

SURVEY TEAM DRAWS COUNTY LINE

If you live in Multnomah County, you've probably seen a map of the county. On the other hand, only a few county residents have ever walked the county boundary line. The boundary line is well known to members of the County Surveyor's Office team. If you enjoy math, being outdoors and detective work, you would probably fit in with this group. Recently, several staff in the Surveyor's Office completed a rare task: establishing the corner point common to Multnomah and Clackamas Counties, on the west boundary of Hood River County.

Usually our Survey staff maintains 2,000 plus corner medallions inside Multnomah County. These brass medallions mark land divisions that help establish property boundaries, from six-mile township squares, to the 36 sections within each square. This October it was time to confirm the location of the corner that marks the southeast corner of Multnomah County and northeast corner of Clackamas County. The corner has never been physically marked. Since the corner is a boundary for three counties (including Hood River County), it had special significance for the Survey crew.

Getting to the work zone was not easy. "The boundary between Multnomah and Hood River counties in this area is the summit of the Cascade mountain range," explains County Surveyor Bob Hovden. "Each day our team hiked for over an hour, on the Pacific Crest Trail carrying all equipment to reach the site." Snow was already on the trail and the crew worked long days due to the remote location.



The field survey crew included crew leader Peter Juhnke and Solomon Kahsay and Corey Berger. All volunteered for the assignment. Bob Hovden and Survey Supervisor Scott Okell assisted.

Establishing the common corner required a series of precise measurements. The team surveyed part of the south line of Section 22, where the summit of the Cascade Range crosses the section line. Hood River County had no records for the South $\frac{1}{4}$ corner of Section 22, other than the original 1940 General Land Office survey. The team used an established hand-held GPS (global positioning system) position obtained in our 2007 survey for the southwest corner of Section 22 in Multnomah County and from this, computed where they might find the Hood River corner. Using the hand-held GPS unit, they found the corner within 15 feet of their computed point.

This inexpensive hand-held GPS unit saved the team considerable time and money. A few years ago, establishing the corner search area would have involved hand-measuring along the section line with a steel tape

An electronic total station (survey instrument for measuring angles and distances) came in handy when the team ran a traverse (crossing) line to the corners in Multnomah and Hood River counties that formed a loop. The ground was very steep (up to 100% slope) and brushy. With the help of the total station, the crew managed to measure the 7,500-foot-long traverse line within a couple of inches of accuracy.

The crew used the traverse line near the summit of the Cascade Range to set a point on the section line. Then they ran along the section line to the highest point of the ridge, where they set the corner common to Multnomah and Clackamas counties, on the west boundary of Hood River County.

Physically marking the corner proved no easy task. “The ground was so rocky we couldn’t hammer in the 2” diameter by 36” long iron pipe corner monument,” Bob recalls. A three-foot hole was dug to get the monument in the ground. A 4-1/4” brass disc was set in concrete into the iron pipe, marking the boundary between the three counties (see photo).



Considering the project location, all that was left to do was show off the work to the neighbors. A few days after completion, Bob and Scott escorted Clackamas County Surveyor Chuck Pearson and Hood River County Surveyor Randy Johnston to the corner. The event was marked by a photo showing the three county surveyors standing in their respective counties. A map of the survey was filed in all three counties.

