

Case 1: Pacific Shores Golf Community, Vancouver Island

- proposed new development with large capacity (300 gpm) well near the Nanaimo River, situated outside the floodplain, 105 m from the high water mark;
- well is 50 m deep, completed in an unconfined sand and gravel aquifer;
- water quality shows no total or E. coli bacteria
- well meets all requirements of the *Groundwater Protection Regulation*;
- no known sources of contamination within Public Health setback distances.

STEP 1. Based on the information you have available run through the checklist and complete each item as you see it for the well.

STEP 2. Discuss your individual findings as a group and record any major differences.

STEP 3. Identify any areas where you feel additional information or more details are required.

STEP 4. Discuss and record the recommendations of your group.

CASE 1

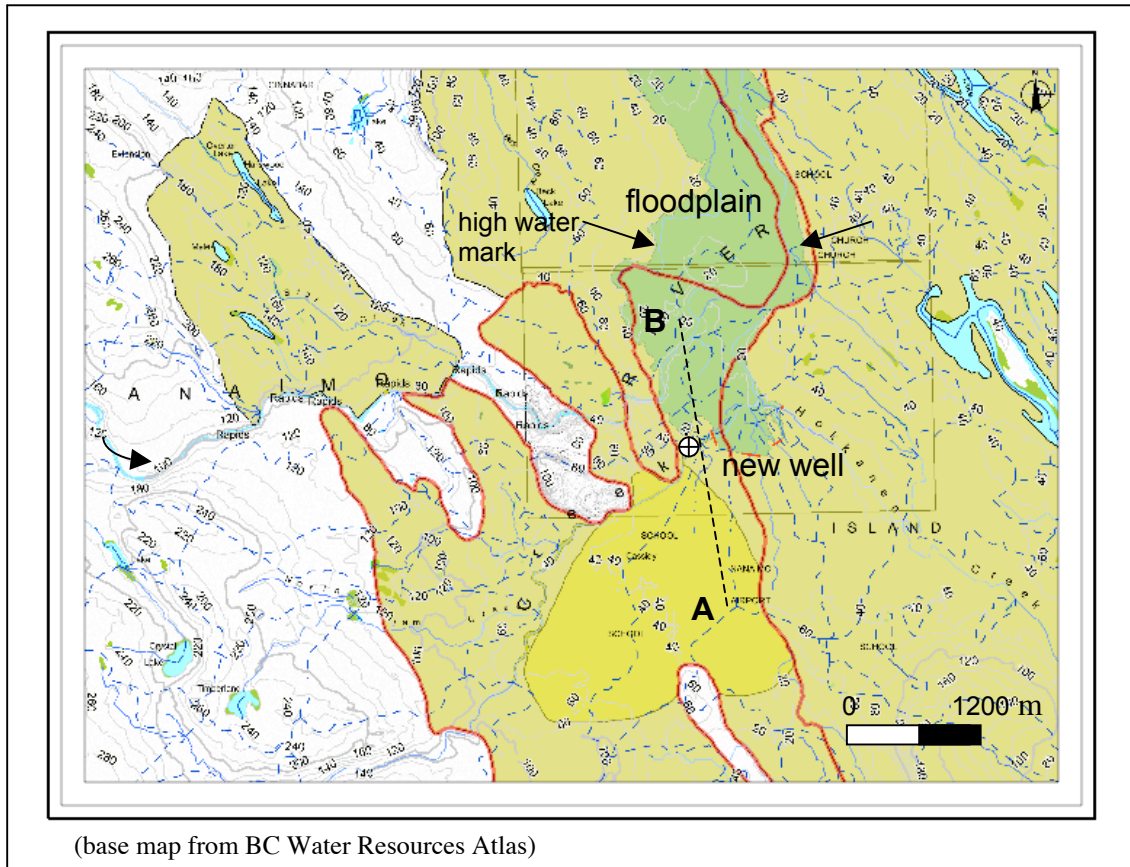


Figure 1. Location of new large capacity well for Pacific Shores Golf Community, Vancouver Island.

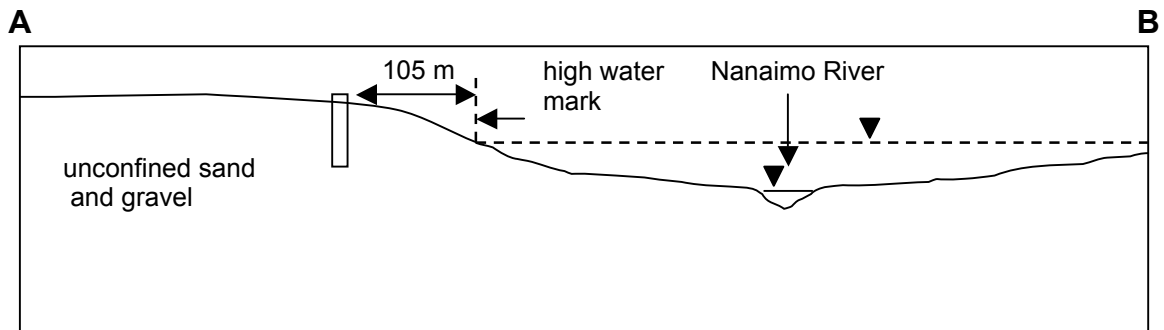


Figure 2. Cross section A-B looking easterly.

Screening Tool Checklist for GROUND WATER AT RISK OF CONTAINING PATHOGENS

WATER SYSTEM NAME: _____

BCMOE Well Identification Plate Number (number on plate on well): _____

Well Log Examined: Yes / No Site Survey Conducted: Yes / No

FACTORS and CRITERIA	YES: At Risk	NO: Low Risk	Unable to determine risk status	Comments
WATER QUALITY RESULTS				
Water system or well sampling shows presence of total or fecal coliform or <i>E.coli</i> .				
Water system has a reported or a history of turbidity problems associated with the source water.				
Water system has a history of known or suspected disease outbreaks that could be associated with surface water or other source(s) or pathogens.				
SOURCE TYPE and LOCATION				
Well situated inside setback distances of the Public Health Act Transitional Regulation, from a possible source of contamination.				
Well with intake depth < 15 m below ground and located in floodplain or with intake depth < 15 m below ground and < 100 m outside from high water mark or natural boundary of surface water feature.				
Well located < 100 m outside from high water mark of surface water feature and with intake depth that is <15 m below the elevation of the high water mark.				
WELL CONSTRUCTION				
Well fails to meet section 7 of Ground Water Protection Regulation (GWPR) for surface sealing.				
Well fails to meet section 10 of GWPR for well caps and covers.				
Well fails to meet section 11 of GWPR for floodproofing.				
Well fails to meet section 12 of GWPR for wellhead protection.				
AQUIFER TYPE and SETTING				
Well with intake depth < 15 m below ground and situated in; a highly vulnerable, unconfined, unconsolidated aquifer or in any bedrock aquifer.				
Well completed in a karst bedrock aquifer.				

Risk Assessment:

Did any factor suggest that the system is "At Risk" (as opposed to "Low Risk")?

Yes/No/Unable to Determine

- If **"Yes"** and the water supplier does not wish to undertake remediation (see below for remediation options), move to Stage 2 Preliminary Hydrogeological Investigation.
- If **"No"**, move to Stage 4 Long-term Water Quality Monitoring.
- If **"Unable to determine risk status"** because information is unavailable for any factor(s) or criteria of the assessment, then move to Stage 2 Preliminary Hydrogeological Investigation.

Remediation Options:

- Treatment to meet Health Authority drinking water requirements
- Provide alternate source of water
- Well Alteration / correct significant deficiencies in well construction¹
- Relocate the well
- Eliminate source(s) of contamination
- Stage 2 Preliminary Hydrogeological Investigation
- Stage 4 Long-term Water Quality Monitoring
- Other

Completed by: _____

DATE: _____

¹ Deficiencies in well construction related to the Ground Water Protection Regulation must be addressed.