



Wallace Stegner Center
for Land, Resources and the Environment
UNIVERSITY OF UTAH S.J. QUINNEY COLLEGE OF LAW



Rockville Community Forum on Culinary Water

Held August 20, 2015, 7:00-9:00pm

Facilitators' Report

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Co-Facilitator: Hannah Payne,
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Rockville Community Forum on Culinary Water August 20, 2015

Attendance: approximately 36 people

Immediate Action Items for Town Officials

- Make sure a copy of the Water Master Plan is available at town offices
- Share the PowerPoint from the presentation by Russ Funk from Sunshine Engineering
- Plan for next steps and follow up

NOTES FROM THE FORUM

The below notes reflect the discussion that occurred during the Forum. A list of the Expert Visitors and Town of Rockville staff who attended the Forum is provided in Appendix 1. Additional information from the Forum and confidential assessment interviews conducted prior to the Forum is provided in Appendix 2.

Questions with answers provided by the audience

Below are questions asked and answered during the meeting. In some cases, additional fact checking and information gathering may be warranted.

- How many water pumps does the pipeline company have?
 - Five, but one pump does the bulk of the work
- What does MCL mean?
 - Maximum contaminant level
- It looks like Rockville isn't in compliance with the state water pressure regulations for fire safety. What does that mean? Does the state enforce compliance?
 - The state typically doesn't enforce, but it does offer loans and programs for upgrading systems.
- What has the town done to improve fire safety in areas that have inadequate water flow?
 - The town advises people who build in areas with inadequate flow to include a sprinkler system.
 - The town also requires that there is a holding tank for water on properties in low-pressure areas.
- Do private wells get their water from the same aquifer as the pipeline company gets it water?
 - No, wells in the valley are not pulling from that aquifer.
 - The aquifer in the valley is recharged by the Virgin River. The valley aquifer is much bigger and separate from the perched aquifer.

- The pipeline company says it will protest any new wells that take water from the perched aquifer in order to protect the resource.
- What is the priority of water rights on the perched aquifer, from which the town gets its water?
 - The pipeline company's water rights (i.e., the water rights that provide water to Rockville) are protected.
 - Priority is based on when water rights were established. Anyone who comes in after cannot impair prior rights. If there is any question about priority, this is resolved legally.
- Are water rights limiting the amount of water the town can access? Or is town water limited by the water recharge rate of the perched aquifer?
 - The recharge of the aquifer is the limiting factor, not the water rights. The wells produce less water than the total amount allowed by the water rights.
- Why doesn't the pipeline company have an additional well in the valley?
 - Primarily because of the cost to put in an additional well and to treat the water from the Virgin River is prohibitive.
- Are Rockville residents paying much less for their water than people in other places in the state?
 - In many places, people pay significantly more. Rockville's water rates are quite low.
- Do the water companies have a plan for allocation of water supply if there is a water shortage?
 - Rockville Town Ditch has oldest rights and will have water until the Virgin River dries up.
 - The pipeline company has the right to not allow outdoor watering using culinary water. They think limiting outdoor use of culinary water would probably conserve enough water to deal with most shortages.
- If the pipeline company increased supply, would there be adequate storage?
 - Yes.
- How is culinary water conservation being addressed?
 - The current, more aggressive culinary water rate structure was put in place in 2004. Since then, water use has notably decreased. In particular, the high water users have come down to approximately 50,000 gallons/month.
 - High water users have not been identified publicly in recent years because high water users have not been using as much.
 - This summer the town has not had to buy culinary water from Springdale, which it does when it runs short on culinary water from its aquifer.

Answerable Questions

The following questions were raised at the meeting and likely have researchable answers.

- Is it possible to tell how much is leaking from the culinary water system? Can we analyze if there are significant leaks?
 - The pipeline company says this can be calculated.
- What is the safe concentration of radium?

- How does previous data on radium concentrations compare? Are fluctuations typical?
 - Anecdotally, the historic levels have been similar and have had periodic spikes.
- Do surrounding areas have the same radium issues?
- Are there any other contaminants of concern in the water supply?
 - There is a lot of iron, but this is not a health concern. No other contaminants are known to be in the aquifer water.
- A few areas in town have water pressure below the state fire protection standards. What does this mean for homes in those areas? Are other fire safety measures in place that can manage a fire if one occurs?
- Does anyone other than the pipeline company have rights to draw out of the perched aquifer?
 - There appears to be one individual and the Logan development, but this merits more inquiry and clarification.
- What percentage of culinary water is used for irrigation?
 - The pipeline company says this can be estimated pretty easily by comparing winter usage to summer usage.
 - Anecdotally, usage is twice as high in the summer as in the winter.
- Why does the pipeline company have to buy water from Springdale and when? How much does it cost? Can we get more information on how often water is purchased from Springdale, why, the amount purchased, and the cost?
 - According to the pipeline company, water is purchased from Springdale, if needed, during July, August and September when water usage is highest in Rockville.
- How do Rockville's water rates compare to other places in the region and the state?
- How much water are the largest culinary water users actually using?
- Can irrigation rights be transferred to culinary rights (temporarily or in a longer term sense)?
 - It appears that they can, but any decision to implement this option will likely need further research on what this entails.
- Can water be leased?
 - This may be feasible, but requires further research.
 - One participant suggested that municipal use rights allow for more flexibility than individual rights.
- Will leasing water change the priority of the water right?
 - Likely not, but this merits more research.

Data Gaps

Below are questions that were asked at the meeting that are more difficult to answer and/or may require significant additional research and/or community conversations to address.

- Has the aquifer recharge rate changed over time? Is there any historical information about this?

- Anecdotally, recharge has diminished in recent years due to drought.
- How susceptible is the aquifer to depletion?
- How does the aquifer replenish/ recharge? How quickly? Are there predictions of future recharge?
 - A few people have questions about the necessity and cost-benefit of conducting a study to answer these questions about the aquifer.
- Is Rockville using more or less water than it can pump from the aquifer?
- What level of priority does the Town of Rockville have in terms of water rights for the perched aquifer?
 - It seems like the town is first in line, but this could use some clarification.
 - According to one participant, the town's water rights appear to be the oldest for the perched aquifer.
- Who are the owners of the town's water rights? Who controls the water rights? What does it mean that the town controls water rights and it is for the "residents of Rockville"?
 - There is a report on water rights in the Water Master Plan, but this could use some more clarification.
 - It appears that 38% of the water rights owned by the town and that 62% are controlled by the pipeline company.
 - *Facilitation team note:* there seemed to be some continued and significant confusion on the topic of town culinary water rights. Residents would like more clarity on this issue.
- If the perched aquifer is depleted and the water supply cannot meet town demands, what are options for additional culinary water?
 - Over the past several summers, Rockville has purchased water from Springdale. This will be an option as long as Springdale is willing to sell water.
 - One idea put forward is to implement water conservation measures for irrigation and then to turn excess irrigation water into culinary water and lease excess water to other areas.
 - Different options for water conservation, water trading, and securing additional culinary water should be further investigated.
- What would happen if Rockville connected its water system to Springdale's? Would Rockville lose its priority water rights?
- What is the agreed upon minimum flow for the Virgin River?

Priority Concerns Identified During the Forum

During the forum, participants engaged in an exercise in which they were asked to use sticky notes to share their two or three predominant concerns about culinary water. The results of the exercise are shared below.

- The predominant culinary water-related concern identified by forum participants was the long-term security of culinary water. Participant comments, as written on sticky notes, were:
 - What is plan B to ensure a safe and adequate drinking water supply for Rockville?

- What do we do when Springdale says they can no longer accommodate us (in terms of selling water when needed)? Are there some methods other than money per overuse (i.e., the tiered water fee system) to prevent some people from using excessive amounts of water to irrigate? Can we utilize/convert available irrigation water to culinary water?
 - *Facilitation team note:* it is not clear whether this individual means using culinary water to irrigate, or just using “excessive amounts” of irrigation water.
- Quantity. We are purchasing from Springdale. As they grow, that source becomes more threatened. We need to consider new sources. Also very concerned about fire flow.
- What can we do to get more water?
- What are other options for “creating” or securing more culinary water?
- How much would it cost to get the town a share to draw water from the river?
- In the advent of climate change, what is plan B or C or D as we go forward to ensure a water supply for the town? What is our safety valve? Have we looked at other sources?
- Having enough water for residents. Is there an allocation plan in the event of a shortage?
- How does the RPC intend to meet the projected future needs for residential water? We have several serious abusers of our culinary system – what will the RPC do to address this problem?
- Additional water!
- Participants also expressed concern about water for fire fighting needs. In their words:
 - Water lines on north side of town are not big enough to provide fire-fighting needs. Any plans to upgrade these lines?
 - What is most important: water on demand or fire protection?
- People also made a number of comments about the need for the town to conserve water and suggested some approaches the town might take to conserve water and secure more culinary water. Their comments were:
 - What can be done about people that use way too much water – it’s not fair, they need to conserve.
 - Save irrigation water (conserve) and convert it to culinary water.
 - (1) We must detect any leaks in the delivery system for culinary water; (2) we must reduce usage of culinary water used for irrigation; (3) the cost of water needs to be reevaluated; and (4) we need to hire someone who can work on grants and bringing in money to upgrade systems.
 - Need to reduce the summer irrigation that is using culinary water – get larger users to convert to drip systems, drill for wells, and other conservation measures to reduce the use of culinary for irrigation
 - Do a study on the aquifer – better understand supply, recharge, and demand.
- Other concerns that were identified by participants were:

- Ownership of water – the town should govern their water.
- Controlling growth. We have historically used water to control growth. Are there other, more effective ways to control growth and plan for the future?
- Water rates affordability – need to accommodate the fixed income people who are conserving.
- Volunteer board and private company – need a professional entity.
- Age of system. Need major projects. Grants, higher rates, loans, savings.
- Concern that the Sunrise Report is biased.
- Through the exercise, participants also raised the following questions:
 - What is the actual culinary water demand per connection? Is the average misleading since there are only 152 connections and that means that several very larger users can significantly increase the average? Are the very large users using culinary water for agricultural/yards? If so, make sure we are clear on the true culinary water demand. And what about grey water and using this for helping to meet agricultural needs?
 - If we transfer ditch water to Springdale for treatment, how do we know that we get it all back as culinary water? In a drought, who would get priority use?
 - Where does the water in new wells that are drilled (not town issued) come from? Does it affect the town's culinary water source?
 - Need an overview of how one gets a culinary water right: what are the choices of wells, moving water rights, and buying culinary water rights?
 - Why can't we get state funds to improve our fire hydrant output?

**APPENDIX 1:
LIST OF EXPERT VISITORS AND TOWN STAFF IN ATTENDANCE
(as recorded by Town of Rockville staff)**

Expert Visitors

Ashley Averett, Interim Fire Chief
Jeff Ballard, Hall and Grafton Irrigation Company
Ryan Ballard, Fire Chief
Jason Bradshaw, Natural Resource Conservation Service
Steve Cox, Rockville Ditch Company
Luci Francis, Rockville/Springdale Fire District Board
Russ Funk, Sunshine Engineering
Rob Snyder, Rockville Pipeline Company
Kurt Vest, Division of Water Rights
Elaine York, Southern Utah Nature Conservancy

Planning Commission Members

Jane Brennan
Linda Brinkley
Robert Ford
Sharon Hatfield
Karen Lodinger

Town Officials

Terry Bell, Council Member
Tracy Dutson, Mayor
Bernie Harris, Council Member
Elaine Harris, Clerk
Meg Honer-Orton, Council Member

APPENDIX 2: ADDITIONAL NOTES FROM INTERVIEWS AND FORUM

A number of questions related to culinary water in Rockville were raised during the process of the confidential assessment interviews that were conducted in anticipation of the Water Forum. This appendix shares these questions and, when available, related information. All facts and information should be confirmed. This list of information and desired information is intended to be complementary to the notes from the Water Forum; some points may be redundant.

Information

*The below questions were raised by interviewees during the course of the confidential assessment. The information included to respond to these questions was shared by other interviewees or during the course of the Water Forum. **All of the below information should be confirmed.***

- How much culinary water storage does the town have?
 - There are two culinary water tanks that are both serviceable and provide a storage capacity of 400,000 gallons. The first tank is 100,000 gallons and the second is 300,000 gallons.
 - *Facilitation team note:* There is a lot of confusion among community members about the size of these tanks. Some people think that putting in a larger storage system would solve the problem, or at least help address it. However, this does not appear to be the case.
- How many wells does the pipeline company have?
 - There are five wells in the pipeline company's system but one well is the main producer and the rest are not as effective.
- What types of water capture and reuse is allowed by the state?
 - Rain barrels are allowed. People need to complete a free online registration if they have more than two containers or if either container exceeds 100 gallons. More information available at: (<http://extension.usu.edu/waterquality/htm/urbanstormwater/rain-water-harvesting/>)
 - Gray water reuse rules and system design requirements are available at: <http://www.rules.utah.gov/publicat/code/r317/r317-401.htm>
- Are water rights limiting our culinary water supply?
 - Rockville has water rights for more water than its perched aquifer can produce.
 - During the Forum, the engineer from Sunrise Engineering noted that the Sunrise Engineering report details information and recommendations about water rights owned by the Town of Rockville (38%) and the Rockville Pipeline Company and State of Utah Board of Water Resources (62%). He also noted that there seem to be some inconsistencies in the Division of Water Rights' database, and recommended that these get resolved.

- What do we do when we run low on culinary water?
 - Rockville has purchased culinary water from Springdale to meet demand during summer months—often several hundred thousand gallons.
 - This may not be a reliable source in the long run, especially if there are future limitations on water use on the Virgin River.
 - Springdale is currently working on a water master plan and is looking at options to increase capacity of their water treatment system. There might be an opportunity for partnership with Rockville.
- Do we have radium in our culinary water? Is this a problem?
 - Rockville’s spring water (i.e., the water in the perched aquifer) has radium in it, and there have been times when radium levels have not met water quality standards in the past.
 - Small amounts of Uranium are present in the area rocks and hence, radioactive isotopes can be present in the water drawn from the Rockville Town spring and wells. The Utah State Division of Drinking Water requires monitoring for several radioisotopes. Radium 228 is present in the source water for Rockville. The amount of this radioactive isotope is monitored by the Rockville Pipeline Company. The EPA sets the allowable level for Radium 228 at 5 pCi/L. This allowable level has been exceeded so the Rockville Pipeline Company has been required to conduct quarterly monitoring. Radium concentration sampling data was presented from 2011 to 2014. According to Rob Snyder, samples indicate the radium concentrations have moved up and down historically.
 - It is not known what has triggered the recent exceedence in Radium 228 in the water. The allowable level has not been exceeded since 2013 samples, but if the Radium 228 level increases above the 5pCi threshold, action may be required to bring it under the threshold.
 - The mechanism for why the radium is sometimes higher in the water is not entirely understood. During the Forum, the engineer from Sunrise Engineering expressed a theory that it may correlate with flow rate. A resident said that theory might be tested by correlating flow rate and radium level to see if it was valid but the engineer said that had not been done.
 - One of the possible solutions presented by the Sunrise Engineering Report to a higher radium level was dilution with Springdale water, to bring the radium level down. The Sunrise Engineering study proposed a new 8-inch pipe to bring blend water from Springdale to Rockville, when needed. The engineer from Sunrise Engineering said during the Forum that there is an existing 6-inch pipe that is used to transfer water from Springdale to Rockville when Rockville purchases water from Springdale. He said this existing pipe could be used to move dilution water from Springdale to Rockville. The town has two water storage tanks with over 50% excess capacity. The original tank is 100,000 gallons and the second tank is 300,000 gallons. Further study is needed to explore the potential of this approach.

- What is the pipeline’s water rate?
 - The pipeline company has a tiered pricing system that starts at \$3.50 and increases to \$10 (this needs to be confirmed)
 - People have indicated that this rate is low compared to other places in the state and nationally.
- Who works for the pipeline company?
 - The pipeline company has been able to pay for two positions—a maintenance person and a clerk. It used to be entirely volunteer.
- Are people who are drilling their own wells tapping into the town’s culinary water supply?
 - Rockville residents with independent wells in the valley are pulling from the Virgin River aquifer, not from the perched aquifer.
- Where did funding for the Water Master Plan come from?
 - It was covered 100% by a state grant.
 - Other state grant and loan opportunities are likely available.
- Do shareholders have a say in pipeline company decisions?
 - Any loan decisions that the pipeline company makes have to be approved at annual shareholder meeting.
- Does the fire department have a plan for managing fires in areas without sufficient water pressure?
 - The fire department is aware of the low pressure in some areas of town. They are prepared to bring their own water already loaded in tanks on the fire trucks. There are also mutual aid agreements with the Town of Hurricane and the National Park Service.
 - During the Forum, there was significant discussion about the water system for fire safety. A map of Rockville was shown which details the areas in which the water pipes are undersized to meet the fire water supply requirements. It was stated that houses need to be within 250 feet of a hydrant. While some pipes were undersized to meet fire water requirements in certain parts of Rockville, the possibility exists that water could be gotten from hydrants on both sides of Main Street and that the flow would not be impaired by running out of several hydrants at the same time. The concern was raised about how traffic would be impacted if water was being pumped from a hydrant “across the street” from the fire. This would need further study.

Desired Information

Below are a number of additional questions and requests for more information expressed by interviewees, grouped by category:

- Questions about the aquifer and the potential for water shortage:
 - What is the size and recharge rate of the aquifer?
 - Is there a water shortage or is there likely to be a water shortage?
 - Is depletion of storage tanks in summer due to leaks or high demand?
 - How would increased drought affect Rockville’s water supply?
 - What are climate change projections and likely impacts on water supplies?

- Questions about water rights:
 - How much water is one entitled to with one share of water?
 - What is Zion National Park's water right?
- Questions about options for enhancing the town's culinary water supplies:
 - What options does Rockville have if the pipeline company runs out of water? Can Rockville take water from the river if the aquifer runs out?
 - What funding opportunities are there for improvements to the current system or for increasing supply?
 - What would joining with WCWCD entail? What would it cost? What would it mean for Rockville's water rights? Would Rockville have secondary rights to Virgin and La Verkin? Other implications? Is there any room for negotiating rights? Is this a sustainable option, particularly given climate change projections?
- Questions about policy and management concerns:
 - Is the town planning on changing the policy on providing water to secondary structures? If so, how will this decision be made?
 - Who has decision-making authority on providing water to secondary and/or new structures: the town, the pipeline company, or both?
 - What are the pipeline company's origins? Why is it private?
 - If the water company became municipally owned, would the town be required to supply water to anyone who wants to build? Are there other implications (costs, benefits, etc.)?
 - Can we clear up the water waiting list and whether or not people with water shares are still waiting for water?
- Requests for more information and better communication:
 - Can Rockville Ditch share monitoring information?
 - What did the past study to explore the connection to Virgin (which was apparently conducted about 8 years ago) say? Can we get more information on this?
 - Are there issues with runoff from flood irrigation going back into the river? Are there environmental concerns around this (such as silt/salinity)? How much water is actually returning to the river – is a lot being lost to evapotranspiration?
 - Where do big fines from water users go? What does the culinary water company do with extra money it receives from excess water use? If it received a lot more money (such as if water prices were increased), could it pay for things like water conservation support, etc. that would help “produce more water”?