

Mosier Watershed Council Meeting

Wednesday, January 24th, 2018

6:30-8:30PM

MINUTES

Attendees:

Tatiana Taylor, <i>SWCD</i>	Karen Bailey, <i>Member</i>	David Skakel
Ken Lite, <i>OWRD</i>	Megan Pingree	Jim Reed, <i>Member</i>
Kris McNall, <i>Co-Chair</i>	Karen Lamson, <i>SWCD</i>	Bryce Molesworth, <i>Co-Chair</i>
Todd Stevens, <i>Member</i>	Pete Dalke	Susan Gabay, <i>Member</i>
Wade Root, <i>Member</i>	Erik Thomasser, <i>OWRD</i>	Walt Burt, <i>GSI</i>
Joe Carroll	Mike Merritt, Well Driller	Colleen Colman
Kris Fade		

Call to Order

Bryce called the meeting to order and initiated a round of introductions. The council took a moment to look over the minutes and discuss.

Karen Bailey moved to approve the minutes as written. Ken Lite seconded the motion and the motion passed.

Derailment Oil Spill & Fire Cleanup

Kris McNall explained that Bob Schwarz was unable to attend the meeting. Kris explained that Bob has the data to present this issue. Kris also mentioned that Team Mosier had finished negotiations with UP and had secured a couple of million dollars including some in-kind donations. Colleen Coleman made note that the city received a parcel of land and is currently starting an environmental impact study, despite the assumption that all is well.

Kris presented photos of the Fire Truck and two fire Tenders that the Mosier Fire District had just obtained. Kris acknowledged that the vehicles were purchased used, as to ensure the greatest economic value.

Deep Wells & Well Repair Updates- *Ken Lite, Erik Thomasser, OWRD*

Erik began by stating water was encountered 1,165 ft below surface and currently the water level is 33.1 feet below land surface for a total pressure head in the aquifer of 490 psi. Erik mentioned that the issue of commingling between the higher pressure and lower pressure water-bearing zones had been tentatively resolved. The previous Friday the team had run a borehole geophysical survey in the well and found some water moving up the water column at a rate of 2.4 gpm, thought the camera survey did not show any interval movement.

Erik discussed a meeting taking place on January 25th with the Wasco Co. SWCD to discuss the next deep well in the project. Erik mentioned that they will use the lessons learned from the first deep well in the construction of the second. The meeting will also discuss potential financing options for the second well. The final estimated price for the first well is approximately \$840,000, which is way above the original estimate of approximately \$600,000. The project is currently 34% over the original estimated budget.

Erik discussed the pump test performed on the first well. The well pumped 500 gallons a minute and drew down 442 feet, for a specific capacity of 1.24 gpm/ft.

Ken discussed the new information regarding temperature of the water. A PSU professor tested the water and found the water temperature at 77°F (25°C), a pH level of 7.7. The water from shallower aquifers is 14-17°C. The temperature from the deep well is much higher than expected. Ken explained that this was possibly due to a region of high heat flow in the volcanic setting, however there were several other possible explanations.

Kris inquired about the Grande Ronde aquifer and if the water was drinking water quality. Erik responded that the water chemistry is similar to other basalt aquifers in the watershed, and is drinking water quality.

Ken explained that the next strategy to be discussed regards financing the second well. The current plan is to go back to OWRD and ask for more money. Ken was not sure if OWRD has the legal authority to expand a previous grant, if not we will apply for another grant.

Josh Thompson mentioned that the Wasco SWCD submitted a loan application to the Department of Environmental Quality (DEQ). Josh also mentioned the potential to sub lend to partners to reduce the impact.

Walt explained that although the pressure in the Grande Ronde aquifer in the well is higher than expected, this does not necessarily mean that the aquifer holds a lot of water in storage, rather the head (water level) is indicative of elevation of where the aquifer is recharged. Karen Bailey inquired if the water had been age dated, and Ken replied that it had not.

Ken explained the benefits that the deep wells will (hopefully) provide. The upper aquifer is connected to Mosier Creek and by taking the large irrigators off of that aquifer, there should be an environmental benefit. Ideally, this will allow some of the pressure on the Pomona to be lifted, allowing it to slowly recharge and reduce the impacts of pumping on flows in Mosier Creek. The best-case scenario would be to have Mosier Creek return to a situation in which it gets water from the Pomona during irrigation season rather than lose water to the aquifer.

Erik began with an update of the Mosier Million Well repair project. He informed the council that Mike started his first well that day (January 24th). Mike has the temporary casing in the well and has started construction. Walt mentioned that the next wells to be fixed have final contracts set up. Walt explained that 15 wells were originally bid out, but there are two wells in which the landowners are not interested in replacement. There are 26 total wells that could be replaced; however there is not enough money to get all of them replaced.

Colleen asked about the prioritization process. Walt replied that priority was based on what was hypothesized to have the most benefit. Kris inquired how long to get through the scheduled wells. Erik mentioned that due to time of year, the site access might prove to be a challenge. Mike mentioned that he hopes to get his 2nd well driller up to help, and to complete the wells by June 30th. Erik mentioned that this due date is due to the release of funds, and that the money comes from liquidated lottery bonds. Bryce inquired for more questions. None were posed, and the council moved on to the next agenda item.

Mosier Groundwater Work to date: You are Here- *Walt Burt, GSI*

Walt introduced his presentation by stating that the council is at a crossroads here it will need to identify and prioritize future efforts. Walt then provided a summary of the history of Mosier groundwater issues.

In the 60's and 70's well levels began to drop. In 1985 OWRD began studying Mosier area hydrology. By 1988 an administrative area was established by OWRD and no new water rights were being issued by OWRD for Priest Rapids and Pomona.

Walt explained that declining water levels and the consequent threat to a stable supply of water was identified by stakeholders as the highest priority concern within the watershed. The primary objectives for the watershed included stabilizing or reversing water level declines in principal aquifers, increasing summer base flows in Mosier Creek, and supporting a viable agricultural economy in the valley. Walt mentioned that the Mosier Watershed Council was unique in that most watershed councils focus on surface water, rather than on ground water.

Walt summarized two recent studies regarding commingling. In 2012 the USGS study modeled the basalt groundwater system. This study found that commingling is significant in the Mosier groundwater study area and had been the dominant cause of water level declines, but Walt mentioned that commingling is probably not the dominant cause of further well water level declines at this point in time because levels have declined so far. Recent research by OWRD (Ken Lite) and PSU graduate students have shown that summer groundwater pumping has begun to draw measurable amounts of water from Mosier Creek in locations where the aquifers used to discharge water to Mosier Creek

Joe Carrol inquired what the dominant factor contributing to wells going dry is. Walt replied that there is a 2-7ft decline per year, and that in 2010 there was an inflection point for Mosier creek, where levels have continued to drop, but less than previously. Walt mentioned that pumping is now a more significant part of the water budget than when the pressure differentials between the Pomona and Priest Rapids aquifers was greater. Now commingling has less of an effect because the Pomona is no longer saturated over a significant area.

The other study was OWRD funded and examined artificial recharge. The study showed that artificial recharge was potentially feasible but expensive to test and implement. The study also demonstrated that recharge to Priest Rapids and Frenchman Springs aquifers would likely to be of minimal benefit as long as the region has commingling wells, particularly in the lower (northern) portion of the watershed.

Walt explained the three-prong approach being deployed by the watershed council and SWCD to combat the commingling wells. The first approach has been to identify and fix commingling wells and prevent new ones from being constructed. The second approach is the ongoing work to develop new water sources to reduce withdrawals from Pomona and Priest Rapids. The third approach has been to reduce use and convert to high-efficiency irrigation.

Walt presented several maps of the commingling wells. Walt explained that 71 have been identified in the high priority area. Desktop assessments of these wells indicated that 45 of the wells were found to possibly commingle, and 26 were not potential commingling wells. Field assessments have been completed on 29 wells and 25 wells have been prioritized for repair/replacement. Two commingling wells have been decommissioned, and one of these has been replaced. The top 15 commingling wells based on the ranking scheme were bid out for replacement. 1 million dollars was provided from the State of Oregon to fix these wells. There were also special area construction standards set in place in 2016 to prevent the construction of new commingling wells. Erik mentioned that the new wells that are being drilled for the Mosier Million are so close to the old wells that new water rights are not required.

Kris posed the question of what to do with landowners that don't wish to cooperate with the project. There were two commingling wells in the top 15 wells owned by landowners who did not wish to participate in the project to receive new wells. Walt mentioned that the wells in the top 15 with landowners who will not participate were evaluated as commingling based off the desktop study and by evaluation of adjacent commingling wells, rather than being field evaluated. Should the well owners continue to refuse to participate in the replacement work, two wells of the next tier in priority would be replaced instead. Walt was unsure which two wells would be replaced instead of the wells with unwilling landowners.

Walt mentioned that because of the connection between the Mosier Creek and the Pomona and Priest Rapids aquifers, stabilizing and improving water levels in the aquifers would benefit the creek's flow levels. Walt also mentioned that the pumping is likely the primary cause of most recent drops in water levels, and that there is a strong correlation between aquifer levels and seasonal pumping. A study completed by OWRD in 2016 found a seasonal response in streamflow and aquifer water levels to pumping.

Mosier Groundwater Work in the Future

Walt explained that there has been a lot of work completed with local orchardists through NRCS to help reduce water usage. The City of Mosier also upgraded their water system to save 31% of the water used. Walt explained that although per capita use of water in the west has decreased, eventually growth will catch up. He has had many calls through the Wasco Co. SWCD regarding wells outside the high priority area and the OWRD administrative area going dry. Walt inquired if this should be a future priority of the watershed council.

Erik explained the recent developments in Mosier regarding groundwater. He mentioned that few wells were drilled in 2017. Since the new well construction standards came into effect, 20 wells were constructed with the new standards. Erik mentioned a need for monitoring of the deep well project to understand how these changes will affect the aquifers. Susan Gabay inquired how much the irrigators pump out of the aquifers, and Kris replied they are not required to report usage. Erik mentioned that the irrigators using the new deep wells would have to report their usage. Additionally, the new well will have a flow meter attached.

The council moved on to discussing next steps in terms of conservation. Walt suggested the basalt system may react relatively quickly to reductions in pumping of the shallow basalt aquifers from moving irrigation withdrawals to deeper aquifers. The council agreed per a comment from Ken Lite that the council and District should maintain momentum and position for future funding opportunities by continuing to identify, assess and prioritize commingling wells while monitoring and analyzing the impacts of measures taken so far to stabilize groundwater levels

Walt mentioned the importance of continuing to monitor groundwater levels and the creek over the next few years to evaluate the benefits of the commingling well replacement and deep well projects. There are two water gauges along Mosier Creek, one installed and ran by USGS and one installed by OWRD. Kris mentioned a potential for more water gauges with District Cost Share.

Discussion circled back to reluctant landowners and their refusal to participate in the project. Kris mentioned that the desktop study is public information, so it is public knowledge who has commingling wells. Kris also mentioned that commingling wells are illegal, and landowners will be unable to sell their property without disclosing that they have one. Realtors are beginning to

become aware of the issue as well. Walt mentioned that although OWRD could potentially force landowners to replace their well, OWRD didn't feel this was a productive response at this time.

Co-Chair Elections & Announcements

The council tabled co-chair elections for the next meeting.

Pete Dalke provided the council with a Forest Collaborative Update. 80,000 trees have been replanted by USFS. He mentioned that the county has disbanded the Weed Board and that he would keep the council informed regarding any invasive species training provided.

The next meeting is scheduled for April 25th at 6:30PM and the Meeting was adjourned at 8:20PM.

Minutes prepared by Tatiana Taylor