

## Logan (8/15/2013) Breakout Session

### **Bob Morgan – Water Law**

- Why is it not alright to use grey water to water yard? Referred to the legislature and the Division of Water Quality and Drinking Water to find out if there are any problems using it.
- Does not like the laws that have been passed cutting the recreational use of water and the importance of being able to use water for recreation. The new laws limiting water use are wrong. Fishing and recreational uses are important and add to the local economy. Against damming Logan River. Like to see water ways opened up. Referred to Idaho laws which allow recreation use to have standing in water laws.
- Fair access to water, Utah Stream Coalition agreed that more access to water ways for recreational use is important.
- We can share and want to know more about Utah Water Law. Referred to a Water Rights Regional Engineer and compilation of the water laws.
- Inquiring about capturing water on own property. A situation was talked about a dealership being sued by Salt Lake City because of an extensive system the dealership had to collect water at the dealership.
- Discussion about land bought with spring endangering property. He can get rid of the water. He cannot put the water to use.
- Has a plan to use bentonite clay to build capture basins under an entire piece of property to capture nearly all the water that falls on a property. Wants to know why the 2500 gallon limit? Are water rights like mineral rights and not necessarily connected with the property?
- How did we get into the fix where water rights exceed available supply?
- Answers were given to each of these questions. Water rights are issued under the appropriation doctrine and are not directly connected with the land.
- Who can have instream flow rights in Utah? Parks and Recreation, Wildlife Resources and in some cases trout can be protected in the headlands without interfering with existing rights.
- Where well rights exceed the available water agreements must be reached or the later rights will have to be shut off.
- Thought the limit for capturing water was 15,000. Limit is 2,500 gallons. We should be more smart about water. Educate more, maybe in school assemblies.
- Utah Lake, Deer Creek and Jordanelle Reservoirs are operated jointly.
- The same amount of water is going to be used in homes. Why not use what falls there making better use of energy. How did our water laws get to where they are? Our water laws got where they are today because of Pioneer settlements were at the mouth of streams where water was available. A lot of work and leadership was needed to build storage facilities and protect watersheds.
- The limit for capturing water is the same on any size property.

- Agriculture does not have incentive to go to sprinklers. Utah water law does not allow them to increase the acres when they conserve. An explanation was given that increasing efficiency does not necessarily mean that there is more water. Increased crop yields generally means increased water use. Sevier system which re-diverts water all the way down the system is an example.
- Many farms perceive that it is not worth it to conserve water if they cannot use it on more acres.
- Think about routing some of the water to municipal uses, increasing efficiency and creating good projects to increase irrigation.

### **Dennis Strong – Maintenance, Infrastructure & Funding**

- How do we go about getting secondary water delivered to users by pipe rather than open channel? Dennis talked about this issue and said it has been brought up before. Tage (with Weber Basin) has talked to a lot of people about it. What you are talking about is a much better way of managing water. But this becomes a community effort. I believe there needs to be developed some sort of coalition between those who have the water and those who are going to deliver the water, and often they are not the same. Since the city is a stock holder in the canal company there is an opportunity to work with the city to form a new company or a coalition to borrow the money and be able to pay it back and cover the cost through rates. This type of project gets quite expensive. That is why it is not usually done. Also there is not a lot of people interested in paying for this kind of project. It's hard to get people together for a project like this.
- Sometimes when communities are looking to identify the next least cost alternative, secondary water projects can be identified as the least cost way to go. And sometimes cities can require developers to install the facilities to deliver secondary water so that when the water becomes available the facilities are in place. But this approach requires some good planning.
- Hyrum has a secondary system that could be used as an example of how to get a system like that developed.
- We humans like the open water systems. I had a business in downtown Logan for years and visitors always commented about the running water when the ditches were flowing. There are tradeoffs between an open water system and a closed water system. The open system provides aesthetics but not the efficiency of a closed system. Examples of city creek mall in Salt Lake City where a lot of money was paid to have a stream of water flowing through the mall. There was talk in the general session about getting rid of grass. But the aesthetics issue comes into play here also.
- Is this the kind of project that Water resources could fund? Yes, we have low interest loan money and also technical assistance. But your initial challenge will be to build that partnership between the users and the delivery company. The funding although challenging will happen once the interest is there. Payment can be accomplished with rates. There are communities that have done this and their experiences can serve as an example. The division's web site is a good place to start and then you contact the board

member for your area. The board member from your area is your advocate to the division and in application for loans and assistance.

- Lake Wasatch. One of the Ideas suggested for dealing with the flood water in the 80s was diking off the east side of the lake to create a fresh water lake. I think this idea merits some additional consideration. It seems like a good opportunity. Dennis stated it was studied in the 80s. We have done modeling and performed some cost estimate analysis. If you would like you could come down the division we can share the information and data. It is thirty years old but we do have some data on it and have investigated it. It was a fairly extensive diking system and therefore very expensive. There are also considerable water quality issues both with the resulting fresh water lake and potential water quality impacts to the Great Salt Lake that would need to be investigated.
- Wasn't there a law passed that gave Bear River water to the Wasatch Front. The Board of Water Resources had a 220,000 acre-foot filing for water in the Bear River Basin. In 1991 the legislature passed the Bear River Development act allocating that water: 60,000 acre-feet to stay in Cache Valley, 60,000 to Box Elder County, 50,000 to Weber Basin Water Conservancy District and 50,000 to Jordan Valley Water Conservancy District. But even that 220,000 acre-feet is a small portion of the average annual flow of 1.2 million acre-feet into the Great Salt Lake.
- Has Weber Basin and Jordan Valley developed their portions of the Bear River Water. Dennis stated no. That development will require some storage and they are estimating their need as being somewhere about 2035. That is the time frame based upon growth and population projections.
- Do they need Honeyville dam to accomplish that development? We are still investigating that. There are several options of which Honeyville is just one. High Oneida is still an option but because of its location in Idaho it will probably not happen unless Idaho comes on board as wanting to be involved. Also it has a limited available supply because so much water comes in below that location.

### **Tagg Flint – Delivery and Water Efficiency**

- We need customers that ask for climate-controlled irrigation systems. Customers always go with the low cost option and in addition to that they are not even demanding their contractor to do a better job with the low cost option. Smart controllers are not making it in Utah. Secondary users have no incentive to invest in irrigation technology. More education needs to happen for all types of irrigation systems.
- Tap into shallow ground water to supplement irrigation. Catch flood waters and divert water to areas that need the water. This should happen across state and country.
- Transport excess snow (from across the country) to storage areas that need it. Capture and reuse water.
- Sell water to that need it.
- Thermo heat, solar, and wind energy should be harvested.

- Change irrigation frequency – water deep and less often. Water can't evaporate if it is not on the surface. Blue grass 80% of ET and Xeriscape is 40% of ET.
- If you want conservation, you have to make people pay. You have to charge for the water.
- We have to meter both secondary and culinary water. If you don't measure it; you can't manage it.
- We need agricultural to help keep food cost down.
- Do you have Irrigation Company's under you wanting to meter secondary systems?
  - Tague Flint talked about two wholesalers are interested in implementing them. Cost to add secondary meters is about \$1000 per house.
- Do we have any studies about metering secondary water and effects on use?
  - 23-28% are using less this year than last year.
- How efficient is the infrastructure delivery system?
  - Varies depending on age of system but our infrastructure is wearing out. The efficiency gained will help to repay for the replacement of the infrastructure.
- You might consider charging overages when costumers water over the basic irrigation allotment.
- Water management is like a 3 legged stool.
  - Delivery system that gets water evenly and to the right place.
  - Good base irrigation schedule and landscape needs.
  - Automated system that reacts to climate.
- Turn off every connection for 48 hours so they can realize the value of water.
- Education is huge.
- Systems should be saving money for future infrastructure maintenance and replacement.
- Water is more important than gold.
- Education is huge; we have to educate our water users.
- Will there be more dams in northern Utah?
  - Yes, we will need more storage. But there are 3 hardships that we face to building more dams.
    - Cost
    - Community impact
    - Environmental concerns
  - Are there any studies that look at water that comes out of springs verse wells?
- State should evaluate groundwater versus springs overflowing.
- Why don't we use hydropower on a micro scale? Right now there is a \$250,000 just for the permit.
  - FERC is working on a small hydro – stream line permitting
- How could we fund a study that looks at evaporation from sprinklers? There are some studies out there.

## Tim Hawks – Water and the Environment

Reasonable stream access should be available to those who wish to recreate on streams.

- Conservation is important, too much water running in the gutters.
- Irrigation is important, but use it wisely. Flood and sprinkler are poor methods of irrigating – low pressure pivot is better.
- Dam up Logan Canyon – other good examples of similar dams.
  - Water rights a concern with suggested dam.
  - Damming a canyon raises environmental concerns.
- Feels we are stewards.
- Conserving water is similar to saving and spending money wisely.
- Cache Valley is growing and need for more water is imminent.
- How much water do we use, is it over 1500 gal?
- Use rain water harvesting for small gardens at first and the move up from there.
- What is governments approach to dealing with water for oil/gas and associated environmental issues? Concerned with the way waste water from oil/gas is disposed of.
- We are dealing with these issues in a similar way to other states, and may face some of the same problems as these other states, which is a lack of water.
- We should focus energy and time to reuse of oil/gas waste water.
- Drilling a well for injection is \$3M plus maintenance.
- Contamination from injection is of concern. The technology removes the oil, which goes to the oil companies, solids, which are used for road base, and chemicals stay in the water.
- Stop going after fresh water for oil/gas.
- Does this technology deal with salinity?
  - Response: salinity is adjusted by dilution as needed for oil companies, oil companies usually add salinity.
- What are solutions being discussed for decreased snowpack.
- Increasing population and decreasing supply.
- Fish have limited standing as far as water rights are concerned.
- Farming and fishing can be accomplished together and this is should be the goal. How do we change our mind set to solve this problem?
- Groups should come together.
- Concerned with the Blacksmith Fork River going dry. Canal systems being converted to pipe effects the riparian systems. Some share-holders he knows are willing to contribute back to flow in Blacksmith Fork.
- Midwest and Eastern communities, unlike the west, let their lawns go dry during droughts.

- Priorities are the issue. Agrees with priorities comment and he personally is willing to conserve. People in his neighborhood expected him to have a very green lawn when he first moved in.
- Would like to see canal companies install micro-hydro turbines/low-head-hydro. The process for installing micro-hydro turbines is on track through legislation to become a simpler.
- Gray water is not legal in UT. Not much water is available from rain water harvesting.
- What effects are seen from rain water harvesting?
  - Paper being published that describes effects.
- Gray water reuse is done on an industrial scale
- Conservation on a residential level has very little effect on overall water use.

### **Warren Peterson – Water for Agriculture**

- Realize that agriculture is a big part of Utah economy. We need to protect our shares. We have the majority of existing water rights and have a desire to conserve water. For example piping a Smithfield canal saved 700 acre-feet of seepage water per year. The idea that agricultural water users are not charged for their water is false since I pay dearly for annual water assessments for 400 shares in addition to my well pumping costs. How much we pay for water is not the only important factor in our production because we have dry acreage. We answer to our shareholders who are government, municipalities, and other shareholders. If you need to purchase water shares, there are often no water shares to purchase. We cannot meter our household connections yet because of the cost.
- Interested in piping water from canals. I would like to see the Bear River canal companies pipe their water. Why aren't some canal companies working on piping their water? *Warren: It's expensive. It's a matter of economics.*
- One thing about agriculture is that it provides a certain quality of life. In Utah County growth has gobbled up agriculture and as a result traffic is horrible. In addition to water conservation, I am in favor of keeping water in streams. We have storage problems but building a dam is cost prohibitive. The river has muddy water in the spring and then the stream is dry up for the rest of the summer. Water Resources has helped with 2 projects we paid for in 30 years. Costs make projects prohibitive but water is so cost prohibitive. We've had a dam project on our books for 12 years but we cannot afford the 12-15 million dollars needed for construction. We need financial help to make a dam a reality. *Can you get access to chapman canal?* No. We tried to get a fifty-year loan but Water Resources would not allow more than 30. Chapman canal took part of our water to build Woodruff Narrows. Has applied for grants but have not been successful so far.
- *Cub River Irrigation.* We put in 2 pipe projects in last five years. Loans paid back over 21 years. Every drop of water for our household connections is metered. We now have fewer irrigation ditches. We got 20 cfs savings of water by piping. If you purchase property you have to purchase water shares to cover the property. Agriculture can grow

about anything if you conserve and maintain the system. Because of the water savings now people use more of their water.

- North Cache Cons District, Lewiston. Regarding funding, Cache County is the only county in the state without a water conservancy district. If we had one, we would be able to leverage federal and state dollars in order to maintain our water rights. Lewiston recently completed a project that would produce water savings of 20-30%. Now we need to protect the water right so that Agriculture will not lose their right through non-use. Regarding water aquifers in Cache County, the pioneers developed the highest one. We are now developing the 2<sup>nd</sup> aquifer, somewhat deeper. There is a third aquifer that needs to be developed.
- Conservation, maintenance, planning and innovation. We have done that through piping, sprinkler systems and laser leveling land. We had help from the NRCS. The incentive is to save water, but we lose the water that we save and the downstream user benefits. *Warren: So if you're more efficient it helps the next guy.* Yes. I have served 20 years in our conservation district. We have very few in the legislature that know water or have an agricultural background. Water laws and regulations were very complicated and our legislators don't understand the issues. It is important for you to educate us otherwise we may make a bad choice. I have been lobbying in legislature for a long time. Knowledge level in legislature has diminished in orders of magnitude over the years.
- Help us manage secondary irrigation. Secondary used for development without planning properly. Conversations with the right groups are not happening.
- There's water everywhere, how can we get it here. I love the agricultural way of life and the aesthetics. I recognize that agriculture needs to make money. Premium agricultural land should be preserved by conservation types of easements. Warren stated *Make them profitable and he will stay in agriculture.*
- The Governor killed conservation easement green belt. The green belt if sold must pay difference in tax between green belt but Governor killed that. Never going to have enough money but can protect critical lands. Without all the ag industry greenbelt is meaningless. You have to preserve large blocks of land. Not just tiny blocks.
- I think we have an education problem in agriculture. Less than 40% bacon pigs, eggs chickens.
- We added 5 silos for reclaimed water and computers to reduce water demand and usage.
- Don't convert my ag water.

### **Voneene Jorgensen – Competition for Water**

- Balanced Bear River water Management.
- More dams higher up on the system. Develop new water resources.
- Re-evaluate water rights for Ag. to M&I transfer of shares. Ease the process for Ag. to M&I transfers.
- Build more dams.
- Change water law to benefit those who actually conserve. Create incentives for improved efficiency in water use. Too much difficulty in dealing with water rights transfers.

- Water is tied to land in flood irrigation amounts and can't be changed.
- Create underground reservoirs.
- Network water supply systems across basin and even state borders.
- What determines who wins competitions for water; ownership, economics or money? Is water banking and/or conservation driven only by money?