

WASHINGTON COUNTY WATER CONSERVANCY

DISTRICT

Minutes of Meeting of Board of Trustees

July 21, 2015

Minutes of a public meeting of the board of trustees of the Washington County Water Conservancy District, held on Tuesday, July 21, 2015, beginning with a work meeting at 3:00 p.m. at 533 East Waterworks Drive, St. George, Utah. Those board members present for the meeting were: Chair Ed Bowler, Jim Ence, Howard Bracken, Ken Neilson and Jon Pike. Tom Hirschi was not present. Also present were General Manager Ron Thompson, Associate General Managers, Barbara Hjelle and Corey Cram, and Secretary Roberta McMullin. Ed Bowler conducted the meeting and welcomed those present. Clint Rogers from Carollo Engineering was a guest in the audience for the meeting.

The first item on the agenda was a presentation by USGS on Pah Tempe Hot Springs. Ron introduced Philip Gardner and David Susong from USGS.

David Susong first explained why the salinity control forum is interested in studying the hot springs. They would like to know if it is possible to capture the discharge that comes out of Pah Tempe Springs

Philip Gardner did a PowerPoint presentation on the effects of groundwater withdrawal from the Hurricane Fault zone on discharge of saline water from Pah Tempe Springs. They have been working on this study which has been funded by the Bureau of Reclamation, the Colorado River Basin Salinity Control Program and the Washington County Water Conservancy District.

Corey gave some numbers for informational purposes and so that board members could realize the kind of impact we are talking about each year in the Virgin River. The hot springs is about 10 to 11 cfs, about 5,000 gallons a minute roughly. The concentration of the salt is approximately 10,000 parts per million. That is about 110,000 tons of salt per year.

Some of the information presented in the PowerPoint presentation included:

- Permeable geology exists east of Hurricane Fault
- Thermal water rises in fractured damage zone of Hurricane Fault and discharges to the Virgin River
- Has been studied a lot – early studies done by Bureau of Reclamation – now there is collection of studies on distribution of salt loads in the Virgin River
- Previous studies showed that if salts could be taken out it would be beneficial on down the river
- Goal : evaluate feasibility of salt load mitigation through pumping to capture the Pah Tempe Spring discharge

He showed an aerial view of the pump tests and design and locations of observation wells used, monitoring sites, pumping sites, 18 spring temperature sites etc. He gave an overview of the three tests done.

They used forward looking infrared (FLIR) thermal imaging – to visually record and document what was happening to the springs when they pumped. A short video clip was shown that showed what happened as studies went along and where the water gets warm and the pipelines get warm.

All the data has given them a better understanding than the old ideas of how the hot springs work and are connected with the river. He showed various graphs of their findings including pre-pumping temperatures in springs

These are the conclusions from their study:

- Pumping adjacent to VR captures Pah Tempe Spring discharge and reduces salt load.
- River and thermal spring system are hydraulically connected - pumping can capture unwanted fresh water and pumping is best done at low river flows.
- Virgin River – Pah Tempe Spring system can be simulated using a porous media numerical model (model useful in project design).
- Optimizing pump locations and increasing pump rates will likely capture all Pah Tempe Springs discharge.

Some additional work that they feel would be useful was: EM induction surface geophysics; locate high permeability zones and locate specific location of fault barrier; fine tune numerical model; conduct optimization modelling (used to design a pumping system that approximates the streamed gradient and minimizes fresh water capture).

There was some discussion and various questions were answered after which Ron thanked them for their presentation.

The next item on the agenda was a **discussion of the district's asset management plan**. Ron explained to the board that a couple of years ago the legislature passed a law that requires water

The legislature passed a couple of years ago a law that requires the four biggest water conservancy districts, including us, to come up with a capital asset assessment, maintenance and replacement policy which requires us to give a useful life to each capital asset. Ron said it requires the district to have a policy in place before 2017 as to how we will fund that and move forward in implementation. Ron said the district has hired Barry Barnum to work on this and so he asked Barry to come to the meeting today and give a presentation on it.

Barry Barnum passed out handouts to board members and staff. Barry told the board the goal of the plan is to provide a mechanism for the accumulation of funds to replace and/or repair capital assets needed by the district to carry out its operations. He then explained how he determined the capital assets/needs list and future replacement costs for each asset. Barry said he used the district's 2013 asset list. A useful life was estimated for each asset and the data was used to calculate future replacement cost for each asset based on a 3% annual inflation rate. Using that method the future placement amounts needed by the District were calculated by year for the next 100 years and this becomes the "needs list." The list will need to be updated as assets are added or replaced, as base assumptions change and as major asset events occur such as catastrophic damage or asset life extension.

Barry answered some questions and there was some discussion among the board. There will be further information and discussion on this as we move forward.

Ron introduced Austin Flint . He is going to be working on IT, SCADA and GIS. He has a degree in IT work and is the nephew of the Weber Basin WCD General Manager, Tage Flint and grandson of Ivin Flint.

Corey discussed the **groundwater issues in the Sand Hollow area**. Corey said the Sand Hollow Groundwater Plan is a groundwater recharge and recovery project. We store water in the reservoir but one of the purposes is to take that water and allow it to infiltrate into the underground aquifer. The reservoir holds 50,000 a.f. Corey said that to date we have recharged 120,000 a.f. This underground aquifer water has built up under the reservoir and is now slowly spreading out. Corey said the infiltration has slowed a little and the process is still working and we are pleased with the project results. [BH1] There is an area west of the reservoir where they are seeing the water table rise. They are seeing some groundwater come up close to the surface near the SITLA parcel. Corey said the district is still working with insurance on the water that was in the basement of a home in the Sand Hollow Resort area. With the pumping of wells on the north side of the reservoir the ground water conditions are being managed. There are no wells to the west and northwest and that is where the dominant flow of groundwater is. Corey said we need to have additional wells to manage those groundwater conditions and to capture that water so that we don't lose water and can capture that water and use it when we need it.

Corey said since the district has been working with USGS since the late 1990's on the Sand Hollow groundwater aquifer so the district asked them for their recommendations on addressing groundwater issues on that northwest side and where they should put the wells.

Corey showed a drawing of their recommendation for four wells and explained their suggested well development plan.

Ron told the board the district has a budget of about 2.5 million dollars for that this year and they want to move ahead now on those four wells and getting them drilled and equipped as this is an area of immediate concern.

Ron showed some the status of some other projects and concerns on a PowerPoint presentation.

Replacing pipeline at Casa de Oro – this project should be finished this week

Drought - Ron showed the USGS graph of the Virgin River at Virgin gage for the last 15 years. We can see by the graph that the drought is prolonged in these numbers.

Ron showed the board a map on the screen of the district water system and projects including reservoirs, hydroplants, pipelines, water treatment plant, etc. starting up at Crystal Creek and working down the system for the benefit of the new board members and discussed how the water is handled as far as filling up the Quail Creek and Sand Hollow Reservoirs. Ron also explained how Hurricane, La Verkin and Washington canal company water rights are the highest and oldest priority and explained the curtailment presently in place on junior water rights.

Toquerville Secondary Water System - Ron said there has been a significant decrease in the springs in Toquerville in this fourth year of drought. In an attempt to help manage this the district has moved irrigators into zones and the different zones get water twice a week. The residential users are also in zones and get water three days a week for four hours.

Ron showed the Board **how the district's SCADA system works**. He showed reservoir levels and different areas like Quail Creek hydropower station, water treatment plant and Sand Hollow etc. to show the board all the information which is available on SCADA at each of these sites. He showed the board the USGS water gage station sites. He said the district monitors and watches the Virgin River at Virgin gage most closely but they monitor other gages also.

6:00 PM Meeting:

The first item on the agenda was a **public hearing to levy the annual contract assessment within the Kolob Water Service area.**

Ken Neilsen moved to go into a public hearing on the Kolob Water service Area annual contract assessment. Jon Pike seconded the motion. A roll call vote was taken and all board members present voted aye.

Ron said their assessment is billed on their taxes every year and the statute requires us to have a public hearing annually. Ron told the Board the district is not

proposing any changes or increases. There are 70 permanent connections billed at \$320 a year, 108 standbys and the standbys are billed at \$250 year.

There was nobody present for the hearing but Ron told the board we still have to go through this process. Ron said he recommends leaving the rates the same again this year and that it be assessed on the property tax rolls.

Jon Pike made a motion to levy the annual contract assessment as explained, Howard Bracken seconded the motion and all voted aye.

Jim Ence moved to adjourn the public hearing and Ken Neilson seconded the motion. A roll call vote was taken and each board member present voted aye.

Approval of new GC Mass Spec for Water Treatment Plant (WTP) – Ron said when we took over the regional system in 2006 our first purchase was this machine which allows us to look at the water quality of the water coming into the plant. This allows us to deal with any taste and odor issues. The WTP didn't have this capability before the district took over. The new machine cost \$119,000 but if we were sending the tests out for sampling, this machine covers costs in 2 ½ years. It has been ordered and should be here in next week. Ron asked the board for ratification of this purchase.

Jim Ence moved to ratify the purchase of a GC Mass Spec machine for the WTP. Jon Pike seconded the motion and all voted aye.

Approval of Repair & Replacement Fund Policy – Ron presented a resolution for the board to consider adopting an asset management program. Ron said they have determined that \$0.067 per thousand gallons of water would be adequate to meet the requirements for this repair and replacement fund. After discussion the board approved the resolution as follows:

Jim Ence made a motion to adopt a resolution for a charge of \$0.067 per thousand gallons of water sold by the district to any customer, which charge shall be adjusted annually on January 1, beginning January 1,

2017, based upon the cost of living. Jon Pike seconded the motion and a roll call vote was taken. All board members presented voted aye.

Ron Thompson gave brief status reports on the following items:

Lake Powell Pipeline Project – This project continues to move forward. They are finishing the water needs assessment right now. Several studies are moving to final. They are still working on some water conservation issues. The district has a water conservation committee in place and they are working on a recommendation. Ron said he will bring that back to the board in **September**^[BH2]. The district is required to resubmit its water conservation plan every five years.

Financial reports – A current financial report was given to board members to review. Ron said we are under budget for first half of year in every item.

Staff - Ron told the board we lost one of our key water treatment plant personnel (Michele Deras – chemist) who moved up north. They have interviewed applicants and made an offer to a chemist. The company he was working for has now raised his salary so they are not sure yet what he will do.

Board field trip – the field trip is planned for September 8 and will be an all-day event.

Water conditions – Ron said the soil moisture and forage conditions look very good.

Solid Waste District – Ron said the solid waste district has been using a one acre site in Virgin and they now want to move that site to another location. They would like to move it to the road that goes to Kolob. Ron told him they need them to take over waste disposal at Kolob Reservoir as part of this agreement as they won't be paying anything to use the site on our property that they want to use.

Zion Corridor - The district has been approached by the city manager in La Verkin who is on Zion corridor committee. They are looking at Zion corridor and want to put an information kiosk and pull out for cars and they want to use some of the district's property. It is at the intersection at the state highway to Zion. Ron

asked the board how they feel about this. After discussion, the board felt like the district should work with them but not make it a permanent arrangement.

The mayors and commissioner have another meeting to attend so Ron said we will cover any additional items at the next meeting.

Approve of minutes of June 16, 2015 Board of Trustees Meeting – The minutes of the June board meeting were reviewed by the board after which the following motion was made.

Jim Ence moved to approve the minutes of the June 16, 2015, board of trustees meeting as presented. Kenny Neilson seconded the motion and all voted aye.

The meeting was adjourned.

Secretary