MORGAN VALLEY WATER ISSUES PUBLIC MEETING

MAY 13, 2008

This meeting was held in the Morgan County Council Chambers, located at 48 West Young Street, Morgan Utah. Notices were mailed to all water companies in the valley as well as several public agencies. In addition, a press release was issued to local media outlets. There were 70-80 people in attendance.

Assistant State Engineer Matt Lindon started the meeting at 7:00 PM by welcoming those in attendance. Mr. Lindon stated that the focus of the meeting was to present the proposal of a study on the hydrogeology of the Morgan Valley. The State Engineer's Office is seeking public input on the scope of the study. Mr. Lindon went on to discuss that rapid growth in the valley is reason for the study and that the study will address the recharge and occurrence of groundwater in the basin fill and bedrock aquifers. The study will also attempt to quantify the amount water in the basin and the interaction of the water between well diversions, surface water discharge, evapotranspiration losses and recharge of the aquifers. The Utah Geological Survey (UGS) was contacted to prepare a proposal to conduct the study. Weber Basin Water Conservancy District (WBWCD) expressed an interest in the bedrock aquifer. Morgan County is also interested in an evaluation of the water situation. Four points of concern were identified for the study to consider, they are:

1. Quantify the amount of water in the alluvial valley fill aquifer.
2. Evaluate the bedrock interface with the valley fill in relation to the recharge and discharge of water from the bedrock aquifer into the valley fill aquifer.
3. Compile a water balance in an attempt to identify a sustainable balance where the amount of water entering the valley equals the amount of water leaving the valley thru diversions, evapotranspiration and surface discharge from streams and the Weber River.
4. Where does the recharge come from that provides the water to the valley?

In closing Mr. Lindon stated that the study would cost $340,000 to complete. Contingent on funding the study would start in July 2008, and take eighteen months to complete, with a published report to be completed by 2010. The State Engineer's Office is looking for public input as to the scope of the study from the public, government agencies and water right holders. Mr. Lindon closed his remarks by indicating that there would be a one-month period for public comment on the study, he then introduced Frank Quintana, Assistant Regional Engineer for the Weber/Western Region.

Mr. Quintana introduced himself and mentioned that he has been employed by the state for seventeen years. He went on to discuss the process by which he designates change applications for either approval or denial. Mr. Quintana went on to discuss the potential

impact of change applications on existing wells, exchange applications on water rights in the area. He also reviewed the existing policy for the Morgan Valley, the amount of water that has already been appropriated and the applicable statues that regulate the evaluation and approval or denial of proposed change applications. Some of the points that he made are that the Morgan Valley is currently closed to new appropriation and approved and perfected water rights currently divert 6,406 acre-feet of water annually from underground water wells. Mr. Quintana then concluded his portion of the presentation.

Mr. Lindon then introduced Mike Lowe from the UGS. Mr. Lowe is the Groundwater and Paleontology Section Manager for the UGS. Mr. Lowe discussed that the scope of the study would be to determine the thickness of the valley fill, to determine the water yielding characteristics of the fractured bedrock aquifer and develop a groundwater budget for the drainage basin. He stated that the study would take eighteen months to complete. He reviewed the regional geologic setting and the composition and distribution of the rocks, which comprise the Morgan Valley and surrounding mountainous areas. Mr. Lowe also discussed previous geologic work that has been preformed in the vicinity. He then concluded his presentation with an outline of what work would be done in the study. The following is an outline of the different facets of the study:

1. Compile the existing data on the area.
2. Complete a geologic map of the region.
3. Construct cross sections of the regions structural geology and rock distribution.
4. Create an isopach map thru geophysical techniques to determine the thickness of the alluvial valley fill aquifer.
5. Geo-chemical water sampling to determine age of water, recharge elevation and water quality.
6. Review of well driller data for well flow yields and valley fill and bedrock distribution of wells.
7. Compile a Morgan Valley water budget.
8. Assess structural geologic features of the fractured bedrock to determine if there are structural compartments, which would influence groundwater occurrence.

Mr. Lindon then introduced Scott Paxman of the WBWCD. Mr. Paxman is Assistant General Manager of Water Supply for the district. Mr. Paxman discussed the process where water users enter into a contract with his organization for an acre-foot of water to be diverted from a well source. An acre-foot of water is then released from an upstream storage reservoir as compensation to meet the demand of downstream users. The WBWCD is interested in the study to determine the amount of water available in the Morgan Valley so that they don't get too far ahead of the water budget balance by allowing excessive diversion through contracts to use water. As a result of this pending study the district will no longer sell replacement water in the Morgan Valley until the results of the study are known. Pending contracts, however, will be honored.

Mr. Lindon thanked Scott for his participation and then opened the meeting to questions from the audience.
Question: What about older grandfather wells that are being impacted by newer wells in the area? Will the newer wells be forced to shut down until the water levels recover?

Answer: Boyd Clayton, Deputy State Engineer, stated that for a groundwater resource that the users need to share the water that is available have to go get the water and in some cases that requires deepening their wells. Water users that impair the availability of other water users can be sued or can make arrangements to be compensated for damages if the infringement or impairment is "unreasonable" as defined and the code and case law.

Question: Our water company supply well is 200 feet deep the water level is currently at 44 feet. What happens to our water users when the water level drops to the bottom of our well?

Answer: It is up to the water user to deepen the well to go after the water and only has legal recourse if the effort required is "unreasonable"

Question: What about the Wasatch Front using Weber River water, can we plug the river to keep the water in Morgan Valley?

Answer: Mr. Lindon responded that there are existing water rights on the Weber River that are downstream of Morgan Valley. The Morgan Valley is closed to new appropriation and the only way to acquire a water right is through the change application or Weber Basin exchange process. The goal is to balance the system by replacing the water that is taken out of the system so that downstream users are 'made whole' and no water rights are enlarged.

Question: What about a water right from San Juan County being transferred into Morgan County?

Answer: That is not happening. Change applications are evaluated by hydrologic system.

Question: Any possibility Weber Basin may drill a well and take any untapped water that the study may identify?

Answer: Mr. Paxman responded that the Morgan Valley is fully appropriated and that he doubts that there will be any "new" water found. He does not believe that there will be enough water to ship elsewhere.

Question: How is recharge rate calculated?

Answer: Mr. Lowe responded that precipitation rate for the area is calculated, that amount is then evaluated in respect to how much of the precipitation is lost to seasonal

flows of streams, how much water is lost to evapotranspiration by plants and how much of the water seeps into the rock. The result is essentially an educated guess.

Question: On Durst Mountain water flows into a cave system, where does the water go?

Answer: Mr. Lowe responded that the geologic study would help determine the cave fracture system, which will be beneficial in determining where the disappearing Durst Mountain water goes.

Question: Secondary water systems provide for irrigation and we are allowed 1.0 acre-foot for that purpose. Culinary water is allowed for 1.0 acre-foot of water is we allowing too much water for a half-acre lot? Why does Weber Basin sell too much water?

Answer: Mr. Clayton responded that the State Engineer evaluates indoor domestic use at 0.45 acre-foot of water per year. Depending on the lot size it is possible that too much water is being assigned to half-acre lots.

Question: Will the water budget be prepared for the alluvial and bedrock aquifers?

Answer: Mr. Lowe responded that one value would be determined for the sustainable yield of the aquifers in the valley. They will look at a divided budget, but will probably settle on one number.

Question: How long will the study take?

Answer: Mr. Lowe responded that the study will if funded will start July 1, 2008, and will take eighteen months. The study should be completed by December 2009. Then submitted for review. An additional six months will be needed before the study is published.

Question: If additional water is found will Weber Basin allow additional contracts to exchange water?

Answer: Mr. Paxman responded, yes.

Question: Why is water in East Canyon Reservoir allowed to be transferred to Summit County?

Answer: Mr. Clayton responded that the application is before the State Engineer for review. The water originates in Summit County so it is actually be recirculated back to its source area in Summit County. The change application would be evaluated for diversion and depletion values to ensure that no enlargement of the water right occurs.

Question: Did the previous studies that have been conducted in the valley, such as the 1984 United States Geological Survey (USGS) create a water budget?

Answer: Mr. Lowe responded that there was a water budget created by the 1984 study. However, with the recent growth and water use patterns in the area it is time to reevaluate the budget.

Question: Has the State Engineer done other studies in the state?

Answer: Mr. Clayton responded that studies have been done as growth dictates. Studies have been done or are currently being done in Cedar Valley and Northern Utah County, Tooele and Cedar City. The studies are done to help provide information to make the best decisions on water issues. We will also meet with the public again after the study is completed to discuss the results. The county will decide how they want to manage growth. It is possible that a central water system may be needed to address public health and water quality issues.

Question: Is this a water quality or a water quantity study? And do water wells act as a conduit for groundwater contamination?

Answer: Mr. Lowe responded that this is not a water quality study per say. Mr. Clayton responded that well drilling requirements dictate a surface seal on wells to prevent contamination of the groundwater by water flowing down the outside of the casing into the water bearing zones. Mr. Clayton also discussed well density versus a central water system.

Question: Will you continue to sample water quality?

Answer: Mr. Lowe stated that the UGS has completed their water quality study of the valley. He mentioned that the Utah Department of Agriculture and Food has a water quality-sampling program that may be active in the valley.

No further questions were forthcoming.

Mr. Lindon concluded the meeting at 8:17 PM.