

# **Mosier Ground-Water Project Update**

## ***Mosier Watershed Council Meeting, March 10, 2005***

### ***Well logging***

Goal: measure leakage through boreholes of comingling wells.

Progress: Selected 8 candidate wells. Four owners (Molesworth, Kinsey, Frost, Haycox) have already granted permission to log wells. We are working to contact remaining owners. Made site visits today.

Plans: Will log minimum of 3 wells, more if time allows. Dates are March 21 – April 1. Logs will include: temperature, gamma, resistivity, caliper, and flow meter. Video logs will be run if equipment is available.

### ***Stream Flow Monitoring***

Goals: (1) Monitor flow at Mosier Creek gaging station to evaluate how flows have changed since 1963-81 period when gage was last in operation. (2) Measure flows at other sites on Mosier Creek to determine where ground-water enters or surface-water leaves the creek. Evaluate seasonal and long-term changes since 1962 and 1986 when last measurements were made.

Progress: Visited old gaging station and assessed work needed to re-establish. Visited other sites measured in 1962 and 1986. Acquired and reviewed OWRD records from 1986.

Plans: Make final site selections and begin bi-monthly measurements at about 12 locations in April. Install temperature monitors at 8 sites. Re-establish gaging station in May. Gaging station will measure flow every 15 minutes and be accessible on USGS web site.

### ***Ground-Water Level Monitoring***

Goal: Monitor water levels in wells to evaluate changes over times scales ranging from hours to decades. These measurements will help understand the effects of climate, development and other factors on the ground-water resource.

Progress: Pressure transducers and data loggers have been acquired. We are searching for well without pumps that can be used for continuous monitoring.

Plans: We will be inventorying additional wells in April. An expanded monitoring network will be designed and bi-monthly measurements will begin in May. Continuous monitors will be installed as we find appropriate unused wells.

## ***GIS and Well Data***

Goal: Compile and evaluate existing well and other geographic data to support the study.

Progress: Basic geographic data layers have been acquired from Wasco SWCD (roads, streams, basin boundaries, etc.). Digital elevation data, maps, water rights information, and other data have been acquired from USGS, OWRD, and other sources. We have created a metadata template for project GIS layers and have established a project GIS library. A digital base map has been developed. Well data from previous studies (Gervey, 1995; Kienle, 1996) has been acquired. There are 160 wells already in the USGS's National Water Information System (NWIS) database that were inventoried in a 1979 study of the Hood River basin. We have linked these to the driller's reports using the OWRD well-log ID number.

Plans: Make sure that all active and inactive ground-water monitoring wells are in NWIS and water-level data are current.

## ***Miscellaneous***

First year project funding has been increased from \$63,790 to \$89,790. This will allow us to re-establish the Mosier Creek stream gaging station and install continuous ground-water level monitors.