



# **DESCANSO BAY REGIONAL PARK**

## **Water System Annual Report 2011**

Prepared by:



REGIONAL  
DISTRICT  
OF NANAIMO

**REGIONAL DISTRICT OF NANAIMO**

*Water & Utility Services Department*

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Appendix A - Map of Descanso Bay Regional Park Water System

Appendix B - Water Quality Testing Results

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## 1. Introduction

The following annual report describes the Descanso Bay Regional Park Water System and summarizes the water quality, the completed and proposed maintenance activities, the Emergency Response Plan, and the Cross Connection Control Program. This report is to be submitted to the Vancouver Island Health Authority by the Spring of 2012.

## 2. Descanso Bay Regional Park Water System

The Regional District acquired the Descanso Bay Regional Park property in 2002 from the Coastal Community Credit Union. The park is accessed from Taylor Bay Road and comprises an area of 16 hectares (40 acres) on the west side of Gabriola Island. There are 5 standpipes (taps) for drinking water supply at the campground, including one at the Park Office (Manager's Cabin). The water source comes from one groundwater well located within the park. The water is filtered, disinfected with ultraviolet radiation, and stored in one cistern. The on-site water treatment system was installed in 2010. A portable generator is available for emergency power outages. A map of the Descanso Bay Regional Park Water System is provided in Appendix A for reference.

### 2.1 Groundwater Well

The Descanso Bay Regional Park well is located approximately 50 metres east of the Manager's Cabin. The well is 54.8 metres deep and is disinfected with UV (ultraviolet) radiation.

### 2.2 Reservoir

One polyethylene cistern is located behind the pumphouse next to the Manager's Cabin. The cistern has a capacity of 9.0 m<sup>3</sup> (2,000 imperial gallons).

### 2.3 Distribution System

The water distribution system is comprised of 675 metres of 3-inch PVC (poly-vinylchloride) pipe (plastic). There are no fire hydrants in this water system. There are five standpipes from which to draw drinking water in the campground (also known as yard hydrants).

**Descanso Bay Regional  
Park Pumphouse  
(cistern is located behind  
the pumphouse)**



### 3. Water Sampling and Testing Program

Water sampling and testing is carried out monthly from a standpipe in the water system. The following table includes a summary of all testing:

Timing	Location	Tests
Monthly (from May to Sept)	BC Centre for Disease Control	Total coliforms, E.Coli
Quarterly (from Oct to April)	BC Centre for Disease Control	Total coliforms, E.Coli
Annually (October)	North Island Labs	Complete potability testing of raw well water at wellhead, including UV Transmittance
Annually (May)	North Island Labs	Complete potability testing of treated water

### 4. Water Quality - Source Water and Distribution System

Water quality testing results for both the source water and distribution system (for the period June 2009 to March 2012) are provided at the end of this report under Appendix B. Bacteriological results are posted on the Vancouver Island Health Authority (VIHA) website at: [http://www.healthspace.ca/Clients/VIHA/VIHA\\_Website.nsf/Water-Samples-Frameset?OpenPage](http://www.healthspace.ca/Clients/VIHA/VIHA_Website.nsf/Water-Samples-Frameset?OpenPage), then click on [Gabriola Island](#), then click [Descanso Bay Regional Park](#).

### 5. Water Quality Inquiries and Complaints

No complaints were received from the Descanso Bay Regional Park Water System in 2011. Inquiries were limited to seasonal campground hours.



**Standpipe for water supply in Descanso Bay Regional Park**

## 6. Groundwater Production and Consumption

The volume of groundwater pumped from the Descanso Bay Regional Park well is not monitored, nor is the water consumption monitored at the standpipes. Installing a meter at the wellhead will be reviewed 2012.

## 7. Maintenance Program

A daily pump station inspection is carried out to reduce or eliminate the risk of contamination and system failure. Watermains are flushed once annually in the Spring. The water storage cistern is brand new, and is scheduled to be drained and cleaned once every two years starting in 2012. Twenty-four hour on-call coverage is in place to respond to water system emergencies and alarms.

## 8. Water System Projects

### 8.1 2011 Completed Studies & Projects

- Installed drain pads with French drains at each standpipe;
- Posted a maintenance log inside the pumphouse noting that UV bulb and filter(s) have been checked;
- Installed audible alarm when UV bulb requires changing;
- Installed a solenoid valve on the UV unit so water flow is shut off in case of a UV bulb failure (low UVT);
- Tightened the well cap;
- Locked the reservoir (cistern) lid;
- Installed a pitless adaptor on wellhead;
- Secured the well pumphouse;
- Updated the Emergency Response Plan;
- Maintained a high level of water quality; and
- Continued quality control through regular testing and monitoring of our water system.

### 8.2 2012 Proposed Projects & Upgrades

- Install signs notifying users that the drinking water has levels of dissolved sodium higher than what is recommended in the Canadian Drinking Water Guidelines for persons on a severely sodium-restricted diet;
- Review the options available for monitoring groundwater production;
- Clean the water storage cistern; and
- Update the Standard Operating Procedures.

## **9. Emergency Response Plan**

The Regional District Emergency Response Plan (ERP) contains procedures and contact information to efficiently respond to water system emergencies such as contamination of water supply, loss of supply, and pump failure. The ERP was reviewed and updated in 2011, and copies are available on our website, at each RDN office, in each pumphouse, and in each Water Services vehicle. A copy of the ERP is also attached to this report in Appendix C.

## **10. Cross Connection Control**

A formalized Cross Connection Control Program was initiated by the Regional District in 2007. Cross connection controls in-place include dual check valves at each service connection, fire hydrant use permits, and water supply bylaws noting discontinued service if a threat to the water supply is perceived by staff.

## **11. Closing**

An annual report for the year 2012 will be prepared and submitted to the Vancouver Island Health Authority in the Spring of 2013. Annual reports are available on the RDN website at [www.rdn.bc.ca](http://www.rdn.bc.ca), (under SERVICES / Parks) and at the RDN Administration Office at 6300 Hammond Bay Road, Nanaimo, B.C.

**APPENDIX A**

**MAP OF DESCANSO BAY REGIONAL PARK**

**WATER SYSTEM**

DESCANSO BAY REGIONAL PARK

WATER SYSTEM

Descanso Bay Regional Park





## APPENDIX B

### WATER QUALITY TESTING RESULTS

## DESCANSO BAY REGIONAL PARK

### Facility Location:

595 Taylor Bay Road  
Gabriola Island

### Facility Information:

Facility Type: DWS

### Facility Sampling History:

<u>Location</u>	<u>Date</u>	<u>Total Coliform</u>	<u>E. Coli</u>
Descanso Bay, Stand Pipe # 5 Upper Property	15-Mar-2012	L1	L1
Descanso Bay, Stand Pipe # 5 Upper Property	22-Feb-2012	L1	L1
Descanso Bay, Stand Pipe # 5 Upper Property	9-Feb-2012	L1	L1
Descanso Bay, Stand Pipe # 5 Upper Property	12-Jan-2012	L1	L1
Descanso Bay, Stand Pipe # 5 Upper Property	20-Dec-2011	L1	L1
Descanso Bay, Stand Pipe # 5 Upper Property	17-Nov-2011	L1	L1
Descanso Bay, Stand Pipe # 5 Upper Property	2-Nov-2011	L1	L1
Descanso Bay, Stand Pipe # 5 Upper Property	19-Oct-2011	L1	L1
Descanso Bay, Stand Pipe # 5 Upper Property	28-Sep-2011	L1	L1
Descanso Bay, Stand Pipe # 5 Upper Property	24-Aug-2011	L1	L1
Descanso Bay, Stand Pipe # 5 Upper Property	11-Aug-2011	L1	L1
Descanso Bay, Stand Pipe # 5 Upper Property	14-Jul-2011	L1	L1
AUDIT Descanso Bay Regional Park (Manager's Cabin), AUDIT Descanso Bay Regional Park (Manager's Cabin)	8-Jun-2011	L1	L1
Descanso Bay, Stand Pipe # 5 Upper Property	8-Jun-2011	L1	L1
Descanso Bay, Stand Pipe # 5 Upper Property	26-May-2011	L1	L1
Descanso Bay, Stand Pipe # 5 Upper Property	11-May-2011	L1	L1
Descanso Bay, Stand Pipe # 5 Upper Property	20-Apr-2011	L1	L1
Descanso Bay, Stand Pipe # 5 Upper Property	16-Mar-2011	L1	L1
Descanso Bay, Stand Pipe # 5 Upper Property	9-Feb-2011	L1	L1
Descanso Bay, Stand Pipe # 5 Upper Property	19-Jan-2011	L1	L1
Descanso Bay, Stand Pipe # 5 Upper Property	1-Dec-2010	L1	L1
Descanso Bay, Stand Pipe # 5 Upper Property	15-Sep-2010	L1	L1
AUDIT Descanso Bay Regional Park (Manager's Cabin), AUDIT Descanso Bay Regional Park (Manager's Cabin)	11-Aug-2010	L1	L1
Descanso Bay, Stand Pipe # 5 Upper Property	7-Jul-2010	L1	L1
Descanso Bay, Stand Pipe # 5 Upper Property	21-Jun-2010	L1	L1
Descanso Bay, Stand Pipe # 5 Upper Property	12-May-2010	L1	L1
Cistern # 3 - hand pump, 595 Taylor Bay Road	17-Jun-2009	OG	OG
Cistern # 4 - hand pump, 595 Taylor Bay Road,			

Gabriola Island BC, V0R 1X1	17-Jun-2009	OG	OG
Cistern # 5 - hand pump, 595 Taylor Bay Road	17-Jun-2009	OG	OG
Cistern #1 - tank, 595 Taylor Bay road	17-Jun-2009	EST 68	L1

Show: 30 results per page

↓NEXT

## **APPENDIX C**

### **EMERGENCY RESPONSE PLAN**

[ Hard copies available at RDN Office, 6300 Hammond Bay Road, Nanaimo, B.C.]