

Meeting #10

October 24, 2013 Meeting

MEETING SUMMARY

Meeting Attendees

Community Working Group members present:

George Martin – JF Ranch
Lynn Martin – JF Ranch
Nancy Vogler – LOST Trail & Superior Copper Alliance
Bill Vogler – LOST Trail & Superior Copper Alliance
Pam Rabago – Superior Chamber of Commerce
Fred Gaudet for Matt Nelson – Arizona Trail Association
Pam Bennett – Queen Valley HOA
Mark Siegwarth – Boyce Thompson Arboretum
Martin Navarrette - Superior Little League
Jeff Bunkelmann – Central Arizona College
Bruce Wittig – Queen Valley Water Board (new member)

Community Working Group members not present:

Cecil Fendley – Queen Valley Water Board
Lynn Heglie – Superior business
Roy Chavez – Retired Miners & Concerned Citizens

Resolution Copper:

Vicky Peacey - senior manager of approvals, communities & environment
Melissa Rabago – community outreach coordinator
Greg Ghidotti – water specialist
David Stanley - water manager
Dave Richins – government affairs

Guests:

Tom Millspaugh - Arizona Water Company
Tom Hartel – Arizona Water Company
Jacquie Smith – Arizona Water Company
Dominic Perea - Superior Junior/Senior High School
Steven Byret - Superior Junior/Senior High School
Mila Besich Lira – Town of Superior Councilwoman

Facilitators - Godec, Randall & Associates (GRA):

John Godec
Debra Duerr

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Housekeeping – Member Update: New, Resigned, Possible Additions

John Godec asked attendees to introduce themselves, since we have quite a few visitors here tonight. He welcomed visitors from Arizona Water Company and from Superior Junior/Senior High School, who may be joining our group as members. John also mentioned that he had seen Councilwoman Lira last night and she said that the council is interested in finding a liaison to work with this group (the Councilwoman later joined the meeting).

Vicky Peacey introduced David Stanley who is Resolution's water manager, Dave Richens who is new to Resolution as the government affairs person, and Greg Ghidotti who is a water specialist with Resolution.

Water: Resolution's Plan Recap

Presenter: David Stanley

David Stanley did a brief review of the presentation Vicky Peacey gave at the last meeting. He explained that his focus is on where the company will get the water it needs, and on the regulations that would govern that. He showed a map plotting monitoring wells that have been developed in an effort to understand the impacts of the mining operation on local water supplies. He reviewed the region's water sources, both non-renewable from groundwater and renewable from rivers including the Gila and the Central Arizona Project (CAP).

Major water needs for the mine include refrigeration and cooling of the mine, processing, transportation, and potable use. The total consumption will be 17-20,000 acre feet per year over the life of the project. As much water as possible will be reused.

Resolution plans to obtain its water from mine dewatering, water 'banking' from the New Magma Irrigation District, and has applied for a specific allocation from the CAP of non-Indian agricultural water. Stanley explained that the banking process involves purchasing CAP water for farmers to use instead of using groundwater. The 'un-pumped' groundwater will later be used by Resolution for the mine.

Stanley answered some of the questions from the last meeting, which included:

- Where will the pumping wells be located?
 - He showed a map of the fresh water delivery system.
- How far east of the CAP will you be pumping water from the deep aquifer?
 - We don't know that yet; it will depend to some extent on what has the least impact.

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- There have been higher flows underground recently – is this an increase compared to the average between 2009 and 2012?
 - The entire mine is pumping less, but we would expect a ‘bathtub effect’ as water drains into the mine over time. Resolution has been pumping about 1100 gallons per minute from the shafts, compared to about 400-500 gallons per minute for the old Magma Mine.
- As you sink more shafts and get more water into the mine, will this decrease the amount of outside water needed for the project?
 - Not necessarily; we expect the need to be relatively consistent over time.
- How many monitor wells are there west of the fault?
 - There are 4 wells that monitor the deep aquifer system, and many that monitor the shallow aquifer.
- What is the flow rate through Devil’s Canyon?
 - About 95 to 100 gallons per minute, as estimated from direct flow and some modeling
- How much potable water will you use?
 - Approximately 1000 acre feet per year. By comparison, the town of Superior uses about 400 acre feet per year. Of the amount needed for the project, about 200 acre feet is for residential use and the rest is for industrial uses, like refrigeration, that require high quality clean water.
- What is the banking capacity of New Magma Irrigation District?
 - The permitted capacity is 54,000 acre feet per year, which is the maximum that Resolution is allowed to bank and use.
- What percentages of water from each water source would be used?
 - Of the maximum 20,000 acre feet per year, about 10% would be from mine dewatering, and the rest would be from CAP and outside sources.

Water Resources Overview and Regulations from the State’s Perspective

Presenter: Doug Dunham, Arizona Department of Water Resources

Doug Dunham shared some information about his background in geomorphology and as a special assistant to the director of the Arizona Department of Water Resources (ADWR), legislative liaison, and ombudsman. He explained the critical functions of ADWR, including Colorado River negotiations and the Assured and Adequate Water Supply Program, which set up and regulates the state’s Active Management Areas, which are unique among states in water management programs. The department also supports adjudications and Indian water right settlements, and demand and supply planning. The department does this by providing data and technical support.

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Dunham showed a chart that outlines the distribution of the state's water sources by type including surface water sources (Colorado River supplies about 39%), groundwater, and reclaimed water. The total water budget for the state is about 7.6 million acre feet per year.

He reviewed the history of the Colorado River Compact dating to 1922, which originally allocated 7.5 million acre feet each to the upper and lower basins. He mentioned some of Arizona's efforts to successfully manage our water supplies, including Salt River Project, Colorado River Compact and Law of the River, the Central Arizona project. Arizona has been a leader in water conservation programs for areas within the five Active Management Areas, and also manages a recharge and recovery water banking program. He showed the relationship between gross domestic income, population, and water use, indicating that water use has remained rather steady because of management programs while population has grown significantly.

Dunham described the concept of water banking, using an underground storage facility either through recharge to a natural channel or constructing infiltration basins such as the CAP Agua Fria recharge facility.

A groundwater saving facility (GSF) uses a renewable water supply as a substitute for groundwater. This is the approach that Resolution is using for this project, which is permitted as a GSW. Most of these facilities have a 5% reserve that goes back to the aquifer, and there is also a benefit from additional water recharge to the aquifer over time, which is not being pumped. Dunham showed a map of the Phoenix Active Management Area, including the three GSFs (New Magma, Tonopah, and Roosevelt irrigation districts).

Questions, comments, and discussion from the group included the following:

- Is there a formula for evaluating how much of this water evaporates versus being recharged?
 - Yes, evaporation rates tend to be higher at certain times of year, and this is calculated in models that the state uses.
- David Stanley clarified that, of the 275,000 acre feet of water Resolution is banking, 219,000 acre feet of storage is permitted in New Magma Irrigation District (which is located in the Phoenix Active Management Area) and the rest is being stored in the Pinal Active Management Area.
- What is an AMA?
 - Established in 1980, these are areas generally near urban centers that are heavily regulated and include conservation requirements. Groundwater

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rights were assigned at the time, and no new rights have been issued. There are strict requirements for pumping groundwater in these areas, and new users must prove a long-term adequate supply before being permitted. The five AMAs include Prescott, Phoenix, Pinal, Santa Cruz, and Tucson.

- Does Resolution's pumping occur in an AMA?
 - Yes, both in the Phoenix and Pinal AMAs.
- How is the boundary defined?
 - Based on the groundwater basin, which is a distinct hydrologic unit that is separated from adjacent units.
- After paying for the credits in the New Magma Irrigation District, where does Resolution then pump the water from?
 - Under state law, they are allowed to take it from anywhere within the AMA, subject to well spacing criteria and other regulations. The greatest supplies will probably be found near the middle of basins rather than in the foothills and mountains.
- With the drought in the Colorado River basin, will there be cuts in Arizona's allocation of CAP water?
 - After 10 years of drought, the state is doing pretty well. However, the Bureau of Reclamation just issued a report suggesting that there is a 50% chance by 2016 that there will be cuts in the river allocations, increasing slightly by 2018. ADWR is responsible for managing the CAP water. Unfortunately, CAP is the most junior right on the river, so we'd be the first one to be cut. Within the state's allocation, agriculture has the lowest priority and so would be the first cut by a small percent.
- So, what are the chances that Resolution would not get the amount of water they need for the project if they're relying on agricultural water?
 - The state is now looking at how any reductions would be shared. We currently use every bit of our full allocation, either for use or for banking. There are some municipalities that won't use their full allocation, and we may be able to move some of these supplies to agriculture to 'lessen the pain'. Because of banking, the state has about 8.5 million acre feet in storage in case of emergency – this would last for two to three years at the current usage rates.
- Would these conditions impose restrictions on the recovery of banked water?
 - No, if you've paid for it, you will be able to recover it.
- How will ADWR regulate Resolution's water use for this project?
 - ADWR must approve the banking agreement. They will permit all well sites, which will require a monitoring program to assure that pumping is in

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accordance with permitted amounts. There will be meters on the wells that will be inspected occasionally; there is only one well inspector for the entire state. Monitoring data is publicly available.

- What about outside of the AMA?
 - There are no groundwater rights or any limitations on groundwater use outside of AMAs in rural areas.
- To get credit for banked water, can dewatering water be released in Queen Creek for credit?
 - Yes, Resolution would need a recharge permit from ADWR and an Aquifer Protection Permit from Arizona Department of Environmental Quality. The state evaluates whether this would cause 'unreasonable harm' to another party.
- Are the recovery wells going to impact our water in Queen Creek and Superior?
 - We don't know that. When Resolution asks for a permit, they need to demonstrate that there will not be greater than a 5-foot decline in water levels over a 10-year modeling period. This would likely be done through pump testing and modeling.
- If the model shows that there wouldn't be a negative impact on Queen Creek wells, what happens if there is, in fact, a negative impact later on?
 - The state has never pulled a permit after the fact. Historically, most declines in well levels that are seen are regional in nature and it's very difficult to attribute that to a specific well or user.
- Does the state have the authority to make a user cut back on pumping if there are negative impacts on other wells?
 - Dunham doesn't know the answer to that. If over-pumping or a violation of the permit occurs, ADWR would have authority to take action.
- Are the shafts considered "wells"?
 - Dunham is not sure about this— We would need to check the statutes. It is an artificial hole in the ground, so it might be logical to define it as a well...
- Is there a public comment period for installing a well?
 - Yes, there will be public notice in the media during the permitting process, and after the permit there is an appeals period if needed.

Update on the Shaft #10 Situation

Peacey explained that there was excessive heat discovered at the bottom of the shaft and, for public safety reasons, Resolution has had to reduce the work force temporarily. Copies of a letter to the group have been distributed in the meeting packets. No one had any questions about this.

Public Comments

Several visitors said that they had learned a lot about water issues, and thanked Mr. Dunham and the group.

Final CWG Comments and Next Meeting Agenda

The next meeting will be an extra meeting on Nov. 4 for Resolution to present the mine plan of operations. The meeting after that is on Nov. 14, and we've asked the State Land Commissioner to talk about state land issues. We will also be inviting a specialist from Arizona Department of Environmental Quality to talk about water quality and air quality. The group decided to have only one meeting in December. There was discussion about the upcoming Queen Valley public meeting on Nov. 13. Cecil Fendley and Bruce Wittig will both be there and are able to answer questions.

Other comments included:

- What is the status of the land exchange?
 - Resolution doesn't know when it will get back to the floor of Congress. It could still be this year.
- Will the location of the 2 wells near the CAP be part of the NEPA process?
 - Yes, they will be included in the plan of operations, and the locations will be further refined through the NEPA process.
- Can Resolution negotiate with landowners to address well impacts, in addition to what's required by law?
 - Yes, Resolution could do things like joint fact-finding, hiring an independent third party to do studies, and similar.
 - Dunham offered that certain 'index wells' are automatically monitored, for example. The state can respond to requests to install transducers on certain wells, and the data from them would then be public data. Bruce Wittig noted that the new well in Queen Valley will have this.

Future meeting topics that were previously suggested include:

- Water quality & air quality issues
 - ADEQ representatives will be invited to discuss
- Cultural resources
- What's the next step and timeline for a tailings site selected for the mine plan?
- Public health issues – particularly BHP and community cancer issues
- State Lands issues (to be covered on Nov. 14)