, which will systematically and effectively prevent the contamination of the Paradise Estates Water System.

Interpretation: Any interpretations of this document regarding scope, intent, degree of hazard, or type of protection required, will be subject to the current accepted guidelines of the State at the time of the interpretation, and the regulations established therein.

Existing System: The Paradise Estates Water System is primarily residential with (3) non-residential connections. The system currently has 159 connections and is DOH-approved for 167 connections. At present, there are no known Backflow Assemblies installed in the system. Cross connection control devices located within the individual homes are presently unknown.

Initial Cross Connection Program: The program to be instituted will generally be educational and request participation by customers. A Cross-Connection Control Survey form will be sent out to customers informing them of possible cross-connections and the resulting hazards that may accompany them. The notice will describe possible home-based cross-connections such as: irrigation systems, filling the family spa or pool with a water hose left below the water line, the presence of a water connection to an in-house photographic development chemical tank, or auxiliary water supplies from private wells that have not been disconnected from the potable water system. The Customers will fill out the Survey forms and return them to the Purveyor's DOH-Certified Cross-Connection Control Specialist (CCS) within 45 days.

Initial Hazard Assessment

a. ***Existing*** Facilities/Systems - The Purveyor will ensure that a DOH certified cross-connection control specialist (CCS) conducts an initial cross-connection hazard evaluation of the **Paradise Estates Water System** within six months after adoption of this CCC program.

Program Adoption Date: _____ Initial Hazard Survey Date:_____

b. *New* Facilities/Systems -- The Purveyor will ensure that a DOH-certified CCS conducts an initial cross-connection hazard evaluation, *before* water service is provided to any new facilities, irrigation systems etc. served by the water system.

The Survey will be followed up with an Inspection by the CCS. Cross-connections that are identified on the Survey or the Inspection will be eliminated or have backflow assemblies installed at the customer's expense. Customers will be supplied with a suggested source of supply for the assemblies, recommendations for installation, and contacts for the required annual testing of the installed device(s). The expense of all required annual testing will also be the responsibility of the customer.

Customer System Open for Inspection: The customer's system shall be open for "Facility Survey" at all reasonable times to the Purveyor to determine whether cross connections or other structural or sanitary hazards exist, including violations of these regulations. If access is denied, the Purveyor shall require the installation of a Reduced Pressure Backflow Assembly (RPBA) in the water service line. Until access is granted, or until an RPBA is installed, the Purveyor's CCS in consultation with the Owner may, depending upon the severity of the presumed hazard, cause the service to the premises to be immediately discontinued or denied by a physical break in the service line. Such service could be resumed when the customer has corrected the condition in conformance with this program.

Definitions: As used in this document, unless the context indicates otherwise, the following shall apply:

Air Gap Separation (AG): The physical, vertical separation between the free flowing discharge end of a potable water supply line and the open or non-pressure receiving vessel.

Approved Backflow Assembly: An assembly which has been approved by the State for preventing backflow.

Atmospheric Vacuum Breaker (AVB): (also known as an anti-siphon valve): A device consisting of a single check valve in the supply line that opens to atmosphere when the pressure in the line drops to atmospheric.

Auxiliary Water Supply: Any supply of water used to augment the supply obtained through the Paradise Estates Water System which serves the premises in question.

Backflow: The flow of water or other fluids in the direction opposite to the normal flow.

Backflow Assembly Tester (BAT): An individual who is certified by the Washington State Department of Health (DOH) to test Backflow Prevention Assemblies.

Check Valve: A valve that permits flow in only one direction.

Contaminant: Any physical, chemical, biological, or radiological substance or matter in water which may render the water non-potable according to State regulations.

Cross Connection: Any link or channel between piping which carries potable drinking water and the piping or fixtures which carry non-potable water or other substances.

Cross Connection Control Specialist (CCS): An individual Certified by the DOH to inspect for Cross Connections.

Customer System: All plumbing, piping, and appurtenances on the customer's side of the point of metering or connection.

Double Check Valve Assembly (DCVA): An assembly of two independently-acting check valves with a shut-off valve on each side of the two check valves. The assembly also has test ports for checking the water tightness of each check valve. The assembly must be an approved Backflow Prevention Assembly.

Facility Survey: An on-site review of the water source, facilities, equipment, operation, and maintenance for the purpose of evaluating the hazards to the drinking water supply.

Premises Isolation: A method of protecting a public water system by installation of approved air gaps or approved backflow prevention assemblies at or near the service connection or alternative location acceptable to the purveyor to isolate the consumer's water system from the purveyor's distribution system.

Pressure Vacuum Breaker Assembly (PVBA): A mechanical assembly consisting of one spring loaded check valve in the supply line and a spring loaded air inlet on the downstream side of the check valve which will open to atmosphere when the pressure in the assembly drops below one pound per square inch. The complete assembly consists of two shut off valves and two test ports for checking water tightness of the check valve. The Assembly must be an approved Backflow Assembly.

Reduced Pressure Backflow Assembly (RPBA): An assembly for preventing backflow incorporating two check valves, a differential relief valve located between the two check valves, two shut off valves, one on each end of the assembly, and test ports for checking the tightness of the check valves and the operation of the relief valve. The Assembly must be an approved Backflow Assembly.

Safe Drinking Water (Potable Water): Water which has sufficiently low concentrations of microbiological, inorganic chemical, organic chemical, radiological, or physical substances so that individuals drinking such water at normal levels of consumption will not be exposed to disease organisms or other substances which may produce harmful physical effects.

Secondary Contaminant: Contaminants which at levels generally found in drinking water do not present unreasonable risk to health, but do adversely affect taste, odor, or color.

Service Connection: The point of delivery of water at or near the property line, generally at the water meter.

Backflow Prevention Requirements: Backflow assemblies shall be installed on each service line of a customer's system at or near the property line or immediately inside the building being served, but in all cases before the first branch line leading off the service line wherever any of the following conditions exist:

1) There is an auxiliary water supply which is, or could be, connected to the potable water piping.

2) There is piping for conveying liquids other than potable water, and where that piping is installed and operated in a manner which could cause a cross-connection.

3) There is intricate plumbing which makes it impractical to ascertain whether or not a cross connection exists.

4) In the case where there has been a history of repeating the same or similar cross connection or backflow hazard, even though these have been removed or disconnected.

5) Where there is a building greater than two stories in height or any plumbing system greater than or equal to thirty feet above the water main.

6) Where fire hydrants or fire systems are connected to the potable or domestic water service within the property being served.

7) Where a single water service is used to supply three or more dwellings.

8) Where the water meter serving the property is one and one-half inch or larger.

9) Where there is a backflow or back-siphonage potential.

10) Where any fixture is subject to being submerged.

11) Where the system is not open for inspection.

For single-service residential service connections, "in premises" (point of hazard) backflow protection may be relied upon in accordance with the Uniform Plumbing Code (UPC) for hazards such as, but not limited to:

1) Irrigation Systems

2) Swimming Pools or Spas

3) Ponds

4) Boilers

Type of Backflow Protection Required: The type of protection required shall be commensurate with the degree of hazard which exists as follows:

1) An approved AG of at least twice the inside diameter of the oncoming supply line, but not less that one inch measured vertically above the top rim of the vessel, or an approved RPBA shall be installed in all high-health cross-connection hazard premises listed on table 9 in WAC 246-290-490 (4) where the substance which could backflow is a "contaminant" or potentially hazardous to health. Examples of premises where these conditions could exist include hospitals, mortuaries, car washes, medical clinics, auxiliary water systems, boilers, sewage piping etc.

2) An approved DCVA shall be installed where the substance which could backflow is a secondary contaminant. Examples would include landscape irrigation systems, multiple dwelling units served by a single water service, etc.

3) An approved PVBA or an AVB shall be installed where the substance which could backflow is objectionable but does not pose a risk to health and where there is no possibility of backpressure in the downstream piping.

4) In the case of all private fire services, an approved Backflow Assembly installed to the Purveyors construction specifications shall be required. The Purveyor may require a monitoring meter or detection system to detect unauthorized use or leakage within the system. The type of Backflow Prevention Assembly shall be as follows:

a) Low Hazard – Systems with or without a pumper connection but no auxiliary water supplies available, chemicals or additives, or other detectable cross connections require an approved DCVA.

b) High Hazard – Systems with auxiliary water supplies, chemical additives, or other detectable cross connections shall require an approved RPBA.

Approval of Assemblies: All Backflow Prevention Assemblies required under this program shall be of a type approved by the State and this Purveyor.

Follow Up Cross Connection Program. The Purveyor has the following Cross Connection Control Specialists (CCS) on staff who shall manage the Cross Connection Control Program (CCCP).

Name of CCS	Reg Hearn, Northwest Water Systems, Inc.
Address	P. O. Box 123
City, State, Zip	Port Orchard, WA 98366
Telephone Number	(360) 876-0958
CCS Certification Number	7642

Name of CCS	Danford A. Moore, Northwest Water Systems, Inc.
Address	P. O. Box 123
City, State, Zip	Port Orchard, WA 98366
Telephone Number	(360) 876-0958
CCS Certification Number	10516

Name of CCS	J. Anthony Norris, Northwest Water Systems, Inc.
Address	P. O. Box 123
City, State, Zip	Port Orchard, WA 98366
Telephone Number	(360) 876-0958
CCS Certification Number	8882

Name of CCS	Kelly N. Alsin, Northwest Water Systems, Inc.
Address	P. O. Box 123
City, State, Zip	Port Orchard, WA 98366
Telephone Number	(360) 876-0958
CCS Certification Number	011822

The CCS shall develop a schedule for triennial inspection of the system for cross-connections. The CCS shall evaluate all service connections to assess their degree of hazard and recommend to the customers corrective actions and time frames necessary for completion.

1) For new services, the CCS will evaluate the design and installation prior to activation of the service.

2) For existing services, the evaluation of the system will be made during the initial inspection.

3) For all services, the evaluation of the system will be made triennially as described above or whenever there is a change in the use of the premises.

4) The CCS shall respond to all Cross Connection emergencies and backflow incidents and cause immediate corrective action to be taken.

Backflow Prevention Inspection and Testing Program. The CCS shall also oversee the Backflow Assembly Testing and Quality Assurance Programs. Using Cross-Connection Control Survey and Inspection Reports as a Guide, the CCS shall determine where Backflow Assemblies are required and make recommendations to the customers accordingly. The Purveyor has a DOH-Certified Backflow Assembly Tester (BAT) under agreement to test all assemblies in the water system. Additional BATs are available should the need arise. The CCS shall make certain that the Backflow Assemblies are inspected and tested by the BATs and that their testing equipment is currently and properly calibrated.

Cross Connection and Backflow Assembly Records: The Purveyor shall maintain the following Cross Connection and Backflow Prevention records for both "premises" and "in-premises" installations:

1) Cross Connection Summary and Incident reports

2) A Master List of service connections with Backflow Assemblies or otherwise having a hazard level above normal.

3) An inventory of including type, location, size, model, etc. of all Backflow Prevention devices.

4) Installation, Test, & Inspection History on all Backflow Assemblies.

Owner's Duty for Inspection: It shall be the duty of the assembly owner of any premise where backflow assemblies are installed to have the assembly tested and certified as working immediately upon installation of the assembly, and at least once a year, or more often for those instances where successive inspections indicate repeated failure. The frequency of these tests or the replacement of the assembly because of repeated failure is at the discretion of the Purveyor. The tests, repairs, and/or replacement of any Backflow Assembly shall be at the expense of the assembly owner and performed by a BAT who is currently certified by the State and approved by the Purveyor. Test, repair and/or replacement shall be performed within thirty days of the test date. The assembly owner is to contact a BAT who can perform the test within the required time period. The Purveyor will notify the owner each year when the assembly is due for testing. The assembly owner shall notify the Purveyor a minimum of forty-eight (48) hours in advance of when a test is to be performed, so that the Purveyor's CCS may witness the test if they so desire. Records of such tests, repairs, and/or replacements shall be submitted to the Purveyor within ten (10) days of such tests, repairs or replacements.

Previously Installed Assemblies: Backflow Assemblies which were approved at the time they were installed but are not on the current list of approved assemblies, shall be permitted to remain in service provided that they are properly maintained, are commensurate with the degree of hazard, are tested at least annually, and perform satisfactorily. When assemblies of this type are moved, or require more than minimal maintenance, they shall be replaced by assemblies which are on the list of assemblies approved by the State and the Purveyor.

Backflow Incident Response: The Purveyor's CCS shall lead a team effort to respond to all Backflow Incidents. The team shall follow the procedures outlined in the "Backflow Incident Response Plan" for the Paradise Estates Water System which is included with the program documents.

Customer Education: The Purveyor will distribute with water bills or some other means, at regular intervals, public education brochures to system customers. For residential customers, such brochures will describe the cross-connection hazards in homes and the recommended assemblies or devices that should be installed by the homeowner to reduce the hazard to the public water system. The education program will emphasize the responsibility of the customer in preventing the contamination of the public water supply. The Purveyor's staff will produce the public education brochures or the Purveyor will obtain brochures from:

- PNWS-AWWA;
- Spokane Regional Cross-Connection Control Committee (SRC4);
- Western Washington Cross-Connection Prevention Professionals Group (The Group);
- USC FCCCHR;
- Other national backflow prevention associations, such as the American Backflow Prevention Association (ABPA); and/or
- Other water utilities.

The information distributed by the Purveyor will include, but not be limited to, the following subjects:

- Cross-connection hazards in general;
- Irrigation system hazards and corrective actions;
- Fire sprinkler cross-connection hazards;
- Importance of annual inspection and/or testing of backflow assemblies; and
- Thermal expansion in hot water systems when backflow assemblies are installed for premises isolation.

The Purveyor will distribute information brochures to all customers every two to three years, and to every new customer at the time the service agreement is signed.

Reclaimed/Reused Water: At this time, the **Paradise Estates Water System** does not receive or distribute reclaimed water. Additionally, it is the policy of the Water system to prohibit the intentional return of used water to the distribution system by any customer served by the system.

Technical Resources:

a. Manual of Cross-Connection Control, 9th Edition, 1993, University of Southern California, Foundation for Cross-Connection Control & Hydraulic Research, KAP-200, University Park, MC-2531, Los Angeles, CA 98089-2531 (213) 740-2032.

b. Cross Connection Control Manual, Accepted Procedure and Practice, 6th Edition, 1995 ("Yellow Manual"), Pacific Northwest Section, American Water Works Association, PO Box 2050 Clackamas, OR 97015-2050 (877) 767-2992 (toll-free)

b. Cross-Connection Control for Small Water Systems, March 2004, Revised Office of Drinking Water, Washington State Department of Health, P. O. Box 47828, Olympia, WA 98504-7828 (360) 236-3164

Coordination With Local Administrative Authority: Both WAC 246-290-490 and the Uniform Plumbing Code (as amended for Washington) require coordination between purveyors and the Local Administrative Authority in all matters concerning cross-connection control.

a. Identification of Local Administrative Authority (LAA) –the LAA that enforces the plumbing code for the premises served by the Purveyor is **Mason County, Department of Community Development, Building Department, att'n: Mark Core, 426 W. Cedar St. (P. O. Box 186) , Shelton, WA 98584 (360) 275-8733.**

b. Coordination with Local Administrative Authority - A letter indicating that this cross-connection control program has been implemented has been provided to **Mason County, Planning & Building Department** on **April 20, 2009.**

c. Description of Coordination with LAA – The Purveyor coordinates with the LAA as follows: **Coordination consists of information sharing only.** However, the Purveyor requests the opportunity to review any plumbing plans for new or existing connections to the water system when permits are applied for. The Purveyor further agrees to inform the LAA whenever a backflow incident or a shut-off occurs.

d. Delineation of Responsibilities – The Purveyor and the LAA are responsible for the following CCC activities in the **Paradise Estates Water System.** The LAA reviews new construction drawings; the Purveyor is responsible for all other Cross-Connection Control evaluations, tests, inspections, and record keeping.

e. Notification of Local Administrative Authority - The Purveyor will inform the LAA when there is a:

- Change in plumbing that requires a plumbing permit;
- Change in the use of any part of the premises that alters the cross-connection hazard level; or
- Backflow incident.

Enforcement: The CCS, in consultation with the Owner, shall cause the water service to the premises to be immediately discontinued or denied by a physical break in the service until the customer has corrected the condition in conformance with this program in any of the following situations:

1) When it becomes known that a condition such as a cross connection, plumbing, structural, sanitary hazard, or other violation of this program is present.

2) In those cases of extreme emergency, and where an immediate threat to life or public health is found to exist.

3) When after a reasonable length of time has been allowed as determined solely by the Purveyor's CCS, the tests, repairs, and/or replacement of the assemblies or any other requirement within this program is not performed in accordance with this program.

Severability: The provisions of this program are severable. If any portion of this program is held by a court of competent jurisdiction to be invalid or unenforceable for any reason, such determination shall not affect the validity of the remainder of the program or its application to any other program.

NWS
Northwest Water Systems, Inc.
P. O. Box 123
Port Orchard, WA 98366
360-876-0958

PARADISE ESTATES WATER SYSTEM

Cross-Connection Control Survey

A Cross-Connection is any actual or potential physical connection between the water system and any source of non-potable liquid, solid or gas that could contaminate the potable water supply by backflow (an undesirable reversal of the flow of water). If there were a pressure drop in our public water system due to occurrences such as water line flushing, fire fighting, a broken pipe, or a power outage, backflow could occur. State law requires that the water system survey each member to determine the presence of any connection that has the potential to cause a backflow of contaminants, and work with you to either eliminate the potential for backflow or install a protective device (back-flow assembly).

In general, a cross connection exists any time the potential for backflow exists. This can occur any time a non-potable fluid level could rise to a height in excess of the source of the potable water, or if the source of potable water could be submerged in the non-potable liquid. An example of the first case is an old style bathtub whose water supply is plumbed through the side of the tub below the rim: any time the water level is above the spout, bath water could be drawn into the water supply. An example of the second case is a common stock watering trough fed by a hose: any time the end of the hose is below the water level in the trough, water from the stock tank could be drawn into the water supply.

Please review the following list and check any items that apply to you. If you have any questions about what to include, please call Northwest Water Systems at (360) 876-0958 (or Toll Free (888) 881-0958).
We will advise you within 30 days of receiving your form if we need to conduct a survey at your residence.

Health and Safety:
Dialysis equipment
Fire sprinkler system
Other_____

Plumbing:
Heating system boiler/Solar heating system
Water softener
Old style plumbing fixtures
Other water supply (whether or not connected to plumbing system)

Irrigation System:
In-ground sprinkler system
Outdoor hose and hose-bib
Private Water Well
Other_____

Miscellaneous:
Hot Tub
Pool (including inflatable pools)
Waterbed
Photo lab or darkroom
Greenhouse
Fertilizer attachment for hose
Animal watering troughs
Decorative pools, fountains, birdbaths
Other water-using devices
Sewage pumping facilities or grey water system
Boat moorage with water supply
Water Booster Pump
Hobby farm
Home-based business (If Yes, list type/describe)_____
_____
Other_____

Address: _____

Daytime Phone No. _____

Name: _____

Date: _____

Signature: _____

Please return this form by **June 4, 2009.**

NWS
Northwest Water Systems, Inc.
P. O. Box 123
Port Orchard, WA 98366
360-876-0958

PARADISE ESTATES WATER SYSTEM

Cross-Connection Control Policy

Finding of Fact

Whereas it is the responsibility of a water purveyor to provide water to the customer at the meter that meets Washington state water quality standards;

Whereas it is the water purveyor's responsibility to prevent the contamination of the public water system from the source of supply (i.e., to the customer's connection to the service pipe or meter);

Whereas it is a requirement of the Washington State Department of Health (DOH) for the Purveyor to establish a cross connection-control program satisfactory to DOH;

Whereas cross-connections within the customer's plumbing systems pose a potential source for the contamination of the public water supply system;

Now be it resolved that **Northwest Water Systems, Inc,** hereinafter referred to as the Purveyor, and the **Paradise Service Association**, hereinafter referred to as the Owner, establish the following service policy to protect this privately-owned water system from the risk of contamination. For public health and safety, this policy shall apply equally to all new and existing customers.

Definitions

Unless otherwise defined, all terms used in this resolution pertaining to cross-connection control have the same definitions as those contained in WAC 246-290-010 of the Washington State Drinking Water Regulations.

Prevention of Contamination

The customer's plumbing system, starting from the termination of the Owner's water service pipe, shall be considered a potential health hazard requiring the isolation of the customer's premises by either a DOH-approved, customer-installed and maintained reduced-pressure principle backflow assembly (RPBA) or double-check valve backflow assembly (DCVA), depending upon the severity of the hazard.. The RPBA or DCVA shall be located at the end of the Owners's water service pipe (i.e., immediately downstream of the meter) or at the point of hazard. Water shall only be supplied to the customer through a DOH-approved, customer-installed and maintained RPBA or DCVA..

Notwithstanding the aforesaid, the Purveyor, upon an assessment of the risk of contamination posed by the customer's plumbing system and use of water, may allow:

- A single-family or duplex residential customer to connect directly to the water service pipe, i.e., without a purveyor-approved DCVA or RPBA.
- Any customer, other than a single-family or duplex residential customer, as a minimum, to be supplied through a DOH-approved, customer-installed and maintained, DCVA (Premise Isolation).
- Any customer, other than a single-family or duplex residential customer, to connect directly to the water service pipe (i.e., without an approved DCVA or RPBA), PROVIDED THAT the customer installs and maintains a DCVA or RPBA, at the point of hazard, that is commensurate with the degree of hazard assessed by the Purveyor (In-Premise isolation).

Conditions for Providing Service

Water service is provided based on the following terms and limitations:

1. The customer agrees to take all measures necessary to prevent the contamination of the plumbing system within his/her premises and the Owner's distribution system that may occur from backflow through a cross connection. These measures shall include the prevention of backflow under any backpressure or backsiphonage condition, including the disruption of the water supply from the Owner's system that may occur during routine system maintenance or during emergency conditions, such as a water main break.

2. The customer agrees to install, operate, and maintain at all times his plumbing system in compliance with the current edition of the Uniform Plumbing Code having jurisdiction as it pertains to the prevention of contamination and protection from thermal expansion, due to a closed system that could occur with the present or future installation of backflow assemblies on the customer's service and/or at plumbing fixtures.

3. For cross-connection control or other public health-related surveys, the customer agrees to provide for the Purveyor's employees or agents free access to all parts of the premises during reasonable working hours of the day for routine surveys, and at all times during emergencies.

4. Where agreement for free access for the Purveyor's survey is denied, the Purveyor may supply water service provided that premises isolation is provided through a DOH- approved reduced-pressure principle backflow assembly (RPBA)

5. The customer agrees to install all backflow prevention assemblies requested by the Purveyor and to maintain those assemblies in good working order. The assemblies shall be of a type, size, and make approved by DOH and acceptable to the Purveyor. The assemblies shall be installed in accordance with the recommendations given in the most recently published edition of the *Cross Connection Control Manual, Accepted Procedures and Practice,* published by the Pacific Northwest Section, American Water Works Association.

6. The customer agrees to:

   (a) Have all assemblies (e.g., RPBAs and/or DCVAs) that the Purveyor relies upon to protect the public water distribution system tested upon installation, annually thereafter and/or more frequently if requested by the Purveyor, after repair, and after relocation;
   (b) Have all testing done by a purveyor-approved and currently DOH-certified Backflow Assembly Tester (BAT);
   (c) Have the RPBA or DCVA tested in accordance with DOH-approved test procedures; and
   (d) Submit to the Purveyor the results of the test(s) on BAT-supplied test report forms within the time period specified by the Purveyor.

7. The customer agrees to bear all costs for the aforementioned installation, testing, repair, maintenance and replacement of the RPBA, or DCVA installed to protect the Owner's distribution system.

8. At the time of application for service, if required by the Purveyor, the customer agrees to submit to the Purveyor plumbing plans and/or a cross-connection control survey of the premises conducted by a purveyor-approved and DOH-certified Cross-Connection Control Specialist (CCS).

9. The cross-connection control survey shall assess the cross-connection hazards and list the backflow assemblies provided within the premises. The results of the survey shall be submitted prior to the Purveyor turning on water service to a new customer. The cost of the survey shall be borne by the customer.

10. For classes of customers other than single-family residential, when required by the Purveyor, the customer agrees to periodically submit a cross-connection control re-survey of the premises by a DOH-certified CCS acceptable to the Purveyor. The Purveyor may require the re-survey to be performed in response to changes in the customer's plumbing or water use, or performed periodically (annually or less frequently) where the Purveyor considers the customer's plumbing system to be complex or subject to frequent changes in water use. The cost of the re-survey shall be borne by the customer.

11. Within 45 days of a request by the Purveyor, a residential customer shall agree to complete and submit to the Purveyor a "Cross-Connection Control Survey" form for the purpose of surveying the health hazard posed by the customer's plumbing system on the Purveyor's distribution system. Further, the residential customer agrees to provide within 30 days of a request by the Purveyor an on-site cross-connection control inspection of the premises by the Purveyor's, DOH-certified CCS.

12. The customer agrees to obtain prior approval from the Purveyor for all changes in water use, and alterations and additions to the plumbing system, and shall comply with any additional requirements imposed by the Purveyor for cross-connection control.

13. The customer agrees to immediately notify the Purveyor and the local health jurisdiction of any backflow incident occurring within the customer's premises (i.e., entry of any contaminant/pollutant into the drinking water) and shall cooperate fully with the Purveyor to determine the reason for the backflow incident.

14. The customer acknowledges the right of the Owner to discontinue the water supply within 72 hours of giving notice to the customer, or a lesser period of time if required to protect public health, if the customer fails to cooperate with the Purveyor in the survey of premises, in the installation, maintenance, repair, inspection, or testing of backflow prevention assemblies or air gaps required by the Purveyor, or in the Purveyor's effort to contain a contaminant or pollutant that is detected in the customer's system.

15. Without limiting the generality of the foregoing, in lieu of discontinuing water service, the Purveyor may install an RPBA on the service pipe to provide premises isolation, and recover all costs for the installation and subsequent maintenance and repair of the assembly, appurtenances, and enclosure from the customer as fees and charges for water. The failure of the customer to pay these fees and charges may result in termination of water service in accordance with the Purveyor's water billing policies.

16. The Purveyor will require premises isolation for a customer that is of the high-hazard type or category requiring "Mandatory Premises Isolation" established by the DOH regulations (Table 9, WAC 246-290-490).

17. Where the Purveyor imposes mandatory premises isolation in compliance with DOH regulations, or agrees to the customer's voluntary premises isolation through the installation of a RPBA immediately downstream of the Purveyor's water meter, the customer acknowledges his obligation to comply with the other cross-connection control regulations having jurisdiction (i.e., Uniform Plumbing Code). Although the Purveyor's requirements for installation, testing, and repair of backflow assemblies may be limited to the RPBAs used for premises isolation, the customer agrees to the other terms herein as a condition of allowing a direct connection to the Owner's service pipe.

18. The customer agrees to indemnify and hold harmless the Owner and the Purveyor for all contamination of the customer's plumbing system or the Owner's distribution system that results from an unprotected or inadequately protected cross connection within the customer's premises. This indemnification shall pertain to all backflow conditions that may arise from the Purveyor's suspension of water supply or reduction of water pressure, recognizing that the air gap separation otherwise required would require the customer to provide adequate facilities to collect, store, and pump water for his/her premises.

19. The customer agrees that, in the event legal action is required and commenced between the Owner and/or Purveyor and the customer to enforce the terms and conditions herein, the substantially prevailing party shall be entitled to reimbursement of all incurred costs and expenses including, but not limited to, reasonable attorney's fees as determined by the Court.

20. The customer acknowledges that the Purveyor's survey of a customer's premises is for the sole purpose of establishing the Purveyor's minimum requirements for the protection of the public water supply system, commensurate with the Purveyor's assessment of the degree of hazard.

21. It shall not be assumed by the customer or any regulatory agency that the Purveyor's survey, requirements for the installation of backflow prevention assemblies, lack of requirements for the installation of backflow prevention assemblies, or other actions by the Purveyor's personnel constitute an approval of the customer's plumbing system or an assurance to the customer of the absence of cross connections therein.

22. The customer acknowledges the right of the Purveyor, in keeping with changes to Washington State regulations, industry standards, or the Purveyor's risk management policies, to impose retroactive requirements for additional cross-connection control measures.

The Owner and/or Purveyor may record the customer's agreement to the above terms for service on an "Application for Water Service," "Application for Change of Water Service," or other such form prepared by the Owner and signed by the customer.

Implementation of the Cross-Connection Control Policy

The Purveyor will engage the services of a DOH-certified CCS to develop, implement and be in responsible charge of the **Paradise Estates Water System's** cross-connection control program.

The Purveyor, under the direction of the aforementioned CCS, will prepare a written cross-connection control program plan to implement the requirements of this resolution. The written program shall be consistent with this resolution and shall comply with the requirements of Chapter 246-290 WAC (Group A Drinking Water Regulations).

The Purveyor will use the most recently published editions of the following publications as references and technical aids:

1. *Cross-Connection Control Manual, Accepted Procedures and Practice,* published by the Pacific Northwest Section, American Water Works Association, or latest edition thereof.

2. *Manual of Cross-Connection Control,* published by the Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California, or latest edition thereof.

3. *Cross-Connection Control Guidance Manual for Small Water Systems,* published by the DOH Office of Drinking Water.

The Purveyor will incorporate the written program plan into the Water System Plan or Small Water System Management Program, and will submit the plan to DOH for approval when requested.

The Purveyor, in consultation with the aforementioned CCS, shall have the authority to make reasonable decisions related to cross connections in cases and situations not provided for in the resolution or written program.

If any provision in this resolution, or in the written cross-connection control program is found to be less stringent than or inconsistent with the Drinking Water Regulations (Chapter 246-290 WAC), or other Washington state statutes or rules, the more stringent state statute, rule, or regulation shall apply.

Resolution Passed: _____

Effective Date: _____

Signatures: _____

_____

_____

Emergency Response Plan

This section includes the following information:

- **Emergency Response Plan** – provides phone lists for emergency contacts and response actions for specific events.
- **Emergency Source Activation Protocol** – details the steps required to activate Well #1 for use during an emergency situation, including templates for customer notification.
- **Water Shortage Plan** – provides a framework for establishing voluntary and mandatory water use restrictions if the water system experiences a water shortage due to a natural disaster or other unplanned event.

A short reference list for emergency contacts is provided below. A longer list with additional contacts is provided in the Emergency Response Plans.

Emergency Contacts	Phone
Fire/Police/Emergency	911
Mason County Environmental Health	360-427-9670
Washington DOH SWRO	360-236-3030
Washington DOH Coliform Manager (Sandy Brentlinger)	360-236-3044
Washington DOH Emergency Hotline (24-hour)	877-481-4901
Electrical utility: Mason County PUD 3	360-275-2833
Pump repair: Nicholson Drilling	800-894-4421
Satellite management agency / Engineer / Media contact Northwest Water Systems, Inc. (NWS) (24-hour)	360-876-0958

NORTHWEST WATER SYSTEMS

EMERGENCY RESPONSE PLAN

1.0 INTRODUCTION

Safe and reliable drinking water is vital to every community. Preparing for emergencies is a vital step in protecting the water supply and a high priority for Northwest Water Systems (NWS). NWS has identified the following goals in emergency preparedness:

- Understand and organize a communication network
- Determine the possible emergencies and likelihood of occurrence
- Establish appropriate levels of security
- Evaluate alternative sources of water and the viability of each.

When NWS is notified of an emergency situation at a water system, emergency procedures will be implemented to ensure that the situation is handled appropriately and with as little risk to public safety as possible. The purpose of this Emergency Response Plan is to document the procedures NWS will implement in responding to emergency situations.

The Emergency Response Plan includes the following information:

2.0 Personnel Responsible for Emergency Response
3.0 Contacting NWS Regarding an Emergency
4.0 NWS Emergency Assessment
5.0 Emergency Response Quick Reference Lists
6.0 Repair Providers
7.0 Notifying Residents or Customers
8.0 Notifying Regulators
9.0 Plan Approval
Appendix – Templates for Emergency Notifications

This document should be accessible to all NWS personnel responsible for emergency management at all times. In the event that the information below should change or become dated, i.e. contact names and numbers, this emergency plan will be updated.

2.0 PERSONNEL RESPONSIBLE FOR EMERGENCY RESPONSE

At NWS, the staff member responsible for the emergency response plan is:

Operations Supervisor: Kelly Alsin, WDMIII, CCS, BAT

Within NWS, the following chain-of-command or lines of authority exist:

President and CEO:	Jonathan Wiley
Operations Supervisor:	Kelly Alsin
Field Technicians:	Tony Norris, Brandon Maine, Sean Burns

All NWS personnel can be contacted at the following 24-hour phone number: (360) 876-0958.

3.0 CONTACTING NWS REGARDING AN EMERGENCY

In an emergency situation, often the water system customers will be aware of a problem with their water system before NWS is aware of the problem. All customers served by systems managed by NWS are provided with the NWS office phone number. All emergency calls are directed to the NWS office phone system.

During business hours (8:00 AM to 5:00 PM Monday through Friday, except holidays detailed in the Employee Manual), phones at the NWS office will be answered in person. Emergency calls will be routed to the Operations Supervisor. If the Operations Supervisor is not in the office, he/she is contacted on his/her cell phone and informed of the emergency.

From Monday through Thursday, after hours calls are directed to a voice mail system which includes an emergency voice mail box. If a message is left in the emergency voice mail box, the phone system automatically contacts the on-call staff person (either the President/CEO or the Operations Supervisor).

From Friday at 5:00 PM through Monday at 8:00 AM, all phone calls to the NWS office number are directed to a call center. Phone calls to the call center are answered in person by call center staff. The call center staff obtains information from the caller and then contacts the weekend on-call staff person via email and text messages to cell phones. The weekend on-call staff person is either the Operations Supervisor or a Field Technician.

4.0 NWS EMERGENCY ASSESSMENT

After NWS identifies an emergency or is notified of an emergency situation, the Operations Supervisor will determine whether the emergency requires an on-site presence by NWS. If needed, the Operations Supervisor will contact the Field Technician and provide instructions for an on-site evaluation.

In assessing an emergency situation, the Operations Supervisor and/or the Field Technician will analyze the type and severity of the emergency.

> **Level I: Normal (Routine) Emergency** - Minor failure which can be repaired within 24 hours. Water quality is not affected. Examples may include, but are not limited to: Distribution line breaks, short power outage, minor mechanical failure in pump house.
>
> **Level II: Minor Emergency (Alert Status) –** Minor disruption in supply or indication of possible contamination. Public health may be jeopardized. Minor emergencies can usually be resolved within 72 hours. Examples may include, but are not limited to: Disruption in supply such as a transmission line break, pump failure with a potential for backflow or loss of pressure; an initial unconfirmed positive fecal coliform or E. coli sample; an initial primary chemical contaminant sample.
>
> **Level III: Significant Emergency –** The system experiences significant mechanical or contamination problems where disruption in supply is inevitable and issuance of a health advisory is needed to protect public health. Major emergencies should be reported to DOH as soon as possible. Examples may include, but are not limited to: a verified acute confirmed coliform MCL or E. coli/fecal positive sample requiring immediate consideration of a health advisory notice to customers, a confirmed sample of another primary contaminant requiring immediate consideration of a health advisory notice to customers, loss of a source or reservoir, a major line break or other system failure resulting in a water shortage or requiring system shutdown, surface water contamination, or an immediate threat to public health of the customers requiring a health advisory.
>
> **Level IV: Catastrophic Disaster –** The system experiences major damage or contamination form a natural disaster, an accident or an act of terrorism. These incidents usually require immediate notification of local law enforcement and local emergency management services. Immediate issuance of health advisories and declaration of water supply emergencies are critical to protect public health.

NWS will contact the water system owner and communicate the recommended action. In the event of a public health emergency, if the water system owner cannot be contacted, NWS will take action as necessary to protect the health of residents on the water system experiencing the emergency.

5.0 NOTIFYING RESIDENTS OR CUSTOMERS

Notify any residents or customers that may be affected as a result of the emergency situation. Depending on the type of emergency and the area affected, phone calls or door-to-door notification may be used to provide information quickly and effectively to the public.

Once the problem is resolved, the same notification procedures will be used to inform the public that the situation has passed and they can resume normal water use procedures.

The following are templates for notifications that may be needed in an emergency situation:

Acute Coliform Failure Public Notice

Non-acute Coliform Failure Public Notice

Emergency Well Use – Boil Water

Emergency Well Use – Boil Water Rescinded

Emergency Well Disconnect – Return to Normal Operations

Copies of these templates are included in an appendix to the Emergency Response Plan.

6.0 NOTIFYING REGULATORS

In the event of a Level I or Level II emergency during which a drinking water system exceeds the Maximum Contaminant Level (MCL) for coliform and in all Level III and Level IV emergencies, NWS will notify the Washington State Department of Health Office of Drinking Water (ODW). Regardless of Group A or B status, ODW will be contacted. The local health jurisdiction will also be notified; however, many of the local health jurisdictions do not have after hours emergency response numbers. ODW can assist in determining the proper notification process for each county.

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

PUBLIC NOTICE CERTIFICATION
Acute Coliform MCL

Within 10 days of notifying your customers, you must send a copy of each type of notice you distribute (hand-delivered notices, press releases, newspaper articles, etc.) to our regional office. Also, complete and send this form, which certifies that you have met all the public notification requirements. If the boil water advisory remains in effect more than three months, you must notify your water users again and provide another Public Notice Certification to us. *With this certification, you are also stating that you will meet future requirements for notifying new billing units of the violation or situation.*

Water System:_____ ID #_____ County:_____

Violation Date:_____ / _____ / _____ Violation Type:_____

This public water system certifies that public notice has been given to water users, following state and federal requirements for delivery, content, and deadlines.

Complete the following items:

Yes No

☐ ☐ Distribution was completed on ___ / ___ /____. Check all that apply:
- ☐ Hand delivery,
- ☐ Press release (TV, radio, newspaper, etc.),
- ☐ Posting at_____ (by DOH approval only),
- ☐ Other _____ (by DOH approval only).

☐ ☐ Were the water users notified within 24 hours?

_____ _____ _____
Signature of owner or operator | Position | Date

If you need this publication in an alternate format, call (800) 525-0127 or for TTY/TDD call (877) 833-6341.

Northwest Regional Office:
20435 72nd Ave S Suite 200
Kent WA 98032
(253) 395-6775
Fax: (253) 395-6760

Southwest Regional Office:
PO Box 47823
Olympia WA 98504-7823
(360) 236-3030
Fax (360) 664-8058

Eastern Regional Office:
16201 E Indiana Ave Suite 1500
Spokane Valley WA 99216
(509) 329-2100
Fax: (509) 329-2104

IMPORTANT NOTICE ABOUT YOUR WATER SYSTEM
Coliform Maximum Contaminant Level (MCL) Exceeded: Non-acute MCL

The _____ water system, ID# _____ in _____ County routinely monitors for the presence of total coliform bacteria and in _____ this type of bacteria was detected. Although this incident was not an emergency, as our customer, you have a right to know what happened and what we did or are doing to correct the situation.

Coliforms are bacteria which are naturally present in the environment and are used as indicators that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems. The samples that showed the presence of coliform were further tested to see if other bacteria of greater concern, such as fecal coliform or *E.coli* were present. **None of these bacteria were found.**

You do not need to boil your water. People with severely compromised immune systems, infants, and some elderly may be at an increased risk. These people should seek advice from their health care provider.

What happened? What is the suspected or known source of contamination?

At this time:
- ☐ The problem is resolved. Additional samples collected were found to be free of coliform bacteria.
- ☐ We anticipate resolving the problem by ____ / ____ / ____.
- ☐ Other _____.

For more information, contact _____ at ( )____-_____ or at _____.
(owner or operator) (phone number) (address)

Please share this notice with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is sent to you by _____ Date Distributed ____ / ____ / ____.

Coliform Non-acute Public Notice Certification Form
The purpose of this form (below) is to provide documentation to the department that public notice was distributed. Please check the appropriate box and fill in the date that the notice was distributed:

- ☐ Notice was mailed to all water customers on ____ / ____/____.
- ☐ Notice was hand delivered to all water customers on ___ / ___ /___.
- ☐ Notice was posted (*with department approval*) at:
  _____ on ___ / ___ /____.

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

_____ _____ _____
Signature of owner or operator Position Date

If you need this publication in an alternate format, call (800) 525-0127. For TTY/TDD call (800) 833-6388.

Send copy of completed notification and certification to:

☐ Northwest Drinking Water
Department of Health
20435 72nd Ave S, Suite 200
Kent, WA 98032-2358
Phone: (253) 395-6750
Fax: (253) 395-6760

☐ Southwest Drinking Water
Department of Health
PO Box 47823
Olympia, WA 98504-7823
Phone: (360) 236-3030
Fax: (360) 664-8058

☐ Eastern Drinking Water
Department of Health
16201 E Indiana Ave, Suite 1500
Spokane Valley, WA 99216
Phone: (509) 329-2100
Fax: (509) 329-2104

Water System
Emergency Well Use Notification

*** BOIL YOUR WATER ***

Dear Customer,

We are currently experiencing a serious emergency of the following nature:

We are working diligently to resolve this emergency by:

During this emergency we will connect to our emergency source on ____/____/____ at ____ (AM / PM). This source will be flushed and tested immediately following connection. Bacterial test results will not be completed for at least 24 hours. Until the source is shown to be absent of bacteria, be advised that all water to be used for drinking, cooking, or other human consumption is to be boiled for at least 20 minutes. The water is acceptable for bathing, pets, and flushing toilets.

This source only produces 5 gpm for the entire community. Outdoor watering is strictly prohibited. Additional information is available by contacting Northwest Water Systems, our Satellite Management Agency at (360) 876-0958.

We anticipate that regular water service will be resumed by _____. We will provide written notice when the emergency source has been disconnected from the water system or the water has been tested. Do not drink the water without boiling for 20 minutes until you receive this written notification. Using bottled water for personal consumption is recommended.

Thank you for your cooperation during this time!

Sincerely,

Water Association

Water System
Emergency Well Use Notification

*** BOIL WATER RESCINDED***

Dear Customer,

We are currently experiencing a serious emergency of the following nature:

We are working diligently to resolve this emergency by:

During this emergency we connected to our emergency source on ____/____/____ at ____ (AM / PM). This source was flushed and tested immediately following connection. Bacterial test results have shown no coliform bacteria, therefore the boil water advisory has been rescinded. The source has not been tested for other contaminants, and bottled water is still advised for drinking and human consumption. The water is acceptable for bathing, pets, and flushing toilets.

This source only produces 5 gpm for the entire community. Outdoor watering is strictly prohibited. Additional information is available by contacting Northwest Water Systems, our Satellite Management Agency at (360) 876-0958.

We anticipate that regular water service will be resumed by _____. We will provide written notice when the emergency source has been disconnected from the water system and the water has been fully tested.

Thank you for your cooperation during this time!

Sincerely,

Water Association

Water System

Emergency Well Disconnect Notification

System has returned to normal operations

Dear Customer,

We recently experienced a serious emergency of the following nature:

We resolved this emergency by:

During this emergency we connected to our emergency source on ____/____/____ at ____ (AM / PM). The emergency source was disconnected ____/____/____ at ____ (AM / PM) and regular service has been restored.
Thank you for your cooperation during this time!

Sincerely,

Water Association

Emergency Response Plan

Section 1: Emergency Response Mission and Goals

Statement: Safe and reliable drinking water is vital to every community. Protecting the water supply is a high priority. Preparing for emergencies is a vital step to maintaining these priorities.

Goal #1: Understand and organize a communication network.
Goal #2: Determine the possible emergencies and likelihood of occurrence.
Goal #3: Establish appropriate levels of security.
Goal #4: Evaluate alternative sources of water and the viability of each.

Section 2: System Information

Person responsible for maintaining and implementing emergency plan

Name: Kelly Alsin	Phone: 360-876-0958
Title: Manager, WDMIII, CCS, BAT	Cell: above number is 24-hr.

Section 3: Chain of Command – Lines of Authority

Name	Title	Responsibility	Phone Number
Jonathan Wiley	Manager, WDMII	Manage, responder	360-876-0958
Kelly Alsin	Manager, WDMIII	Manage, responder	360-876-0958
Bill Davies	PSA Water Committee	Owner representative	360-426-3901

Section 4: Events That Cause Emergencies

Type of Event	Probability	Comments
Contamination	Possible	Determine source and correct
Line Breaks	Possible	Determine location, isolate, and correct
Power Outage	Likely	Connect generator, if available
Water Shortages	Unlikely	Notify users and set limits
Natural Disasters	Unlikely	Dependent on disaster
Terrorism/Vandalism	Unlikely	Source will not be used until determined to be safe.

Section 5: Severity of Emergencies

Definitions and Descriptions
Level I: Minor failure, failure which requires mechanical repairs or replacement, will not take more than one day and water quality is not affected..
Level II: Major failure, requires costly mechanical repairs or replacement, will not take more than a week and water quality is not affected.
Level III: Catastrophic correctible failure, water source can not be used, but corrections can be made and the water system will be usable in the foreseeable future. Alternative sources may or may not be sought
Level IV: Catastrophic uncorrectable failure, water source will not be able to be used in the foreseeable future if at all. Source is not used and alternatives are sought.

Section 6: Emergency Notification

Local Notification List	Day	Evening
Police/Fire/Ambulance/Imminent Risk	911	911
Local Health Jurisdiction (Mason County)	360-427-9670	
Water Testing Laboratory: Twiss	360-779-5141	360-779-5141
Local Emergency Management	911	911
Water System Operator: NWS	360-876-0958	360 876-0958
Neighboring System		
System Owner Rep: Bill Davies	360-426-3901	360-426-3901
News Media Contact: NWS	360-876-0958	360-876-0958
Engineer: NWS	360-876-0958	360-876-0958

State Notification List	Day	Evening
State Police	360-478-4646	360-478-4646
Division of Drinking Water Regional Office	360-236-3030	
State Testing Laboratory	360-407-6445	
DOH Regional Engineer	360-236-3030	
DOH Coliform (Sandy Brentlinger)	360-236-3044	
24-hr DOH Emergency Number	877-481-4901	877-481-4901
DOE Spill Response	360-407-6300	
Call Before You Dig	800-424-5555	800-424-5555

Service/Repair Notification List	Day	Evening
Electrician: Nicholson Drilling	800-894-4421	800-894-4421
Electric Utility: Mason County PUD 3	360-275-2833	360-275-2833
Pump Specialist: Nicholson Drilling	800-894-4421	800-894-4421
Other		

Notification Procedures	Who is Responsible	Procedures
Notifying customers	SMA	Door to door, telephone, or fliers to all
Alerting law enforcement, DOH, and local health authority	SMA	Telephone nature of emergency and assistance required.
Contacting service & repair contractors	SMA	Telephone communication of the services required.
Contact neighboring water systems, if necessary	SMA	Telephone communications of the nature of the emergency.
Procedures for issuing a health advisory	SMA, DOH	Door to door, telephone, or fliers to notify all in the area.
Other procedures, as necessary	SMA	Decisions based on situation.

Section 7: Water Quality Sampling

Water sampling	Basic steps to conduct sampling
Coliform	See Coliform Monitoring Plan
Chlorine residual	Colorimetric; Draw 5 ml sample, add reagent and compare to color wheel
Nitrate/Nitrite	Flush tap 10 minutes, fill 1 cube container, get lab within 24 hours
Total organic carbon	See sampling techniques provided by lab or water system manager
Total halogenated organic carbon (TOX)	See sampling techniques provided by lab or water system manager
Cyanide	Flush tap 10 minutes, fill 1 cube container, get to lab within 24 hours

Section 8: Effective Communication

Designated public spokesperson: Jonathan Wiley, NWS, 360-876-0958

Develop possible messages in advance and update them as the emergency develops:

> Our water system has experienced a failure. The proper authorities have been notified and professionals are evaluating the situation as I am speaking. As I do not currently have all the necessary information available, I will refrain from comment at this time until a complete evaluation of the situation has been made and I have had a chance to discuss the ramifications. Thank you for your time and your concern, and I will inform you of any information I receive.

Emergency numbers shall be distributed: in water billing.

Section 9: Vulnerability Assessment

	Description	Vulnerability	Mitigating Actions	Security Improvements
Source	Inside pumphouse	Minimal	Sealed Well Head	None
Storage	2 concrete, ground-level reservoirs	Minimal	Locked Hatch	None
Treatment	None	NA	NA	NA
Pumping	Inside pumphouse	Minimal	Locked Door	None

Section 10: Response Actions for Specific Events

	Assessment / Immediate Actions	Notifications	Follow-up Actions
Power outage	Temporary Start emergency generator, if applicable	None	Restore to normal operations
Waterline break	Requires repair Call repair facility	Notify residents and inform of progress	Sample and flush as needed
Chlorine failure	Requires repair Call repair facility	Inform on how to make water safe to consume	Perform applicable sampling and flushes
Treatment equipment	Requires repair Call repair facility	Inform on how to make water safe to consume	Perform applicable sampling and flushes
Pump failure	Requires repair Call repair facility	Notify residents and inform of progress	Restore to normal operations
Microbial contamination	Variable Follow coliform monitoring plan	Per coliform monitoring plan	Flush, sample, ensure safety

Chemical Contamination	Variable Inform residents, identify contamination	Notify residents and inform of progress	Flush, sample, ensure safety
Vandalism or Terrorism	Variable Inform residents, identify contamination	Notify residents and inform of progress	Flush, sample, ensure safety
Reduction or loss	Variable Determine extent of problem	Notify residents and inform of progress	Further curtail usage, check for leaks
Drought	Variable Determine extent of problem	Notify residents and inform of progress	Further curtail usage, check for leaks
Flood	Variable Determine extent of problem	Notify residents and inform of progress	Flush, and sample, ensure safety
Earthquake	Requires repair Call repair facility	Notify residents and inform of progress	Restore to normal operations
Hazardous materials	Long term loss Inform residents, identify contamination	Notify residents and inform of progress	Flush, and sample, ensure safety
Electronic equipment	Requires repair Call repair facility	Notify residents and inform of progress	Restore to normal operations

Section 11: Alternative Water Sources

Water systems within one-quarter mile	Feasibility of connecting

Alternative Sources	Name	Phone	Available	Safe
Well 1 (emergency use)				w/ test

Section 12: Curtailing Water Usage

Water Curtailment Measure	Actions
Inform residents prior to an emergency situation to voluntarily reduce usage	Pass out pamphlets on how water can be saved with letters of concern
Check water meters and investigate possible system leakage	Call repair facility to fix any problems
Actively pursue a water curtailment plan, ask residents for ideas, decide on enforcement	Write plan down and distribute to residents
Enforce water curtailment plan, determine usage limitations	Make observations and suggestions, write and collect fines
Examine alternative sources and determine viability.	Contact neighboring facilities to determine availability

Section 13: Returning to Normal Operation

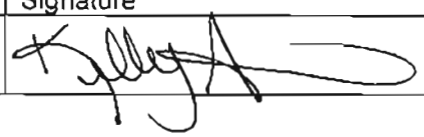
Action	Description and actions
Ensure equipment is operational	Physically inspect rotating equipment, water leaks
Check incoming voltage	Use multimeter and check incoming voltage
Check system pressures	Inspect pressure switch and ensure the on and off pressures correlate with the gage
Perform water samples	Draw water sample and deliver to testing laboratory
Restore system to normal	Inform residents of full operational capacity

Section 14: Training

Water system manager	Trained on proper sampling techniques, and basic mechanical knowledge to determine extent of problem.
Water system manager	Expected to be the immediate responder and make proper decisions on what to do
Field support	Trained on the existing equipment and be available for repair response
Admin support	Trained on giving information and documentation of incidents and accidents

Section 15: Plan Approval

This plan is officially in effect when reviewed, approved, and signed by the following:

Name and Title	Signature	Date
KELLY ALSIN OPERATIONS SUPERVISOR		may 10, 2011

WATER SHORTAGE PLAN

Section 1: Events that Cause Water Shortages

Type of Event	Probability or Risk (high-med-low)	Immediate or Anticipated Event	Comments
Drought	low	none	This area is not known for drought
Water contamination	low	none	A practice of conservative planning
Inadequate planning to meet demand	low	none	A practice of conservative planning
Shallow wells	low	none	Wells in area are good producers
Inadequate pumping equipment	low	none	A practice of conservative planning
Water waste	med	System leaks and excessive use	Correctible situations

Section 2: Evaluate Supply and Demand

Evaluate the source of supply

source ID	Water Rights	Source Capacity	Distribution Capacity	Well Capacity
S02	230 gpm	170 gpm		
S03	230 gpm	60 gpm		
Total	230 gpm	230 gpm		

Evaluate Demand

ADD: 235 gpd MDD: 945 gpd PHD: Storage: 0

How does the existing system meet demands?

% ADD 100 % MDD 100 % PHD % Storage n/a

Section 3: Defining Stages and Criteria of a Water Shortage

Stage I: Minor Shortage - Voluntary Measures	Reducing water consumption during a potential or actual water shortage
Stage II: Moderate Shortage- Mandatory Measures	Mandatory demand reduction during an actual water shortage
Stage III: Severe - Rationing Program	Institute rationing program during long periods of drought without causing hardship

Section 4: Alternate Water Sources

Intertie to Adjacent Water Supply System

Water system within 1/4 mile	Feasibility of connection

Switching to back-up sources

Source Description	Well ID	Required Testing	Special considerations
S01	AHA991	coliform	

Section 5: Effective Communication

Key Messages, develop possible messages in advance, and update over time.

Due to recent weather conditions we have taken the precaution of issuing a mandatory reduction in water use effective immediately. Informational pamphlets are enclosed. We are doing everything in our power to conserve water and explore options for alternative sources. We will get you information as we receive it.

Section 6: Demand Reduction Alternatives

Water Conservation Measures	Actions possible for implementation
Voluntary Program	Prepare and distribute water conservation material. Prepare conservation retrofit kits. Coordinate media outreach program. Issue news releases to the media.

Water Curtailment Measures	Actions necessary for implementation
Conservation rate base and water audits	Use service meters and implement a conservation rate. Compare source meter readings with service meters to determine system leakage.

Section 7: Water Shortage Response Actions

Stage	Criteria	Actions	Messages
1	Potential water shortage	Reduce water consumption	Implement voluntary water use reductions. Initiate a public information program.

Stage	Criteria	Actions	Messages
2	Actual water shortage	Mandatory demand reduction	Reduce water usage for main flushing. Restrict/reduce outdoor watering and institute fines.

Stage	Criteria	Actions	Messages
3	Periods of long drought	Institute rationing program	All public water uses not required for health or safety prohibited. Irrigation strictly prohibited.

Emergency Source Activation Protocol

for the Paradise Estates Water System

The emergency source is not approved for use until the followlng steps have been taken.

1 :	Notify your system's Satellite Management Agency, Northwest Water Systems at (360) 876-0958.
2 :	Contact the Washington State Department of Health, at 360-236-3030 to notify them of your intentions and determine steps to satisfy any additional requirements required.
3 :	Contact your pump specialist Nicholson Drilling at (360) 876-4421 to determine how to bring the source online (electrical requirements, pump installation, tie into existing system etc).
4 :	Complete, copy and distribute the Paradise Estates Water System Emergency Well Use Notification. Post in public places, on doors and send mailings where necessary.
5 :	Once all users have been notified, the emergency source may be connected to the system.
6 :	Flush source to atmosphere for minimum of 2 hours at maximum pump rate. Monitor water levels to ensure adequate supply.
7 :	Following 2 hour flush, collect Coliform samples from the emergency source and send to Twiss Analytical Labs. The lab may be contacted at (360) 779-5141 for further instructions.
8 :	If sample results are absent of bacteria, post notices rescinding boil water advisory.
9 :	Contact your pump specialist Nicholson Drilling at (360) 876-4421 to develop plan of action to return to normal operations.
10 :	Upon return to regular service, distribute notices in manner equivalent to step 4 to system users.

Paradise Estates Water System
Emergency Well Use Notification

*** BOIL YOUR WATER ***

Dear Customer,

We are currently experiencing a serious emergency of the following nature:

We are working diligently to resolve this emergency by:

During this emergency we will connect to our emergency source on ____/____/____ at ____ (AM / PM). This source will be flushed and tested immediately following connection. Bacterial test results will not be completed for at least 24 hours. Until the source is shown to be absent of bacteria, be advised that all water to be used for drinking, cooking, or other human consumption is to be boiled for at least 20 minutes. The water is acceptable for bathing, pets, and flushing toilets.

This source only produces 42 gpm for the entire community. Outdoor watering is strictly prohibited. Additional information is available by contacting Northwest Water Systems, our Satellite Management Agency at (360) 876-0958.

We anticipate that regular water service will be resumed by _____. We will provide written notice when the emergency source has been disconnected from the water system or the water has been tested. Do not drink the water without boiling for 20 minutes until you receive this written notification. Using bottled water for personal consumption is recommended.

Thank you for your cooperation during this time!

Sincerely,

Paradise Estates Water System

Paradise Estates Water System
Emergency Well Use Notification

*** BOIL WATER RESCINDED***

Dear Customer,

We are currently experiencing a serious emergency of the following nature:

We are working diligently to resolve this emergency by:

During this emergency we connected to our emergency source on ____/____/____ at ____ (AM / PM). This source was flushed and tested immediately following connection. Bacterial test results have shown no coliform bacteria, therefore the boil water advisory has been rescinded. The source has not been tested for other contaminants, and bottled water is still advised for drinking and human consumption. The water is acceptable for bathing, pets, and flushing toilets.

This source only produces 42 gpm for the entire community. Outdoor watering is strictly prohibited. Additional information is available by contacting Northwest Water Systems, our Satellite Management Agency at (360) 876-0958.

We anticipate that regular water service will be resumed by _____. We will provide written notice when the emergency source has been disconnected from the water system and the water has been fully tested.

Thank you for your cooperation during this time!

Sincerely,

Paradise Estates Water System

Paradise Estates Water System

Emergency Well Disconnect Notification

System has returned to normal operations

Dear Customer,

We recently experienced a serious emergency of the following nature:

We resolved this emergency by:

During this emergency we connected to our emergency source on ____/____/____ at ____ (AM / PM). The emergency source was disconnected ____/____/____ at ____ (AM / PM) and regular service has been restored.
Thank you for your cooperation during this time!

Sincerely,

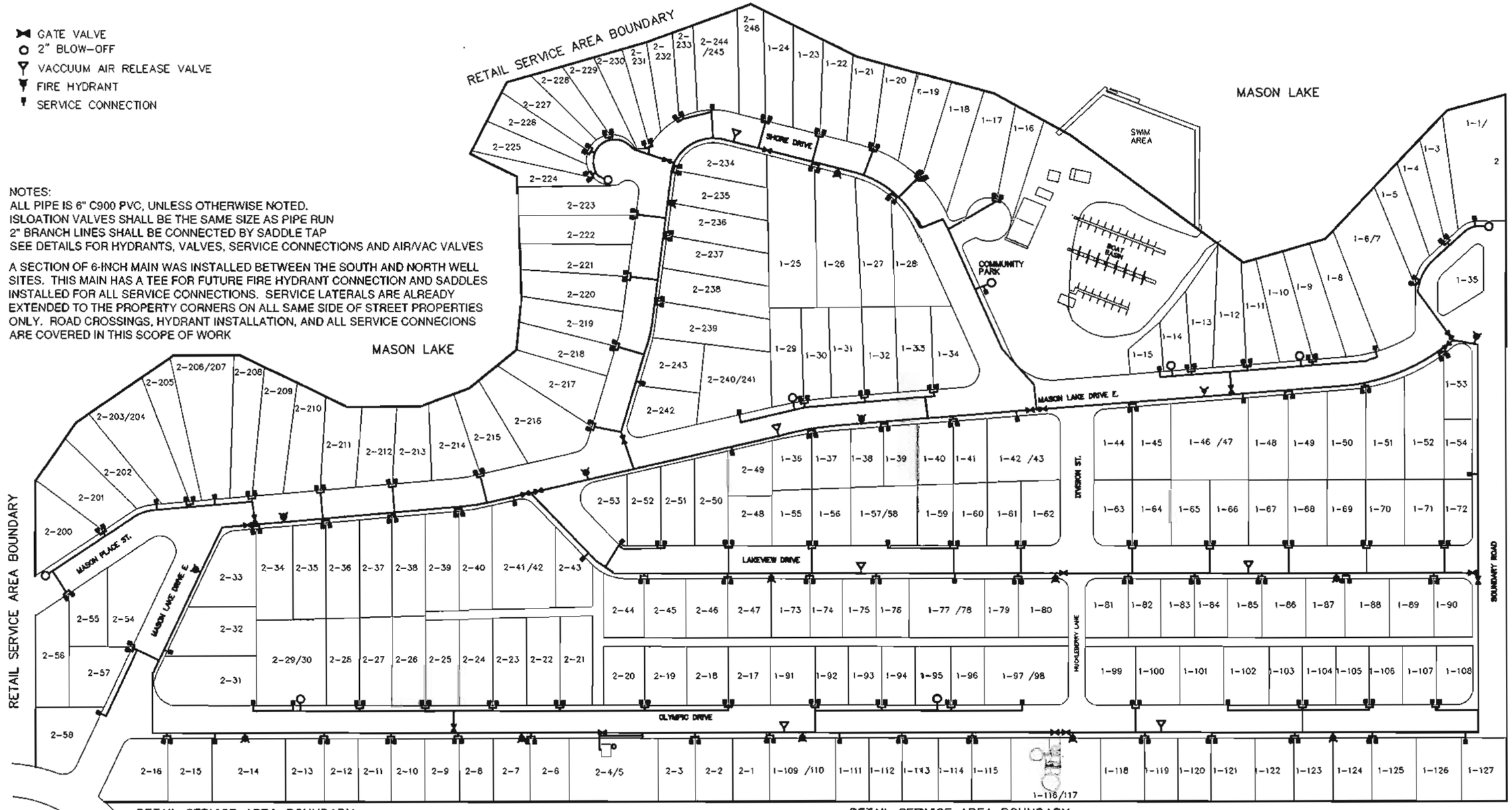
Paradise Estates Water System

PSA - PARADISE SERVICE ASSOCIATES -- JANUARY 2010 "AS-BUILT DRAWING" -- PARADISE SHORE ESTATES WATER SYSTEM

- GATE VALVE
- 2" BLOW-OFF
- VACCUUM AIR RELEASE VALVE
- FIRE HYDRANT
- SERVICE CONNECTION

NOTES:
ALL PIPE IS 6" C900 PVC, UNLESS OTHERWISE NOTED.
ISLOATION VALVES SHALL BE THE SAME SIZE AS PIPE RUN
2" BRANCH LINES SHALL BE CONNECTED BY SADDLE TAP
SEE DETAILS FOR HYDRANTS, VALVES, SERVICE CONNECTIONS AND AIR/VAC VALVES

A SECTION OF 6-INCH MAIN WAS INSTALLED BETWEEN THE SOUTH AND NORTH WELL SITES. THIS MAIN HAS A TEE FOR FUTURE FIRE HYDRANT CONNECTION AND SADDLES INSTALLED FOR ALL SERVICE CONNECTIONS. SERVICE LATERALS ARE ALREADY EXTENDED TO THE PROPERTY CORNERS ON ALL SAME SIDE OF STREET PROPERTIES ONLY. ROAD CROSSINGS, HYDRANT INSTALLATION, AND ALL SERVICE CONNECIONS ARE COVERED IN THIS SCOPE OF WORK



WATER MAIN SHALL BE LOCATED A MINIMUM OF TWO FEET OFF THE EXISTING PAVEMENT. CONTRACTOR SHALL LOCATE MAIN TO MINIMIZE ROAD CROSSINGS AND DISTURBANCE OF PAVEMENT. CONTRACTOR MAY PROPOSE CHANGES TO WATER MAIN PLACMENT. ALTERNATIVE PLACEMENT SHALL BE APPROVED BY THE ENGINEER BEFORE INSTALLATION.

DRAWN BY:		SYSTEM: PARADISE ESTATES	OWNER: PARADISE SVC ASSOC.
CHECKED BY:		FILE NO.: 08012201	FILE NAME: SITE
REVISION		DATE: JULY 8, 2008	SCALE: 1" = 167'
DESCRIPTION	DATE		

NORTHWEST WATER SYSTEMS, INC.
DESIGN - CONSULTING - MANAGEMENT
P.O. BOX 123
PORT ORCHARD, WA 98366
(360) 876-0958

Operations and Maintenance Program

System Personnel

Kelly Alsin	WDMIII	360-876-0958
Brandon Maine	Field Tech	360-876-0958

Suppliers

Nicholson Drilling	pumps, pressure tanks, etc.	800-894-4421
Northwest Water Systems	test kits, chlorine	360-876-0958
Lake City Plumbing	pipes, valves, fixtures	206-546-8843

Operating Parameters

Booster 1	40 psi
Booster 2	35 / 50 psi
Booster 3	25 / 50 psi
Pressure Tank Pre-charge	30 psi

Maintenance Schedule

Function	Frequency
Water Quality Sampling	Monthly
Cross-Connection Inspection	Annual, as needed
System Flushing	Semi-Annual
Inspect Equipment	Monthly
Exercise All Valves	Annual
Check Tank Pre-Charge	Annually, drain and recharge annually
Check Reservoirs	Monthly
Static Water Levels	Quarterly
Record Source Meter	Monthly
Read Service Meters	Bi-Monthly
Sweeping/Cleaning Pump house	Monthly

Operation and Maintenance Procedures

General. Look for leaks in pump house or any other problems. (i.e. rodents, insects, holes in walls or ceilings, or anything out of ordinary) Note on work orders. Use weed eater to clear vegetation in summer months.

Pre-Charge Tanks. If they sound defective, cycle the pump to determine "on" and "off" pressures. Verify pressure with your own gauge. If they have a separate hose bib, attach a hose and close the shut-off valve to the tank so water cannot enter. Open the hose bib and drain the water out of the tank. Check the tank charge and recharge it if necessary with an air compressor. Set pressure 2-4 psi below pump cut-in pressure. If no hose bib available to drain the tank, make a note on work order. To check tanks with no hose bibs there are two options:

1. Turn off the pump(s) feeding the tanks and close reservoir outlet (if there is a reservoir on system). Open up the sample tap in pump house (will drain all tanks). Check the tank charge and recharge if necessary with an air compressor. Set pressure 2-4 psi below pump cut-in. Put reservoir back online and turn well back on. This method does require the system to be shut down.
2. The other method is to close the shut off valve to the tank so no water can enter. Then break the union to the tank (water will go everywhere). Once tank is empty, check charge and recharge if necessary with an air compressor. Set pressure to 2-4 psi below pump cut-in. Retighten union and open up valve for tank to refill. If using this method, make sure there is a floor drain in pump house so water can exit.

Reservoirs. On a monthly basis make sure that the hatch is on and secure with a lock or bolts. Make sure that all vents are screened to prevent birds and other creatures from entering. Check for leaks and cracks in the reservoirs. Annually sweep off the tops and spray with a chlorine mixture to kill moss.

Static Water Levels. If there is a vent pipe, you can remove it and take the static water level by pointing the sonic sounder down the opening. If there is no vent pipe, and the well is not sealed, you can unbolt the top and take off the cap. Take the static water level and replace the cap. Make certain that all gaskets are in place, and then re-tighten the nuts.

Emergency Booster Pump Operation. If Booster Pump 1 fails, a default relay will prevent Booster Pumps 2 and 3 from operating in "Auto" mode. To pressurize the system while Booster Pump 1 is being repaired, the following procedure shall be followed:

1. Open re-circulation valve to the Full Open position.
2. Turn Booster Pump 2 to the "Hand" (manual) position.
3. Slowly close the re-circulation valve until pressure reaches 40 psi.
4. When Pump 1 is operational, put it on-line.
5. Switch Pump 2 to "Auto."
6. Fully close re-circulation valve.

Form 10 - Wellhead Protection Checklist

Susceptibility Assessment	Completed 5/10/2011
Well Radii Delineation	Completed 5/10/2011 (see attached)
Hazard Inventory	Completed 5/10/2011 (see attached table)

Contingency and Emergency Response Plans

If either source fails or becomes contaminated, the second source can be used to serve the needs of the water system. If both sources become contaminated, or if other problems with the water system develop, S01 can be re-connected. S01 would need to be tested before putting this source into service.

In the event that the water system substantially falls out of compliance with WSDOH regulations, or the water is otherwise determined to be unfit as a potable water source, the first point of contact is Northwest Water Systems (NWS) as the Satellite Management Agency. NWS in consultation with the WSDOH and the Paradise Service Associates, will develop a strategy to bring the system into compliance as soon as possible.

Overview Completed	5/10/2011

Groundwater Travel Radii Hazard Inventory

Adopted from Table 1, page 37, DOH Pub. #331-018 *Wellhead Production Program Guidance Document*

Category I: Sources designed to discharge substances

	6 mo.	1 yr.	5 yr.	10 yr.	Notes
Subsurface Percolation (drain fields)	R				
Injection Wells				No	
Land Application of Waste				No	

Category II: Sources designed to store, treat, dispose of substances through unplanned release

	6 mo.	1 yr.	5 yr.	10 yr.	Notes
Residential (change oil, spill paint pail, etc)	R				possible, unconfirmed
Animal Burial	R				possible, unconfirmed
Burning Sites	R				possible, unconfirmed
Surface Impoundments				No	
Open Dumps				No	
Above Ground Storage Tanks				U	Possible small home use
Below Ground Storage Tanks				U	Possible small home use
Graveyards				No	
Landfills				No	
Detonation Sites				No	

Category III: Sources designed to transmit substances

	6 mo.	1 yr.	5 yr.	10 yr.	Notes
Pipelines (other than potable water)				No	
Transport/Transfer Operations				No	

Category IV: Sources discharging as a result of other planned activities

	6 mo.	1 yr.	5 yr.	10 yr.	Notes
Pesticides	R				possible, unconfirmed
Fertilizers	R				possible, unconfirmed
High Density Animal Feeding				No	
De-icing salts				No	
Urban run-off				No	
Mining				No	

Category V: Sources providing a conduit through altered flow patterns

	6 mo.	1 yr.	5 yr.	10 yr.	Notes
Poorly constructed, maintained, abandoned well				U	unlikely
High Production Wells				No	
Large Excavations				No	

Category VI: Naturally occurring influences

	6 mo.	1 yr.	5 yr.	10 yr.	Notes
Surface Water Body			X		Mason Lake
Seawater Intrusion				No	
GWI				No	
Leaching				No	

R - Residential, I - Industrial, X - General, No - None Identified, U - Unknown

Ground Water Contamination
Susceptibility Assessment Survey Form
Version 2.2

Important! Please complete one form for each ground water source (well, well field, spring) used in your system. Photocopy as necessary.

Part I: System Information

Well Owner:	**Paradise Service Asoc.**	Well Manager:	**Northwest Water Systems**
Water System Name:	**Paradise Estates**	Water System Number:	**66125 T**
County:	**Mason**	1/4, 1/4, Sec, T, R:	**NE/NE, 8, 22N, 2W**
Source Name:	**Well 2**	WA well ID tag number:	**AAE-349**
Source Number:	**S02**	Well Depth:	**240 ft**
Number of Connections:	**198**	Population Served:	**200**

Latitude: 47.3282N Longitude: 122.9511W

How was lat/long determined?

- [ ] GPS device
- [ ] survey
- [X] topographic map
- [ ] other

*Please refer to Assistance Packet for details and explanations of all questions in Parts II through V.

Part II: Well Construction and Source Information

1) Date well originally constructed: **9/19/1995** last reconstructed: n/a

2) Well Driller: **Kieth Kinney Well Drilling**
221 Ruby Street
Tumwater, WA

3) Type of Well:

- [X] Drilled: **cable** (rotary, bored, cable, dug)
- [ ] Other: (spring, lateral collection, driven, jetted, other)

Comments:

4) Well Report Available? **yes** yes/no

If no well log is available, please attach any other records documenting well construction; e.g. boring logs, "as built" sheets. Engineering reports, well reconstruction logs.

5) Average pumping rate: **170** gpm
Source of information: on-site measurements
If not documented, how was the pumping rate determined?
measurements using source meter

6) Is this source treated? **No** yes/no (disinfection, filtration, carbon filter, airstripper, other)
If so, what type of treatment:

purpose of treatment (describe materials to be removed or controlled by treatment):

7) If source is chlorinated, is a chlorine residual maintained? **n/a** yes/no
Residual level (at point closest to source): **n/a** ppm

Part III: Hydrogeologic Information

1) Depth to top of open interval: **217.5 ft**

2) Depth to groundwater (static water level):
178 ft
[ ] flowing artesian well/spring
How was the water level determined: sonic sounder or electronic tape

3) If the source is a flowing well or spring, what is the confining pressure?
n/a psi **n/a** ft

4) If the source is a flowing well or spring, is there a surface impoundment, reservoir, or catchment associated with this source:
[ ] yes/no

5) Wellhead elevation (height above mean sea level): **342 ft**
how was elevation determined?
[X] topographic map
[ ] drilling/well log
[ ] altimeter
[ ] other

6) Confining layers: (This can be completed only for those sources with a drilling log, well log, or geologic report describing subsurface conditions. Please refer to assistance package for example.)
[Yes] (yes/no) Is there evidence of a confining layer in the well log?

If there is evidence of a confining layer, is the depth to ground water more than 20 feet above the bottom of the lowest confining layer?
[yes] (yes/no)

7) Sanitary setback: **100+** ft (If less than 100 feet, describe the site conditions):

8) Wellhead Construction:
[X] in wellhouse
[ ] in doghouse
[ ] outside
[ ] controlled access:
[ ] other uses for wellhouse:

9) Surface seal:
[ ] 18 ft
[X] >18 ft (20 feet)
[ ] <18 ft (no DOE approval)
[ ] <18 ft (with DOE approval, include documentation)
[ ] no surface seal
[ ] unknown

10) Annual rainfall:
[ ] <10 in/yr
[ ] 10-25 in/yr
[X] >25 in/yr

Part IV: Mapping Your Ground Water Resource

1) Annual volume of water pumped: **963,630** Cubic Feet

How was this determined?

[X] meter

[ ] estimated: pumping rate: **170** gpm

pumping capacity: **170** gpm

[ ] other: aquifer/screen **27** ft

2) "Calculated Fixed Radius" estimate of groundwater movement: (see Instruction Packet)

groundwater travel time;	6 mo.	**151** ft	$r = [(Q*t)/(\pi*\eta H)]^{0.5}$
groundwater travel time;	1 yr.	**213** ft	where: r = radius (ft)
groundwater travel time;	5 yr.	**477** ft	Q = flow (ft^3/yr)
groundwater travel time;	10 yr.	**674** ft	t = time (yr)
			η = porosity (0.25 assumed)
length of screened/open interval:		10 ft	H = screen/aquifer height (ft)

3) Is there a river, lake, pond, stream, or other surface water body within the six month travel boundary?

[No] yes/no (if yes, identify on a map and describe below)

4) Is there a stormwater and/or wastewater facility, treatment lagoon, or holding pond located within the six month time of travel boundary? (if yes, identify on a map and describe below)

No

Part V: Assessment of Water Quality

1) Regional sources of risk to groundwater:

Please indicate if any of the following are present within a circular area around your water source having a radius up to and including the five year ground water travel time:

	6 mo.	1 yr	5 yr	unknown
likely pesticide application	**yes**			
stormwater injection wells			**no**	
other injection wells			**no**	
abandoned ground water well				**yes**
landfills, dumps, disposal areas			**no**	
known hazardous materials clean-up site			**no**	
water systems with water quality problems			**no**	
population density >1 house/acre	**yes**			
residences commonly having septic tanks	**yes**			
wastewater treatment lagoons			**no**	
sites used for land application of waste			**no**	

Identify on a map all of the risks listed above which are located within the six month time of travel boundary. (Please include a map of the wellhead and time of travel areas within this form. Please indicate any of the following.) If other potential sources of groundwater contamination exist within the ten year time of travel circular zone around your supply, please describe:

None

2) Source specific water quality records:

Please indicate the occurrence of any test results since 1986 that meet the following conditions: (Unless listed on the assessment, MCLs are listed in assistance package.)

	MCL/detection	level >MCL?
A. Nitrate:	10 mg/l	**ND**
B. VOCs:	5 ug/l	**ND**
C. EDB:	0.05 ug/l	**ND**
D. DBCP:	0.2 ug/l	**ND**
E. Other SOC	(detectable)	**n/a**

If any SOC's in addition to EDB/DBPC were detected, please identify and date. If other SOC tests were performed, but no SOCs detected, list methods here:

n/a

F. Bacterial Contamination:

Are any bacteriological test samples available	**yes**	yes/no
Any bacterial detection from the source within past 3 years:	**no**	yes/no
Any bacterial detection in the distribution system and attributed to the source within the past 3 years:	**no**	yes/no

Part VI: Geographic or Hydrologic Factors contributing to a non-Circular Zone of Contribution

The following questions will help identify those groundwater systems which may not be accurately represented by the calculated field radius (CFR) method described in Part IV. For these sources, the CFR areas should be used as a preliminary delineation of the critical time of travel zones for that source. As a system develops its Wellhead Protection Plan for these sources, a more detailed delineation method should be considered.

1) Is there evidence of obvious hydrologic boundaries within the ten year time of travel zone of the CFR? (does the largest circle extend over a stream, river, lake, or up a steep hillside, mountain or ridge?)

no yes/no if yes, describe with references to the map produced in Part IV:

2) Aquifer Material

A) Does the drilling, well, or other geologic/engineering report identify that the well is located in an area where the underground conditions are identified as fractured rock and/or basalt terrain?

no yes/no

B) Does the drilling, well, or other geologic/engineering report identify that the well is located in an area where the underground conditions are primarily identified as coarse sand and gravel?

no yes/no

3) Is the source located in an aquifer with a high horizontal flow rate?

(These can include sources located on flood plains of large rivers, artesian wells with high water pressure, and/or shallow flowing wells and springs.)

no yes/no

4) Are there other high capacity wells (agricultural, municipal, and/or industrial) located within the CFRs?

a) Presence of ground water extraction wells removing more than approximately 500 gpm within:

- [ ] 6 mo. travel time
- [ ] 1 yr. travel time
- [ ] 5 yr. travel time
- [no] 10 year travel time

b) Presence of ground water recharge wells (dry wells) or heavy irrigation within:

- [ ] 6 mo. travel time
- [ ] 1 yr. travel time
- [ ] 5 yr. travel time
- [no] 10 year travel time

5) Please identify or describe additional hydrologic or geographic conditions that you believe may affect the shape of the contribution zone for this source. Reference them to locations on the map in Part IV.

none

Paradise Estates 302
Groundwater Travel Radii:

- 6-month
- 1-year
- 5-year
- 10-year

Scenario: Base
Steady State Analysis
Junction Report

Label	Elevation (ft)	Zone	Type	Base Flow (gpm)	Pattern	Demand (Calculated (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-3	300.00	Zone	Demand	18.40	Fixed	18.40	404.92	45.39
J-4	268.00	Zone	Demand	18.40	Fixed	18.40	404.52	59.06
J-5	242.00	Zone	Demand	18.40	Fixed	18.40	404.32	70.23
J-6	217.00	Zone	Demand	18.40	Fixed	18.40	404.23	81.01
J-7	218.00	Zone	Demand	18.40	Fixed	18.40	404.23	80.57
J-8	224.00	Zone	Demand	18.40	Fixed	18.40	404.23	77.98
J-9	217.00	Zone	Demand	18.40	Fixed	18.40	404.31	81.04
J-10	221.00	Zone	Demand	18.40	Fixed	18.40	404.52	79.40
J-11	254.00	Zone	Demand	18.40	Fixed	18.40	404.80	65.25
J-12	286.00	Zone	Demand	18.40	Fixed	18.40	405.51	51.70
J-13	228.00	Zone	Demand	18.40	Fixed	18.40	404.31	76.28
J-14	252.00	Zone	Demand	18.40	Fixed	18.40	404.38	65.93
J-15	220.00	Zone	Demand	18.40	Fixed	18.40	404.24	79.71
J-16	230.00	Zone	Demand	18.40	Fixed	18.40	401.85	74.35
J-1	310.00	Zone	Demand	18.40	Fixed	18.40	406.42	41.72
J-2	312.00	Zone	Demand	18.40	Fixed	18.40	406.25	40.78
J-18	315.00	Zone	Demand	18.40	Fixed	18.40	405.94	39.34
J-19	210.00	Zone	Demand	18.40	Fixed	18.40	404.39	84.10

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No W046483

Water Right Permit No. AAE-349

1) OWNER: Name PARADISE ESTATES. Address PO BOX 1045 SHELTON WA 98584

(2) LOCATION OF WELL: County MASON NE ¼ NE ¼ Sec. 8 T. 21 N., R. 4 W W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) OLD OLYMPIC DR. MASON LAKE

(3) PROPOSED USE: [X] Domestic [ ] Irrigation [ ] DeWater Industrial [ ] Test Well [ ] Municipal [X] Other [ ]

(4) TYPE OF WORK: Owner's number of well (if more than one) 2
Abandoned [ ] New well [X] Deepened [ ] Reconditioned [ ] Method: Dug [ ] Cable [X] Rotary [ ] Bored [ ] Driven [ ] Jetted [ ]

(5) DIMENSIONS: Diameter of well 8 inches.
Drilled 241 feet. Depth of completed well 243 1 1/8 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 8 " Diam. from +2 ft. to 217 6¼ ft.
Welded [X] " Diam. from ft. to ft.
Liner installed [ ] " Diam. from ft. to ft.
Threaded [ ]

Perforations: Yes [ ] No [X]
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes [X] No [ ]
Manufacturer's Name NAGAOKA
Type STAINLESS Model No.
Diam. 8 [illegible] Slot size .050 from 217 6¼ ft. to 241 1 1/8 ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes [ ] No [X] Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes [X] No [ ] To what depth? 20 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name CUSTOMERS
Type: SUBMERSIBLE H.P. 15

(8) WATER LEVELS: Land-surface elevation above mean sea level 1500 9 ft.
Static level 178 ft. below top of well Date 9-19-95
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Airtest gal./min. with stem set at ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water COLD Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
BROWN COMPACT SILT, BOULDERS [illegible]	0	50
BROWN SILTY GRAVEL	50	117
BROWN SILTY SAND, CLAY SOME GRAVEL	117	148
BROWN SILTY SAND SANDY	148	153
BROWN SILTY GRAVEL	153	193
BLUE CLAY - GRAVEL	193	202
BLUE CLAYBOUND GRAVEL	202	213
SILTY GRAVEL - WATER BEARING	213	216
CLAY GRAVEL " "	216	219
SILTY SAND - GRAVEL " "	219	240
BROWN CLAY BOUND GRAVEL	240	STOP

RECEIVED '95 SEP 26 P1:48 [illegible]

Work started 8-8-95, 19. Completed 9-19-95, 19

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME KEITH KINEY WELL DRILLING 98501 (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 221 RUBY ST TUMWATER WA.
(Signed) Keith Kiney (WELL DRILLER) License No. 0242
Contractor's Registration No. KEITHKK093KB Date 9-19-95, 19

(USE ADDITIONAL SHEETS IF NECESSARY)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

ECY 050-1-20 (10/87) -1329-

Ground Water Contamination
Susceptibility Assessment Survey Form
Version 2.2

Important! Please complete one form for each ground water source (well, well field, spring) used in your system. Photocopy as necessary.

Part I: System Information

Well Owner:	**Bill Davies**	Well Manager:	**Northwest Water Systems**
Water System Name:	**Paradise Estates**	Water System Number:	**66125T**
County:	**Mason**	1/4, 1/4, Sec, T, R:	**SE,NE,Sec8,Twn,21N,R2W**
Source Name:	**well**	WA well ID tag number:	**ALH962**
Source Number:	**SO3**	Well Depth:	**184**
Number of Connections:	**167**	Population Served:	**750**

Latitude: 47d19'46"N Longitude: 122d57'82"W

How was lat/long determined?

[ ] GPS device
[ ] survey
[ ] topographic map
[X] other Google Earth

*Please refer to Assistance Packet for details and explanations of all questions in Parts II through V.

Part II: Well Construction and Source Information

1) Date well originally constructed: **7/19/2007** last reconstructed: n/a

2) Well Driller: Arcadia Drilling
P.O. Box 1790
Shelton, WA 98584

3) Type of Well:

[X] Drilled: **rotary** (rotary, bored, cable, dug)
[ ] Other: (spring, lateral collection, driven, jetted, other)
Comments:

4) Well Report Available? **yes** yes/no
If no well log is available, please attach any other records documenting well construction; e.g. boring logs, "as built" sheets. Engineering reports, well reconstruction logs.

5) Average pumping rate: **60** gpm
Source of information: estimated
If not documented, how was the pumping rate determined?
installation of a 60 gpm flow restrictor

6) Is this source treated? **no** yes/no (disinfection, filtration, carbon filter, airstripper, other)
If so, what type of treatment:

purpose of treatment (describe materials to be removed or controlled by treatment):

7) If source is chlorinated, is a chlorine residual maintained? **n/a** yes/no
Residual level (at point closest to source): **n/a** ppm

Part III: Hydrogeologic Information

1) Depth to top of open interval: **174** ft

2) Depth to groundwater (static water level):
104.5 ft
[n/a] flowing artesian well/spring
How was the water level determined: sonic sounder

3) If the source is a flowing well or spring, what is the confining pressure?
n/a psi **n/a** ft

4) If the source is a flowing well or spring, is there a surface impoundment, reservoir, or catchment associated with this source:
[n/a] yes/no

5) Wellhead elevation (height above mean sea level): **95** ft
how was elevation determined?
[ ] topographic map
[ ] drilling/well log
[ ] altimeter
[X] other Google Earth

6) Confining layers: (This can be completed only for those sources with a drilling log, well log, or geologic report describing subsurface conditions. Please refer to assistance package for example.)
[yes] (yes/no) Is there evidence of a confining layer in the well log?

If there is evidence of a confining layer, is the depth to ground water more than 20 feet above the bottom of the lowest confining layer?
[yes] (yes/no)

7) Sanitary setback: **100** ft (If less than 100 feet, describe the site conditions):
A county road (Olympic Drive) is within 15 feet of the wellhead.

8) Wellhead Construction:
[ ] in wellhouse
[ ] in doghouse
[X] outside
[ ] controlled access:
[ ] other uses for wellhouse:

9) Surface seal:
[X] 18 ft
[ ] >18 ft
[ ] <18 ft (no DOE approval)
[ ] <18 ft (with DOE approval, include documentation)
[ ] no surface seal
[ ] unknown

10) Annual rainfall:
[ ] <10 in/yr
[ ] 10-25 in/yr
[X] >25 in/yr

Part IV: Mapping Your Ground Water Resource

1) Annual volume of water pumped: **1,446,459** cubic feet

How was this determined?

[ ] meter

[X] estimated: pumping rate: **60** gpm

pumping capacity: **175** gpm

[ ] other: aquifer/screen **10** ft

2) "Calculated Fixed Radius" estimate of groundwater movement: (see Instruction Packet)

groundwater travel time;	6 mo.	**303** ft
groundwater travel time;	1 yr.	**429** ft
groundwater travel time;	5 yr.	**960** ft
groundwater travel time;	10 yr.	**1357** ft
length of screened/open interval:		**10** ft

$r = [(Q*t)/(\pi*\eta H)]^{0.5}$

where: r = radius (ft)

Q = flow (ft^3/yr)

t = time (yr)

η = porosity (0.25 assumed)

H = screen/aquifer height (ft)

3) Is there a river, lake, pond, stream, or other surface water body within the six month travel boundary?

[no] yes/no (if yes, identify on a map and describe below)

4) Is there a storm water and/or wastewater facility, treatment lagoon, or holding pond located within the six month time of travel boundary? (if yes, identify on a map and describe below)

no

Part V: Assessment of Water Quality

1) Regional sources of risk to groundwater:

Please indicate if any of the following are present within a circular area around your water source having a radius up to and including the five year ground water travel time:

	6 mo.	1 yr	5 yr	unknown
likely pesticide application			no	
storm water injection wells			no	
other injection wells			no	
abandoned ground water well				X
landfills, dumps, disposal areas			no	
known hazardous materials clean-up site			no	
water systems with water quality problems			no	
population density >1 house/acre	yes			
residences commonly having septic tanks	yes			
wastewater treatment lagoons			no	
sites used for land application of waste			no	

Identify on a map all of the risks listed above which are located within the six month time of travel boundary. (Please include a map of the wellhead and time of travel areas within this form. Please indicate any of the following.) If other potential sources of groundwater contamination exist within the ten year time of travel circular zone around your supply, please describe:

2) Source specific water quality records:

Please indicate the occurrence of any test results since 1986 that meet the following conditions: (Unless listed on the assessment, MCLs are listed in assistance package.)

	MCL/detection	level	>MCL?
A. Nitrate:	10 mg/l	**<.2**	**no**
B. VOCs:	5 ug/l	**ND**	**no**
C. EDB:	0.05 ug/l		
D. DBCP:	0.2 ug/l		
E. Other SOC	(detectable)		

If any SOC's in addition to EDB/DBPC were detected, please identify and date. If other SOC tests were performed, but no SOCs detected, list methods here:

n/a

F. Bacterial Contamination:

Are any bacteriological test samples available	**yes**	yes/no
Any bacterial detection from the source within past 3 years:	**no**	yes/no
Any bacterial detection in the distribution system and attributed to the source within the past 3 years:	***n/a***	yes/no

Part VI: **Geographic or Hydrologic Factors contributing to a non-Circular Zone of Contribution**

The following questions will help identify those groundwater systems which may not be accurately represented by the calculated field radius (CFR) method described in Part IV. For these sources, the CFR areas should be used as a preliminary delineation of the critical time of travel zones for that source. As a system develops its Wellhead Protection Plan for these sources, a more detailed delineation method should be considered.

1) Is there evidence of obvious hydrologic boundaries within the ten year time of travel zone of the CFR? (does the largest circle extend over a stream, river, lake, or up a steep hillside, mountain or ridge?)

no yes/no if yes, describe with references to the map produced in Part IV:

2) Aquifer Material

A) Does the drilling, well, or other geologic/engineering report identify that the well is located in an area where the underground conditions are identified as fractured rock and/or basalt terrain?

no yes/no

B) Does the drilling, well, or other geologic/engineering report identify that the well is located in an area where the underground conditions are primarily identified as coarse sand and gravel?

no yes/no

3) Is the source located in an aquifer with a high horizontal flow rate?

(These can include sources located on flood plains of large rivers, artesian wells with high water pressure, and/or shallow flowing wells and springs.)

yes yes/no

55.5 feet of artesian pressure

4) Are there other high capacity wells (agricultural, municipal, and/or industrial) located within the CFRs?

a) Presence of ground water extraction wells removing more than approximately 500 gpm within:

- [ ] 6 mo. travel time
- [ ] 1 yr. travel time
- [ ] 5 yr. travel time
- [x] no 10 year travel time

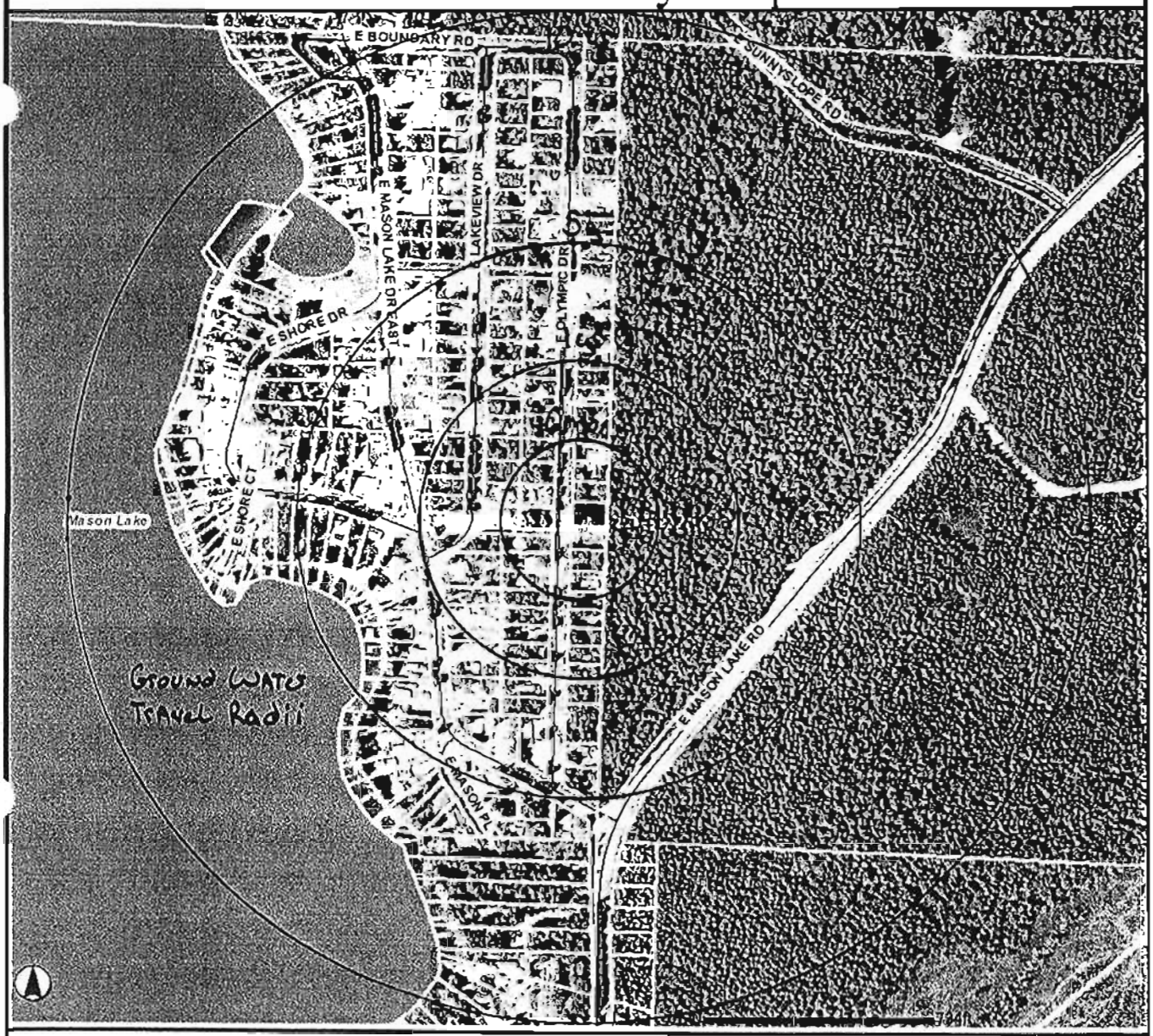
b) Presence of ground water recharge wells (dry wells) or heavy irrigation within:

- [ ] 6 mo. travel time
- [ ] 1 yr. travel time
- [ ] 5 yr. travel time
- [x] no 10 year travel time

5) Please identify or describe additional hydrologic or geographic conditions that you believe may affect the shape of the contribution zone for this source. Reference them to locations on the map in Part IV.

none

Mason County Map



DISCLAIMER AND LIMITATION OF LIABILITY:
The data used to make this map have been tested for accuracy, and every effort has been made to ensure that these data are timely, accurate and reliable. However, Mason County makes no guarantee or warranty to its accuracy as to labeling, dimensions, or placement or location of any map features contained herein. The boundaries depicted by these data are approximate, and are not necessarily accurate to surveying or engineering standards, and are intended for informational purposes only. Mason County does not assume any legal liability or responsibility arising from the use of this map in a manner not intended by Mason County. In no event shall Mason County be liable for direct, indirect, incidental, consequential, special, or tort damages of any kind, including, but not limited to, loss of anticipated profits or benefits arising from use of or reliance on the information contained herein.

415 N. Sixth Street
Shelton, WA 98584

LEGEND

Paradise Estates W.S. (S03)

WATER WELL REPORT

Original & 1st copy - Ecology, 2nd copy - owner, 3rd copy - driller

Construction/Decommission ("x" in circle)

[X] Construction

[ ] Decommission *ORIGINAL INSTALLATION*

Notice of Intent Number _____

PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] DeWater [ ] Irrigation [ ] Test Well [ ] Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

[X] New well [ ] Reconditioned Method: [ ] Dug [ ] Bored [ ] Driven [ ] Deepened [ ] Cable [X] Rotary [ ] Jetted

DIMENSIONS: Diameter of well 8 inches, drilled 235'6" ft. Depth of completed well 235'6" ft.

CONSTRUCTION DETAILS

Casing [X] Welded 8 " Diam. from 2.0 ft. to 218 ft.

Installed: [ ] Liner installed _____ " Diam. from _____ ft. to _____ ft.

[ ] Threaded _____ " Diam. From _____ ft. to _____ ft.

Perforations: [ ] Yes [X] No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: [X] Yes [ ] No [X] K-Pac Location 213'6"

Manufacturer's Name ALLOY MACHINE

Type SLOTTED Model No. _____

Diam. 7 Slot size 0.50 from 218 ft. to 228 ft.

Diam. 7 Slot size 0.00 from 228 ft. to 235.6 ft.

Gravel/Filter packed: [ ] Yes [X] No Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: [X] Yes [ ] No To what depth? 18 ft

Material used in seal BENTONITE CHIPS

Did any strata contain unusable water? [ ] Yes [X] No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 137 ft. below top of well Date 7/19/07

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? [ ] Yes [ ] No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer Test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 20 gal./min. with stem set at 24 ft. for 11 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? [ ] Yes [X] No

CURRENT

Notice of Intent No. WE06949

Unique Ecology Well ID Tag No. ALH962

Water Right Permit No. EXEMPT WELL

Property Owner Name PARADISE SERVICES ASSOCIATION

Well Street Address OLYMPIC DRIVE

City SHELTON County MASON

Location SE 1/4-1/4 NE 1/4 Sec 8 Twn 21N R 2W EWM [ ] Check Or WWM [X] One

(s, t, r Still REQUIRED)

Lat/Long Lat Deg _____ Lat Min/Sec _____

Long Deg _____ Long Min/Sec _____

Tax Parcel No. (Required) 221085500004

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
BROWN SANDY LOAM	0	2
BROWN HARD PAN	2	45
BROWN SANDY GRAVEL, LOOSE, MOIST	45	87
GRAY SANDY GRAVEL, SILT BOUND, TIGHT	87	
MOIST		135
GRAY SILTY GRAVELLY CLAY, TIGHT, DRY	135	160
GRAY SILTY SANDY GRAVEL, WET, TIGHT	160	170
GRAY MEDIUM TO COARSE SANDY	170	
GRAVEL, LOOSE		185
GRAY SILTY SANDY GRAVEL, TIGHT, WET	185	210
GRAY SILTY SANDY GRAVEL, LOOSE, WET	210	220
GRAY SILTY SANDY GRAVEL	220	232
BROWN CLAY BOUND MEDIUM - LARGE	232	
GRAVEL		234
BROWN GRAY SILT AND ORGANIC LENSE	234	235.6

Start Date 7/12/07 Completed Date 7/19/07

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[X] Driller [ ] Engineer [ ] Trainee Name (Print) BRANDON HICKS

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2785

Drilling Company ARCADIA DRILLING INC.

Address PO BOX 1790

City, State, Zip SHELTON , WA , 98584

IF TRAINEE: Driller's License No: _____

Driller's Signature: _____

Contractor's Registration No. ARCADDI098K1 Date 7/20/07

ECY 050-1-20 (Rev 4/07)

Ecology is an Equal Opportunity Employer

WATER WELL REPORT

Original & 1st copy - Ecology, 2nd copy - owner, 3rd copy - driller

Construction/Decommission ("x" in circle) 273321

[X] Construction

[ ] Decommission *ORIGINAL INSTALLATION*

Notice of Intent Number _____

PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] DeWater [ ] Irrigation [ ] Test Well [ ] Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

[ ] New well [X] Reconditioned *Method:* [ ] Dug [ ] Bored [ ] Driven [ ] Deepened [X] Cable [ ] Rotary [ ] Jetted

DIMENSIONS: Diameter of well _____ inches, drilled _____ ft. Depth of completed well _____ ft.

CONSTRUCTION DETAILS

Casing Installed: [X] Welded 8 " Diam. from +2 ft. to 184 ft.
[ ] Liner installed _____ " Diam. from _____ ft. to _____ ft.
[ ] Threaded _____ " Diam. from _____ ft. to _____ ft.

Perforations: [ ] Yes [X] No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: [X] Yes [ ] No [X] K-Pac Location 170

Manufacturer's Name ALLOY MACHINE

Type SLOTTED Model No. _____

Diam. 7 Slot size .050 from 174 ft. to 184 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: [ ] Yes [X] No Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: [X] Yes [ ] No To what depth? 18 ft.

Material used in seal BENTONITE CHIPS

Did any strata contain unusable water? [ ] Yes [X] No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 102 ft. below top of well Date 8/22/07

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? [ ] Yes [X] No If yes, by whom? _____

Yield: _____ gal./min with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer Test 20 gal./min with 3 ft. drawdown after 6 hrs.

Airlift _____ gal./min. with stem set at _____ ft. for _____ hrs

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? [ ] Yes [X] No

CURRENT

Notice of Intent No. WE07202

Unique Ecology Well ID Tag No. ALH962

Water Right Permit No. EXEMPT WELL

Property Owner Name PARADISE SERVICES ASSOCIATION

Well Street Address OLYMPIC DRIVE

City SHELTON County MASON

Location SE 1/4-1/4 NE 1/4 Sec 8 Twn 21N R 2W [X] EWM [ ] Check Or [X] WWM One

(s, t, r Still REQUIRED)

Lat/Long Lat Deg _____ Lat Min/Sec _____

Long Deg _____ Long Min/Sec _____

Tax Parcel No. (Required) 221085500004

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
PULLED SCREEN		
RETRACT CASING TO 170'		
DRILL BACK DOWN TO 184'		
SET SCREEN TO 174' TO 184'		
DEVELOPED WELL		
REFER TO WELL LOG		
WE06949 TAG ALH962		

RECEIVED
OCT 0 2 2007
Washington State
Department of Ecology

Start Date 8/17/07 Completed Date 8/22/07

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[X] Driller [ ] Engineer [ ] Trainee Name (Print) MARK H. NELSON

Driller/Engineer/Trainee Signature Mark H. Nelson

Driller or trainee License No. 1992

IF TRAINEE, Driller's License No. _____

Driller's Signature: _____

Drilling Company ARCADIA DRILLING INC.

Address PO BOX 1790

City, State, Zip SHELTON , WA , 98584

Contractor's Registration No ARCADDI098K1 Date 8/24/07

ECY 050-1-20 (Rev 4/07)

Ecology is an Equal Opportunity Employer

Water Right Analysis

Permit:	G2-26830
Priority Date:	November 18, 1985
Maximum gallons per minute:	230 gpm
Maximum acre-feet per year:	120 ac-ft/yr

Summary: The Paradise Estates development was platted with 228 residential lots. Of these, 15 lots have been combined resulting in 213 existing residential tax parcels. In addition, the caretaker residence is considered as an additional residential connection and the community park with a restroom and boat moorage is considered as an additional connection. The system is currently approved for 167 connections and needs approval for a 215 connections (214 residential plus community park).

The total source production is approximately 230 gpm (approximately 170 gpm from Well 2 and 60 gpm from Well 3). Well 3 has the capacity to pump at least 170 gpm, but is limited by a flow restrictor. When the pump in Well 2 fails, it will be replaced by a smaller pump limited to 115 gpm, and the production of Well 3 will be increased to 115 gpm as described in the *S03 Source Approval Report* (DOH Project #07-1013). In either case, maximum pumping capacity shall remain within the instantaneous limit of 230 gpm.

Based on source meter records from 2010, the system pumps 11,200,000 gallons per year (34.4 acre-feet per year). With a water right of 120 acre-feet per year, the system uses significantly less than its permitted limit.

Provisions of Water Right Certificate: The following notes regard two of the water right certificate provisions:

- **Quarterly static water levels**
    - *Water right provision:* "In order to help protect your water right from potential future impairment by junior water users, it is important that a record be established of accurate water-level measurements for your well. As such, it is recommended that you measure and record the water level in your well quarterly, using a consistent methodology. This information will be most useful if these measurements are taken after your well has returned to a static (recovered aquifer) condition. In the absence of this, the next best option is to maintain consistency regarding the length of pumping and recovery period to each measurement."
    - *Action Required:* Measure and record static water levels in all wells on a quarterly basis.
- **Proof of appropriation**
    - *Water right provision:* "The permittee is advised that notice of Proof of Appropriation of water (under which the final certificate of water right is issued) should not be filed until the permanent distribution system has been constructed and that quantity of water allocated by the permit to the extent water is required, has been put to full beneficial use."
    - *Action Required:* As stated in a letter from the State of Washington Department of Ecology dated April 29, 2002, the Paradise Estates Water System must contact the Department of Ecology by November 1, 2011 if the requirement for full beneficial use of this water has not been met. On or before November 1, 2011, the Paradise Estates Water System must submit a letter to the Department of Ecology noting that full beneficial use

of this water has not been met because full construction of Paradise Estates has not been completed. The provisions associated with the water right certificate also state that "the water right authorization is limited to the supply of 240 homes and will be certificated for that amount of water necessary to supply the development at full build-out."

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
P.O. Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

April 29, 2002

Paradise Service Association
E 381 Olympic Drive
Grapeview WA 98546

Dear Sir or Madame:

Re: Ground Water Superseding Permit No. G2-26830

Enclosed is Superseding Permit No. G2-26830. Our information indicates that your system has been completed.

Also enclosed is a Proof of Appropriation form, which is to be filed when the water has actually been put to full beneficial use. You must contact this office if you cannot put the water to full beneficial use by **November 1, 2011**. Please read the enclosed information sheet, as well as both sides of your permit.

Also, the County Auditor is requiring us to have the parcel number(s) for the point of diversion/withdrawal and the place of use added to your certificate for recording. Please supply these numbers to us and we will forward them to the County Auditor with your certificate for recording.

Sincerely,

J. Mike Harris
Water Resources Supervisor
Southwest Regional Office

JMH:th (permit3)

PARADISE ESTATES
PERMIT FOR 230 GPM

Pg 1 of 2

COPY

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
SUPERSEDING
PERMIT
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	CERTIFICATE NUMBER
November 8, 1985	G2-26830	G2-26830	

NAME
Paradise Service Association

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
E 381 Olympic Drive	Grapeview	Washington	98546

The applicant is pursuant to the Report of Examination which has been accepted by the applicant, hereby granted a permit to appropriate the following public waters of the State of Washington, subject to existing rights and to the limitations and provisions set herein.

PUBLIC WATERS TO BE APPROPRIATED

SOURCE
2 Wells

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE FEET PER YEAR
	230	120

QUANTITY, TYPE OF USE, PERIOD OF USE		
120 Acre-feet per year	Multiple domestic supply (240 Connections)	Year-round, as needed

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION--WITHDRAWAL
Well #2: 825 feet South and 60 feet West of the Northeast corner of Section 8.
Well #3: 100 feet North and 100 feet West of the East quarter corner of Section 8.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, (E. OR W.) W.M.	W.R.I.A.	COUNTY
NE¼ NE¼/SE¼ NE¼	8	21	2W	14	Mason

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

Divisions 1 and 2 of the Plat of Paradise Shore Estates being within the Northeast quarter of Section 8, T. 21 N., R. 2 W.W.M., records of Mason County, Washington.

NEW WELL SITE ADDRESS 160, 180 E. OLYMPIC DRIVE
LOT 4, 5 DIV. II
PARCEL # 22-10855000004 # 4
22-10855000005

PARADISE ESTATES PERMIT FOR 230 GPM 120 AF

DESCRIPTION OF PROPOSED WORKS

Well #2: 8" X 241' and a proposed new well drilled to a similar depth.

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE:	COMPLETE PROJECT BY THIS DATE	WATER PUT TO FULL USE BY THIS DATE:
Started	Completed	November 1, 2011

PROVISIONS

"The combined withdrawals from all wells for this water system shall not exceed 230 gallons per minute and 120 acre-feet per year. This water right authorization is limited to the supply of 240 homes and will be certificated for that amount of water necessary to supply the development at full build-out. The annual quantity on this permit will likely be reduced at that time to reflect actual demand."

All wells constructed in the State shall meet the construction requirements of Chapter 173-160 WAC entitled "Minimum Standards for the Construction and Maintenance of Wells" and Chapter 18-104 RCW entitled "Water Well Construction".

In accordance with Chapter 173-160 WAC, wells shall not be located within certain minimum distances of potential sources of contamination. These minimum distances shall comply with local health regulations, as appropriate. In general, wells shall be located at least 100 feet from sources of contamination. Wells shall not be located within 1,000 feet of a solid waste landfill.

A completed well report of the well(s) shall be submitted by the driller to the Department of Ecology within 30 days of completing this well. All pump test data for this well shall be submitted to the Department as it is obtained.

Installation and maintenance of an access port as described in Chapter 173-160 is required. An air line and gauge may be installed in addition to the access port.

An approved measuring device shall be installed and maintained for each of the sources 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 *monthly* and shall be submitted *annually* to Ecology by *January 31st of each calendar year, (or more frequently if necessary)*.

The following information shall be included with each submittal of water use data: owner, contact name if different, mailing address, daytime phone number, WRIA, Permit or Certificate #, source name, annual quantity used including units, maximum rate of diversion including units, and period of use. In the future, Ecology may require additional parameters to be reported or more frequent reporting.

"In order to help protect your water right from potential future impairment by junior water users, it is important that a record be established of accurate water-level measurements for your well. As such, it is recommended that you measure and record the water level in your well quarterly, using a consistent methodology. This information will be most useful if these measurements are taken after your well has returned to a static (recovered aquifer) condition. In the absence of this, then next best option is to maintain consistency regarding the length of the pumping and recovery period to each measurement. For maximum usefulness, data collected should include the following elements.

1. Unique Well ID Number
2. Measurement date and time
3. Measurement method (air line, electric tape, pressure transducer, etc.)
4. Well status (pumping, recently pumped, etc.)
5. Water level accuracy (to nearest foot, tenth of foot, etc.)
6. Description of the measuring point (top of casing, sounding tube, etc.)
7. Measuring point elevation above or below land surface to the nearest 0.1 foot
8. Land surface elevation at the well head to the nearest foot.
9. Static water level below measuring point to the nearest 0.1 foot."

The permittee is advised that notice of Proof of Appropriation of water (under which the final certificate of water right is issued) should not be filed until the permanent distribution system has been constructed and that quantity of water allocated by the permit to the extent water is required, has been put to full beneficial use.

This permit shall be subject to cancellation should the permittee fail to comply with the above development schedule and/or to give notice to the Department of Ecology on forms provided by that Department documenting such compliance.

Given under my hand and the seal of this office at Olympia, Washington,

this 29th *day of* April, *2002.*

Department of Ecology

ENGINEERING DATA
OK MP

by
J. Mike Harris, Section Supervisor

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

AMENDED

NOTICE OF APPLICATION TO APPROPRIATE PUBLIC WATERS

TAKE NOTICE:

That Paradise Estates

Shelton, Washington on June 24 1992 under

Application No. G2-25465 filed for permit to appropriate public waters, subject to existing rights,

from a well

; the amount of 230 gallons per minute as needed year round

each year, for multiple domestic supply

The source of the proposed appropriation is located within SE¼ NE¼

of Section 8, Township 21 N., Range 2W W.M., in Mason County.

Protests or objections to approval of this application must include a detailed statement of the basis for objections: Protests must be accompanied by a two dollar ($2.00) recording fee and filed with the Department of Ecology, at the address shown below, within thirty (30) days from

(Last date of publication to be entered above by publisher)

* Notice must be published once a week for two consecutive weeks.

Dept. of Ecology
P.O. Box 47775
Olympia, Wa 98504-7775

ECY 040-1-1
Rev. 2/79

NOTICE
51

Example Form 2-1a
Water Right Self-Assessment *For Existing Water Right(s) Status*

Permit Certificate or Claim #	Name of Rightholder or Claimant	Priority Date	Source Name/ Number	Primary or Supplemental	Existing Water Rights		Existing Consumption		Current Water Right Status (Excess/Deficiency)	
					Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)
Permits/ Certificates 1. G2-26830	Paradise Service Associatioin	11/8/1985	S01 S02 S03	Supplemental Primary Primary	230 gpm	120 ac-ft/yr	230 gpm	34.4 ac-ft/yr	0	85.6 ac-ft/yr
2.										
3.										
4.										
Claims 1.										
2.										
3.										
4.										
TOTAL	**********	*******	*******	**********	230 gpm	120 ac-ft/yr	230 gpm	34.4 ac-ft/yr	0	85.6 ac-ft/yr

Intertie Name/Identifier	Name of Purveyor Providing Water	Existing Limits on Intertie Water Use		Existing Consumption Through Intertie		Current Intertie Supply Status (Excess/Deficiency)	
		Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)
1.							
2.							
3.							
4.							
TOTAL	**********						

Pending Water Right Application	Name on Permit	Date Submitted	Primary or Supplemental	Pending Water Rights	
				Maximum Instantaneous Flow Rate (Qi) Requested	Maximum Annual Volume (Qa) Requested
1.					
2.					
3.					
4.					

Example Form 2-1b
Water Rights Self-Assessment

For Projected Water Right(s) Status

Permit Certificate or Claim #	Name of Rightholder or Claimant	Priority Date	Source Name/ Number	Primary or Supplemental	Existing Water Rights		Forecasted Water Use From Sources (20 Year Demand)		Forecasted Water Right Status (Excess/Deficiency - 20 Yr Demand in Water Right)	
					Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)
Permits/ Certificates 1. G2-26830	Paradise Service Association	11/8/1985	S01 S02 S03	Supplemental Primary Primary	230 gpm	120 ac-ft/yr	230 gpm	56.6 ac-ft/yr	0	63.4 ac-ft/yr
2.										
3.										
4.										
Claims 1.										
2.										
3.										
4.										
TOTAL	*********	*******	*******	**********	230 gpm	120 ac-ft/yr	230 gpm	56.6 ac-ft/yr	0	63.4 ac-ft/yr

Intertie Name/Identifier	Name of Purveyor Providing Water	Existing Limits on Intertie Water Use		Existing Consumption Through Intertie		Current Intertie Supply Status (Excess/Deficiency)	
		Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)
1.							
2.							
3.							
4.							
TOTAL	********** ******* ******* **********						

Pending Water Right Application	Name on Permit	Date Submitted	Primary or Supplemental	Pending Water Rights	
				Maximum Instantaneous Flow Rate (Qi) Requested	Maximum Annual Volume (Qa) Requested
1.					
2.					
3.					
4.					

Water System Name: Paradise Estates
State ID: 66125T
Source: S02, S03 Tag No.: AAE349, ALH962
Initial Static Water Level:

Date	Source Meter Well 2	Source Meter Well 3	Usage	Daily Usage gpd	Number of Connections	Average Daily Demand
7/8/2008	12395971	1,376,620				
7/15/2008	12503090	1,901,428	631,927	90,275	99	911.87
7/22/2008	12612453	2,270,022	477,957	68,280	99	689.69
8/6/2008	12819720	3,177,450	1,114,695	74,313	99	750.64
8/14/2008	12927089	3,596,580	526,499	65,812	99	664.77
8/20/2008	12980565	3,936,680	393,576	65,596	99	662.59
9/17/2008	13465472	4,478,300	1,026,527	36,662	99	370.32
10/14/2008	13805840	5,107,970	970,038	35,927	99	362.90
10/21/2008	13878790	5,193,055	158,035	22,576	99	228.04
12/9/2008	14401330	5,823,100	1,152,585	23,522	99	237.60
12/16/2008	14475756	5,916,800	168,126	24,018	99	242.61
12/30/2008	14913535	5,965,218	486,197	34,728	99	350.79
1/6/2009	15142000	5,965,218	228,465	32,638	99	329.68
1/13/2009	15220507	6,077,300	190,589	27,227	99	275.02
1/20/2009	15293550	6,175,418	171,161	24,452	99	246.99
1/29/2009	15408676	6,225,046	164,754	18,306	99	184.91
2/3/2009	15475800	6,266,985	109,063	21,813	99	220.33
2/17/2009	15629390	6,387,472	274,077	19,577	99	197.75
2/23/2009	15704700	6,455,305	143,143	23,857	99	240.98
3/3/2009	15770694	6,516,252	126,941	15,868	99	160.28
3/10/2009	15843142	6,581,330	137,526	19,647	99	198.45
3/17/2009	15923370	6,638,933	137,831	19,690	99	198.89
3/24/2009	15991975	6,704,065	133,737	19,105	99	192.98
3/31/2009	16116928	6,779,410	200,298	28,614	99	289.03
4/7/2009	16202922	6,844,960	151,544	21,649	99	218.68
4/14/2009	16279100	6,910,478	141,696	20,242	99	204.47
4/28/2009	16476100	7,078,320	364,842	26,060	99	263.23
5/5/2009	16601870	7,184,400	231,850	33,121	99	334.56
5/19/2009	16835980	7,387,830	437,540	31,253	99	315.69
5/26/2009	17017630	7,537,810	331,630	47,376	99	478.54
6/2/2009	17302750	7,766,400	513,710	73,387	99	741.28
6/9/2009	17614380	7,995,740	540,970	77,281	99	780.62
6/23/2009	18246510	8,697,110	1,333,500	95,250	99	962.12
6/30/2009	18567730	8,974,630	598,740	85,534	99	863.98
7/7/2009	18910770	9,404,600	773,010	110,430	99	1,115.45
7/14/2009	19188780	9,654,820	528,230	75,461	99	762.24
7/23/2009	19662700	10,034,390	853,490	94,832	99	957.90
7/29/2009	19922740	10,486,280	711,930	118,655	99	1,198.54
8/4/2009	20205950	10,974,390	771,320	128,553	99	1,298.52
8/14/2009	20593610	11,293,110	706,380	70,638	99	713.52
8/18/2009	20734490	11,416,650	264,420	66,105	99	667.73
8/24/2009	20999980	11,618,290	467,130	77,855	99	786.41
9/1/2009	21262920	11,830,910	475,560	59,445	99	600.45
9/8/2009	21418040	11,964,820	289,030	41,290	99	417.07

Water System Name: Paradise Estates
State ID: 66125T
Source: S02, S03 Tag No.: AAE349, ALH962
Initial Static Water Level:

Date	Source Meter Well 2	Source Meter Well 3	Usage	Daily Usage gpd	Number of Connections	Average Daily Demand
9/15/2009	21583740	12,093,460	294,340	42,049	99	424.73
9/22/2009	21742770	12,219,510	285,080	40,726	99	411.37
9/24/2009	21796050	12,263,320	97,090	48,545	99	490.35
9/30/2009	21944240	12,384,560	269,430	44,905	99	453.59
10/6/2009	22084610	12,502,700	258,510	43,085	99	435.20
10/13/2009	22249920	12,643,890	306,500	43,786	99	442.28
10/21/2009	22416090	12,799,360	321,640	40,205	99	406.11
10/26/2009	22505550	12,879,220	169,320	33,864	99	342.06
11/3/2009	22615540	12,972,270	203,040	25,380	99	256.36
11/10/2009	22716520	13,049,340	178,050	25,436	99	256.93
11/17/2009	22823440	13,136,270	193,850	27,693	99	279.73
11/23/2009	22911550	13,213,200	165,040	27,507	99	277.85
12/1/2009	23034030	13,314,450	223,730	27,966	99	282.49
12/8/2009	23142050	13,413,670	207,240	29,606	99	299.05
12/15/2009	23258870	13,510,050	213,200	30,457	99	307.65
12/22/2009	23410190	13,629,790	271,060	38,723	99	391.14
12/28/2009	23505520	13,705,910	171,450	28,575	99	288.64
1/5/2010	23637550	13,806,090	232,210	29,026	99	293.19
1/12/2010	23750150	13,897,970	204,480	29,211	99	295.06
1/19/2010	23863160	13,991,330	206,370	29,481	99	297.79
1/26/2010	23986130	14,093,080	224,720	32,103	99	324.27
2/3/2010	24134660	14,211,520	266,970	33,371	99	337.08
2/9/2010	24247950	14,306,100	207,870	34,645	99	349.95
2/16/2010	24377215	14,406,790	229,955	32,851	99	331.83
2/23/2010	24505590	14,511,340	232,925	33,275	99	336.11
3/10/2010	24781210	14,741,290	505,570	33,705	99	340.45
3/17/2010	24880770	14,821,900	180,170	25,739	99	259.99
3/23/2010	24974240	14,894,020	165,590	27,598	99	278.77
3/31/2010	25084510	14,983,420	199,670	24,959	99	252.11
4/6/2010	25157230	15,043,565	132,865	22,144	99	223.68
4/13/2010	25250550	15,121,850	171,605	24,515	99	247.63
4/20/2010	25347080	15,200,790	175,470	25,067	99	253.20
4/28/2010	25461690	15,289,190	203,010	25,376	99	256.33
5/11/2010	25628080	15,421,970	299,170	23,013	99	232.46
5/18/2010	25724510	15,499,750	174,210	24,887	99	251.39
5/25/2010	25805920	15,567,570	149,230	21,319	99	215.34
6/1/2010	25901910	15,642,390	170,810	24,401	99	246.48
6/24/2010	26196090	15,881,040	532,830	23,167	99	234.01
7/22/2010	26876400	16,442,040	1,241,310	44,333	99	447.80
7/29/2010	27089400	16,619,900	390,860	55,837	99	564.01
8/5/2010	27350610	16,857,270	498,580	71,226	99	719.45
8/16/2010	27637970	17,127,520	557,610	50,692	99	512.04
9/2/2010	28021325	17,461,995	717,830	42,225	99	426.52
9/9/2010	28140735	17,556,945	214,360	30,623	99	309.32

Water System Name: Paradise Estates
State ID: 66125T
Source: S02, S03 Tag No.: AAE349, ALH962
Initial Static Water Level:

Date	Source Meter Well 2	Source Meter Well 3	Usage	Daily Usage gpd	Number of Connections	Average Daily Demand
9/15/2010	28219290	17,621,230	142,840	23,807	99	240.47
9/20/2010	28275960	17,669,145	104,585	20,917	99	211.28
9/27/2010	28354850	17,731,950	141,695	20,242	99	204.47
10/6/2010	28470185	17,826,480	209,865	23,318	99	235.54
10/14/2010	28567120	17,910,240	180,695	22,587	99	228.15
10/18/2010	28626135	17,958,270	107,045	26,761	99	270.32
10/28/2010	28746689	18,054,560	216,844	21,684	99	219.03
11/4/2010	28831605	18,125,550	155,906	22,272	99	224.97
11/17/2010	28980855	18,238,367	262,067	20,159	99	203.63
11/26/2010	29091195	18,320,745	192,718	21,413	99	216.29
12/8/2010	29226500	18,434,422	248,982	20,749	99	209.58
12/15/2010	29311049	18,498,795	148,922	21,275	99	214.89
12/22/2010	29382897	18,556,772	129,825	18,546	99	187.34
12/30/2010	29474615	18,628,280	163,226	20,403	99	206.09
1/12/2011	29645883	18,769,095	312,083	24,006	99	242.49
1/19/2011	29725672	18,826,443	137,137	19,591	99	197.89
1/26/2011	29796468	18,886,675	131,028	18,718	99	189.07
1/31/2011	29852690	18,931,528	101,075	20,215	99	204.19
2/2/2011	29871955	18,949,897	37,634	18,817	99	190.07

Water Use

(The information in this chart should be kept current)

Line #	Type of Information (Annual Usage Figures in Gallons)	
Line 1	Number of Existing Residential Services (from system records)	128.5 [1]
Line 2	Existing Residential Services Annual Usage (from system records) (If there are no records, contact a technical assistance provider to provide you with an estimate.)	11,200,000
Line 3	Average Annual Usage Per Residential Service (ERU usage) (Divide Line 2 by Line 1)	87,160
Line 4	Existing Non-Residential Services Annual Usage (if applicable) From System Records	0
Line 5	Existing Total System Annual Usage (Add Lines 2 and 4)	11,200,000
Line 6	Total Number of Projected Residential Services (Number of Approved Connections on WFI)	215 [2]
Line 7	Projected Residential Services Annual Usage (Multiply Line 3 by Line 6)	18,739,400
Line 8	Total Projected Non-Residential Services Annual Usage (if applicable) (From System Records)	0
Line 9	Total Projected System Annual Usage (Add Lines 7 and 8)	18,739,400

[1] Due to the presence of full-time and part-time (vacation) residences within the service area, the number of equivalent residential units (ERU) was estimated as shown below:

	ERU
Full-time Residences (112)	112
Vacation Residences (85)	14.5
Caretaker Residence (1)	1
Park	1
Total	**128.5**

During the period of analysis (May-December 2010), the 84 vacation homes had approximately 17% of the usage of a full-time residence. Therefore, the ERU for vacation homes was calculated as: 85*0.17=14.5 ERUs.

[2] The system is currently approved for 167 service connections. The Paradise Estates development was platted with 228 residential lots. Of these, 15 have been combined resulting in 213 existing residential tax parcels. In addition, there is a community park with restroom, boat moorage, and a caretaker residence. The water system needs approval for 215 connections (214 residential plus the community park).

Water Use Efficiency Program

System Name: Paradise Estates Water System **ID Number: 66125-T**

Number of Connections: 198
Average Daily Demand: 235 gpd
Maximum Daily Demand: 945 gpd

1 Current Water Conservation Program

The Paradise Estates Water System has adopted an inclining block rate structure to encourage water conservation. In 2009, the distribution system was replaced and service meters were installed. Customer education regarding indoor and outdoor water conservation strategies are included in the annual Drinking Water Quality Report distributed to all customers.

2 WUE Goals

Public Meeting Date: Pending

Goal: The WUE Rule requires setting measurable goals with a set timeframe. This ensures that progress toward achieving the system's goals can be tracked in annual performance reports. The proposed WUE goal is to **reduce maximum daily demand by 5% within 6 years (with 2010 data as the base year)**.

Water use is highest during summer months when more vacation homes are in use and when outdoor watering is prevalent. By focusing on a reduction of maximum daily demand, excessive summer water use will be targeted.

3 Cost Effectiveness of WUE Measures

Measure	Added Cost	Estimated Savings	Net Cost	Feasible
Additional education on landscape irrigation, lawn care, car washing, and long-term outdoor conservation.	$100	unknown	< $100	Yes

4 Implementation of WUE Measures

Number of Measures Required: Systems with less than 500 connections must evaluate or implement at least one WUE measure.

Description: Customer education that is carried out more than once a year counts toward meeting the program requirements for WUE measures. Paradise Estates will increase customer education efforts to promote water conservation. In addition to the customer education provided in the annual Customer Confidence Report (CCR), seasonal water tips will be provided to all customers either in conjunction with at least two bi-monthly billings prior to the summer season or in separate mailings.

5 Customer Education

Annual customer education regarding the importance of using water efficiently is a required element of all WUE programs. Customer education is provided in the annual Consumer Confidence Report (CCR) to customers and includes tips for customers on using water more efficiently.

6 Projected Water Savings Based Upon WUE Measures

Production: 0%
Consumption: 5%

7 WUE Program Evaluation

Beginning in 2008, all municipal water suppliers were required to provide annual water use efficiency performance reports to customers and the Department of Health by July 1 each year. These performance reports must also be made available to the public and must detail progress toward achieving the system's WUE goals.

8 Distribution System Leakage

Distribution System Leakage (DSL) was calculated for the eight-month period following the installation of service meters in May 2010. The results of these calculations are as follows:

2010	Full-time (cu ft)	Vacation (cu ft)	Total (gal)	Source (gal)	Difference (gal)	DSL
May-June	129,465	18,233	1,104,781	1,326,250	221,469	16.7%
July-Aug	336,457	55,140	2,929,146	3,406,190	477,044	14.0%
Sept-Oct	127,755	12,179	1,046,706	1,473,835	427,129	29.0%
Nov-Dec	130,128	7,068	1,026,226	1,145,740	119,514	10.4%

Water Loss Control Action Plan: To control leakage, systems that do not meet the DSL standard must implement a Water Loss Control Action Plan. Based on available data during an eight-month period, the DSL ranges from 10.4% to 29.0%. With a one-year-old, pressure-tested distribution system, it seems unlikely that the DSL is as high as shown. It is possible that one or both of the source meters may not be functioning properly. After the source meters are calibrated, DSL will be re-calculated to determine if the leakage is actually occurring in the distribution system. Leak detection will be initiated if necessary. Recordkeeping and estimation of authorized water consumption uses will continue to account for waterline flushing.

9 Evaluation of Rate Structures

Current rate structure: Inclining block rate	$40 base rate	Up to 1500 cubic feet (cf)
	$0.01/cf	1501 cf – 2400 cf
	$0.015/cf	2401 cf – 3000 cf
	$0.02/cf	3001 cf+

No alternative rate structures were evaluated since this water system utilizes a rate structure that encourages water conservation.

10 Reclaimed Water Opportunity

None

11 Water Supply Characteristics

Water right: 230 gpm, 120 ac-ft/year
Water Resource Inventory Area (WRIA): 14 (Kennedy-Goldsborough)
Average total precipitation: 65.2 inches/year
STR: 08 21 North 02 West

	Well #1	**Well #2**	**Well #3**
Type	Well	Well	Well
Use	Emergency	Primary	Primary
Depth	245	243	184
Open interval	116	217	174
SWL	167	178	102
Flow	42 gpm	178 gpm	60 gpm
Legal constraints	None	None	None
Observed changes	None	None	None
Water quality concerns	None	None	None
Instream flow impacts	Unlikely	Unlikely	Unlikely

System Inventory and Assessment

System Component	Condition	Age (years)	Expected Life (years)	Cost to Replace	Notes
Well (S01)	Fair	47	100	---	Emergency use
Well Pump, 7.5 HP (S01)	Good	13	15	$7500	
Source Meter (S01)	Unknown	Unknown	25	$300	
Pumphouse (S01)	Good	47	50	$3000	
Well (S02)	Good	16	100	$70,000	
Well Pump, 15 HP (S02)	Good	14	15	$7500	
Source Meter (S02)	Unknown	14	25	$300	
Pumphouse (S02)	Good	16	50	$5000	
Well (S03)	Good	4	100	$70,000	
Well Pump (S03)	Good	4	15	$7500	
Source Meter (S03)	Good	4	25	$300	
Pumphouse (S03)	Good	4	50	$3000	
Electrical and controls		variable	25	$7000	
Reservoir (35,000 gallons)	Good	22	70	$50,000	
Reservoir (79,000 gallons)	Good	15	70	$100,000	
Booster Pump 1 (5-HP)	Good	1	25	$5000	Goulds 3MC-G
Booster Pump 2 (5-HP)	Good	1	25	$5000	Goulds 3 MC-G
Booster Pump 3 (10-HP)	Good	1	25	$10,000	Goulds 12AI/BF-D
Distribution system	Good	1	70	$700,000	
Service meters	Good	1	70	$45,000	

List of System Improvements

Item	Year	Cost	Financing method (borrow, surcharge, pay as you go, use existing reserves)
Calibrate source meters	2011	$500	reserves
Possible leak detection and repair	2011	$5000	reserves
Screened vent on S02	2011	$50	reserves

Budget

As required in the guidelines for preparation of the Small Water System Management Program, a six-year operating budget has been prepared for Paradise Estates Water System showing known revenue sources and expenses related to water system operation, maintenance and administration.

Revenue: Paradise Estates bills its customers using an inclining block rate structure based on the following tiers of water use:

- $40 base rate ..... Up to 1500 cubic feet (cf) of water use
- $0.01/cf ..... 1501-2400 cf
- $0/015/cf ..... 2401-3000 cf
- $0.02/cf ..... 3001 cf +

Service meters are read and customers are billed on a bi-monthly basis. In addition to billing for water use, the Paradise Estates Water System also collects $10 per month per connection for the reserve funds.

Expenses: The six-year budget projection estimates annual costs associated with operations, maintenance, and administration of the water system.

Reserve Funds: The six-year budget project includes funding the following reserve funds:

- Emergency / O & M Reserve: This reserve fund is essentially the checkbook balance set aside to meet cash flow needs and provide contingency funds for unforeseen and emergency situations including vandalism, earthquake, or storm damage. It should have enough funds at all times to replace the most vulnerable part of the water system. With a minimum funding level of $10,000, one of the well pumps could be replaced at any time and other minor operational issues could also be addressed.
- Replacement Reserve: The Replacement Reserve account allows the water system to ensure that aging equipment and infrastructure do not become a financial burden. As noted in the system inventory and assessment (see Element 15), the most expensive components of the water system, the distribution system, is approximately one year old. Other components of the system that may need to be replaced in the next 20 years may include well pumps and booster pumps. Within the next 50 years, the reservoirs may need to be replaced.

RESERVE ACCRUAL	2011	2012	2013	2014	2015	2016
Emergency / O&M Reserve	$3,845	$5,860	$7,884	$9,915	$11,955	$14,003
Replacement Reserve	$48,987	$112,023	$177,002	$243,985	$313,030	$384,202

Summary: With the information currently available, it would appear that operating expenses are lower than anticipated, and reserve funds may grow at a faster rate than expected. It is assumed that reserve funds begin at a $0 balance in 2011 and will receive a minimum of $25,560 annually in collections (213 connections x $10 per month x 12 months). The attached budget shows that revenue is expected to significantly exceed expenses during the next six years. All net gains are shown as deposits to the reserve funds.

It is anticipated that a Capital Improvement Program will be prepared for the water system in 2016. This detailed study will include analysis of the water system components as well as a detailed financial analysis to estimate the cost to repair or replacement major components.

SIX YEAR BUDGET PROJECTION

System Name: Paradise Estates Water System **System ID Number: 66125 T**

	System Information:	*2011*	*2012*	*2013*	*2014*	*2015*	*2016*
*	*Number of active connections*	*213*	*213*	*213*	*213*	*213*	*213*

Line			2011	2012	2013	2014	2015	2016
1		**Revenues Received**						
2	**	Cash Revenues (inclining block rate)	56,472	56,472	56,472	56,472	56,472	56,472
3	***	Reserve fund collections	25,560	25,560	25,560	25,560	25,560	25,560
4		Grants	0	0	0	0	0	0
5		**Total Revenue**	82,032	82,032	82,032	82,032	82,032	82,032
6	+	**Operations and Maintenance Expenses**						
7		Operator Fees	9,000	9,270	9,548	9,835	10,130	10,433
8		Electricity	4,700	4,841	4,986	5,136	5,290	5,449
9		Chemical & Treatment	0	0	0	0	0	0
10		Monitoring (coliform and chemical)	1,200	1,236	1,273	1,311	1,351	1,391
11		Materials & Supplies	100	103	106	109	113	116
12		Transportation	0	0	0	0	0	0
13		Miscellaneous	100	100	100	100	100	100
14		**Total O & M Expenses**	15,100	15,550	16,014	16,491	16,983	17,489
15	+	**General and Administrative Expenses**						
16		Salaries and Benefits	0	0	0	0	0	0
17		Office Supplies	1,000	1,030	1,061	1,093	1,126	1,159
18		Insurance	1,000	1,030	1,061	1,093	1,126	1,159
19		Legal and Accounting	0	0	0	0	0	0
20		Engineering & Professional Services	11,000	200	206	212	219	225
21		Regulatory Fees	900	945	992	1,042	1,094	1,149
22		Miscellaneous	200	200	200	200	200	200
23		Depreciation and Amortization	0	0	0	0	0	0
24		Emergency / O&M Reserve	3,845	2,000	2,000	2,000	2,000	2,000
25		Replacement Reserve	48,987	61,077	60,498	59,902	59,286	58,651
26		Debt Service	0	0	0	0	0	0
27		**Total G & A Expenses**	66,932	66,482	66,018	65,541	65,050	64,543
28		**TOTAL EXPENSES (Line 14 + Line 27)**	82,032	82,032	82,032	82,032	82,032	82,032
29		**NET LOSS OR GAIN (Line 5 - Line 27)**	0	0	0	0	0	0

Notes:

* Budget is based on 213 connections and excludes the caretaker residence and community park.

** Income is based on estimated income with inclining block rate structure.

*** A $20 bi-monthly fee per service connection is collected for the reserve fund.

\+ A 3% rate of inflation is assuemd for most expenses, except permits/fees, estimated at 5% annual inflation.

System Management

Water system name: *Paradise Estates Water System* **Date:** *3/2/2011*

1. Type of system ownership (check all that apply):

- ☒ Water Association (home owner association)
- ☐ Local Government (Town, County, PUD, District)
- ☐ Corporation
- ☐ Single private ownership
- ☐ Partnerships
- ☐ Other _____

2. Name of person/parties/association that owns the system: *Paradise Service Associates*

3. Do you have written system rules? If yes, attach a copy. ☒ Yes ☐ No

Bylaws for the homeowners' association are maintained by the board for the Paradise Service Associates.

4. Who makes the major decisions for your system? Examples of major decisions may include the following: scheduling an improvement, selection of a method to finance improvements, allowing additional connections, etc.

- ☐ Single party
- ☒ Board (# of members:)
- ☒ Other: *4-member Water Committee, Bill Davies, Chairman*
- ☐ Group of system users
- ☐ Commissioners (# of members:)

5. How often do those responsible for making decisions meet?

- ☐ Monthly
- ☒ When necessary
- ☐ Annually
- ☐ Other _____

6. Are all system users notified about these meetings? If yes, how are they notified? ☒ Yes ☐ No

If the meeting is in regard to a major issue, all residents would be notified by mail in advance of the meeting. Routine committee meetings are conducted without notification to residents

7. Do you mail water bills? ☒ Yes ☐ No

If yes, how often do you mail bills? ☐ Monthly ☒ Bi-monthly ☐ Other _____

8. How do you plan on financing future system improvements? (check all that apply)

- ☒ Reserve account (cash on hand)
- ☐ System user surcharges/one-time fees
- ☐ Other: _____
- ☐ Money borrowed as needed
- ☐ Don't know

9. Does the system have any paid employees? ☐ Yes ☒ No

If yes, do you have policies regarding personnel management, e.g. salary, benefits, hiring/firing, supervision? If yes, please attach policies. ☐ Yes ☒ No

10. Do you have a system operator? ☒ Yes ☐ No

If yes, if you lose your operator, do you have a plan to get another one? ☒ Yes ☐ No
If so, explain your process (note: if you are required to have a certified operator and your operator leaves your system's employment, you must get another certified operator to provide service immediately)

Hire a Satellite Management Agency (SMA).

11. Do you have a process to record and respond to customer complaints? ☒ Yes ☐ No
If so, explain your process:

Committee member or other designated complaint coordinator is notified and follows up by responding as needed to address the complaint.

12. Do you have any insurance policies? Do you have any safety policies? ☒ Yes ☐ No

13. Identify the party/person responsible for conducting financial transactions (maintaining records, receiving payments, paying bills, etc.).

Mary Gena Smith, President, Paradise Service Associates

14. Do you keep copies of correspondence to and from DOH and other (labs, Ecology, etc)? If yes, describe how and where correspondence is kept. ☒ Yes ☐ No

Paradise Service Associates maintains a correspondence file for the water system. As the satellite management agency, Northwest Water Systems also maintains a correspondence file for this system

Are these documents/records available to the system users? ☒ Yes ☐ No

15. Do you know and are you in contact with other public water systems that are near your system? ☒ Yes ☐ No

Have any of the preceding 15 questions caused you to think that you may want to change your current practices?