

**Ground Water Monitoring Field Protocol
Phase II Hydrogeological Study
Asotin and Alpowa Creek Sub-basins**

October 21, 2008

Introduction

This document summarizes the field methods that will be used for ground water monitoring of wells in the shallow basalt hydrostratigraphic unit (SBHU) and deep basalt hydrostratigraphic unit (DBHU) in the Asotin and Alpowa Creek basins for Phase II of the Hydrogeologic Study for WRIA 35.

Ground Water Monitoring

Purpose

Ground water level monitoring will be conducted to determine the elevation and flow direction of ground water levels in a subset of monitoring wells on the project that are completed in the SBHU and DBHU.

Time Period

The ground water monitoring will be take place from October 27 to November 7th, 2008.

Methods

Ground water level data will be measured in existing wells to the extent possible based on the availability of access granted by private land owners. Area of interest within the study area for the collection of shallow and intermediate basalt aquifer water level data will be identified. Well logs from the Department of Ecology well database (<http://apps.ecy.wa.gov/welllog/>) will be obtained for the area of interest.

The field crew will visit candidate water level sampling well owners to get permission to access wells. A letter describing the project and requesting well access has been provided by Brad Johnson (WRIA 35 Watershed Planning Director) and will be distributed to the candidate well owners (Appendix A). If verbal permission to access well is granted, the following procedures will be taken with the well owner present:

1. Verify with the well owner that the provided well log is correct. If not, obtain new log/well information.
2. Determine if the well is accessible. A well will not have the ground water elevation measured if:
 - The well owner is not present
 - The well does not have a well cap or a means of easy access
 - The well appears to be unsafe or in poor physical condition
 - The well is under pressure (artesian flow)

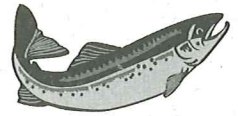
- The well is located in a confined space
3. Take a picture of the well.
 4. Remove well cap.
 5. Take a picture of the well with the cap off.
 6. Decontaminate the water level indicator probe and line in a chlorine bleach solution.
 7. Lower the ground water indicator probe into the well. Once the ground water surface level is reached, record the distance from the top of the well to ground water. Remove the probe and repeat the decontamination process.
 8. Replace well cap. Take a picture of the well with the cap replaced.
 9. Place the GPS unit on the ground next to the well. The GPS unit will be a Trimble GeoXT. Record the position (x, y coordinates and elevation) for 10 minutes or until a precise measurement has been recorded. Record the distance from the ground surface to the top of the well at the ground water level measuring point.
 10. While the GPS unit is recording, interview the well owner using the water use survey located in Appendix B. Record approximate size in square feet of irrigated lawn and garden.

As mentioned above, if the well owner is not present, the ground water level will not be measured. However, if verbal consent is given, a GPS reading and picture will be taken at the well.

Appendix A
Well Access Letter



MIDDLE SNAKE WRIA 35 WATERSHED PLANNING



October 14, 2008

The WRIA 35 Planning Unit is measuring water levels in ground water wells in the Asotin Creek and Alpowa Creek area from October 27th to November 7th, 2008. The purpose of the volunteer data collection is to better understand ground water resources in Asotin and Alpowa watersheds. Trained professional will contact you to request permission to measure ground water levels in your well. If you are willing to allow access to your property and well, the measurement will involve taking the well cap off and lowering an electronic meter into your well. The meter will be decontaminated before and after each measurement. This should take about 10 minutes.

The Planning Unit would appreciate your assistance in providing access to your well. If you have any questions, please contact Brad Johnson at the phone number below.

Brad Johnson
Watershed Planning Director
(509) 758-1010
bjohnson@asotinpud.org

HDR Engineering has been retained to conduct this work and individuals working on this project include Dave Minner and Molly Reid. If you wish to contact them in the field to arrange a time to schedule visiting your residence, please call Dave's cell phone number at (515) 708-3477 or Molly's at (541) 310-8800.

Thank you for your assistance,

Brad Johnson

Appendix B
Water Use Survey

Middle Snake (WRIA 35) Watershed Planning Water Use Survey

Owner Information

Name: _____
Address: _____
City: _____ State: _____ Zip: _____

Well Information

Township: _____ Range: _____ Section: _____ Qtr/qq: _____ /
Well Elevation (top of casing): _____
Ground Surface Elevation: _____
Ground Water Level: _____
Well Depth: _____
Well Log ID: _____

Water Use

How many people live in your house? _____
Do you water your lawn and/or garden in the summer? _____
How often do you water your lawn or garden? _____
How do you water your lawn or garden? _____
Do you water stock (horses or cattle) from your well? _____
Estimate number of stock watered in the winter or summer? _____
Has your well ever gone dry? _____
Any other water use? _____

Comments: _____

