Meeting #9
October 7, 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
Cecil Fendley – Queen Valley Water Board
Martin Navarrette - Superior Little League
Jeff Bunkelmann – Central Arizona College

Community Working Group members not present:

Lynn Heglie – Superior business
Roy Chavez – Retired Miners & Concerned Citizens
Leslie Bryant – Queen Valley business (resigned from CWG)
Frank Stapleton – Cobre Valley Regional Medical Center (resigned from CWG)

Resolution Copper:

Vicky Peacey - senior manager of approvals, communities & environment
Andrew Taplin – project manager

Guests:

Janice Pratt, Central Arizona College
Ciera Navarrette, student, President of Superior Junior Senior HS Student Council
Hank Gutierrez – Superior resident and community leader

Facilitators - Godec, Randall & Associates (GRA):

John Godec
Debra Duerr

Housekeeping – Member Update: New, Resigned, Possible Additions

John Godec told the group that Frank Stapleton has resigned from the group because of time constraints. We're looking for a replacement from Cobre Valley Medical Center. Also, Leslie Bryant has resigned. Pam Bennett suggested that she be replaced by Bruce Wittig of Queen Valley Water Board, and everyone agreed. We're continuing to recruit, so if anyone has ideas please let us know. Godec has a meeting with high school students next week to explore their interest in joining. Because we have a couple of new members, Godec asked everyone to introduce themselves.

Water: Resolution's Plan
Presenter: Vicky Peacey

Godec introduced Vicky Peacey to provide an overview of Resolution's plans for mine and tailings water management. He noted that we have engaged a representative from the Arizona Department of Water Resources (ADWR) for the next meeting on October 24, so we'd like to hear any questions or information needs that the group may have, and we'll pass them on to the ADWR representative before the next meeting. If there are still water-related topics that need to be addressed after that, we'll plan how to include them in future meetings.

Vicky Peacey apologized that both of Resolution's water experts are out this week, so she'll be doing the presentation but stated that she in fact has quite a bit of experience in hydrological issues. She showed a map that includes the mine site and monitor wells in and around the mine area saying that Resolution has spent several years testing water supply and quality, to determine if the rocks around the mine contain or retain water. She noted that this is especially important in the Queen Creek area, where the soil is alluvial (sandy). Tests have found that these rocks don't release water easily, so can't be used to supply mine water needs.

Because of this, Resolution needs to look for other water supplies. Possibilities include groundwater, both deep and shallow (considered to be largely non-renewable sources) and renewable sources like surface water and the Central Arizona Project (CAP). She explained generally how the Central Arizona Project works and the history of the Project, and noted that Arizona doesn't currently use its entire allocation of Colorado River water.

The Resolution Copper Project needs water for processing, mine cooling, and potable uses. The total consumption is expected to be about 12,000 acre feet per year on average over the life of the project, with a maximum of 17-20,000 acre feet at any one time, most likely in Spring before monsoon season.

Peacey said that the project will get its water from CAP allocations and water “banking”. They will also dewater the mine and use the water from this process, but this will not provide enough water for the entire need. Consequently, Resolution is purchasing CAP water on behalf of farmers, who then do not pump groundwater but use the CAP water, leaving the groundwater in place for future use by the Resolution Copper Project. Resolution takes the credit to the groundwater, which is “banked” for future use at the mine. The water is being stored in the New Magma Irrigation District. From this agreement, Resolution has already purchased rights to 275,000 acre feet – enough to operate for about 20 years. Peacey showed a slide that illustrates the impact of water banking over time. There will be a net-zero effect on groundwater depth at the end of the project, since the water used by the mine simply replaces water that would have been used by agriculture. To retrieve the groundwater, wells will be installed and transported in two new pipelines with booster stations. These impacts will be assessed in the project Environmental Impact Statement.

A third source of possible water is direct withdrawals from the CAP canal, purchased from existing water users if they have water to sell. Resolution has put an application in to ADWR for an allocation of Non-Indian water, but does not know if that right will be granted.

Impacts of Resolution mine and tailings operations include dewatering, subsidence, seepage from tailings, and placement of tailings in drainages. Mitigation measures will be required through federal and state regulatory processes and permitting. These might include surface water diversions, seepage collection and recycling, and reclamation.

Regarding mine groundwater impacts, Resolution has done groundwater testing and modeling to see how it will perform. There are several geologic faults that act as confining units for groundwater flows. The mine is located in a deep groundwater system; surrounding aquifers are confined to other geologic formations. Peacey showed a graphic that illustrates what groundwater monitoring has been showing. She also showed a map illustrating geologic characteristics, showing that formations are mainly “aquatards”, which will prevent widespread regional impacts from the mine.

Impacts on surface water from the tailings disposal area include loss or re-routing of surface drainages. Groundwater monitoring wells will be placed all around the tailings pile, and progressive reclamation should help to manage water resources. “Best available technology” will need to be used to control and manage water.

Comments and questions from the group included the following:

- A member noted that Resolution previously said that the maximum would be 16,000 acre feet.
    - Peacey said these estimates are still being refined based on design progress.
- For comparison, Queen Valley uses about 120 acre feet per year; Superior 160-180 acre feet per year.
- Does Resolution expect to bank enough water for the whole term of the project?
    - Yes
- How far east of the CAP canal will this pipeline be?
    - About one mile.
- Will you use the deep wells that Resolution owns now?
    - No, those are supply wells for Superior.
- Has there been an increase in the depth to groundwater since the farmers have been using CAP water?
    - Yes.
- A member noted that Salt River Project is also pumping groundwater in this area to replenish the canals.
- What is Arizona’s allocation of CAP water?
    - Peacey said she would find out the answer to this question.
- Could Resolution pump water out of the subsided mine and put it back into Queen Creek?
    - Yes. However, that water will likely have higher salt levels (total dissolved solids) than the original creek water. They also need to meet “wet testing” criteria to test quality. They can build treatment plants, e.g. reverse osmosis, to improve discharge water quality.
- Please clarify that Resolution can get 10% of its water needs from dewatering?
    - Yes, about 1,800 acre feet per year can be salvaged from mine dewatering.
- Will operations dry up Devil’s Canyon and Pinto Creek?
    - A small part of the subsidence will be located in the upper reaches of Devil’s Canyon watershed, so there will be some impacts. These would

need to be mitigated, and include either surface water impacts or groundwater impacts in the form of drying up springs and seeps.

- Where will potable water come from?
  - Arizona Water Company
- What do you mean by surface water? Flowing water?
  - Sometimes streams have surface flow, sometime they're dry, and sometimes they flow beneath the surface. Impacts to all of these would need to be mitigated.
- Will we see the water that's replaced in surface drainages?
  - No, probably not; it will likely go the groundwater.
- Where would replacement water come from?
  - We don't know that yet; could be treated mine water, for example.
- Is it possible that the CAP allocation will be decreased?
  - That's a question that might be appropriate for the Department of Water Resources. It's possible that during a drought water sources could be reduced. If so, agricultural allocations are the first to be reduced.
- What agency is responsible for overseeing this?
  - Multiple agencies: ADWR will review monitoring results and regulate groundwater withdrawals; the Arizona Department of Environmental Quality will require an Aquifer Protection Permit to ensure water quality. Water replacement will be overseen by the Forest Service.
- What constituents could leach from tailings?
  - Salts, sulfates mainly. Resolution will not be allowed to have acid drainage.
- How much water is it possible to bank?
  - Peacey didn't know but said she would find out.
- Have any activities affected the Queen Valley area yet? It's only been monitoring wells so far, correct?
  - Peacey has a report from Montgomery Associates that shows there have not been negative effects. She noted that some members of the group from the Queen Valley area have said they've seen impacts to water recharge, and lower groundwater recharge rates and levels in wells around Queen Creek. We don't know if this attributable to Resolution or the drought.
- A member observed that, in the past, area residents didn't see decreases in wells because the mine was always pumping. It could be that this was during years of high precipitation, so there would have been more pumping and dewatering from the mine.

- What's happening to mine water now?
    - It goes into a lime treatment plant and then is transported 30 miles to the Magma Irrigation District, where farmers use it.
- Several members said that there might be good uses for this water in Superior rather than sending it to the irrigation district.
- A member noted that the Arboretum didn't want the water in the past.
    - The Arboretum representative clarified that is was because of the water quality and unknown effects on wildlife and plants; if a treatment plant had been offered the Arboretum would likely have taken it, but Resolution decided it was cheaper to send the mine water to the irrigation district.
- Peacey noted that a treatment plant is an option, but the challenge is where to put the waste solids/brine from the process; there isn't room for it at the potential plant site, and there is not a commercial market for it.
- Queen Valley representatives said that the community wants to know what happens if water is contaminated, or if wells run dry in the future. This is one of people's foremost concerns, based on historic problems.
    - Resolution understands that. They can confirm that they need to comply with all applicable regulations. Perhaps a joint fact-finding process with the community should have been conducted, and this may be the best approach for the future.
- Shouldn't the tailings have a liner?
    - An artificial/synthetic liner might not be needed, based on the underlying geology; or it may be required depending on the NEPA analysis and the requirements of ADEQ. Liners are often constructed of existing natural clays and materials.
- This is a complicated issue, and it's hard to present it in a way that everybody can understand. If another water meeting is held in Queen Valley this fall, it should be clearly presented and needs to be kept on topic.
- Can there be monitoring wells closer to Queen Creek?
    - Resolution does monitor some private wells along Queen Creek, and there will be additional wells under the tailings.
- How often are these monitored?
    - About every week to every month. Queen Valley Water Authority is also installing a monitoring well, and once the well is in production, there will be a transducer on it that will provide real-time data.

Public Comments

A visitor said that he's learned something today, both from the presentation and from the group's conversations. Another observed that the issue of what's going on with the Central Arizona Project is of great importance, given the uncertainty of future water availability and resources.

Final CWG Comments and Next Meeting Agenda

Pam Bennett informed the group that there will be a water forum in Queen Valley in November, when there will be many questions about impacts to Queen Creek and local wells; Resolution should be prepared to answer these. Some members noted that there is a lot of misinformation about water uses and impacts, and suggested that it might be a good idea to send information out ahead of time. There was discussion about the format of the forum. Another idea might to be to ask Resolution to come to the Homeowners Association meetings on a regular basis.

A member noted that a letter from San Carlos was sent to some community members indicating the people who are opposed to the mine; she observed that this list of opponents isn't accurate.

Future meeting topics that were previously suggested include:

- Water issues
    - Doug Dunham from ADWR will come to our next meeting on October 24.
    - ADEQ for water quality issues (
        - A member suggested Donna Caodron, who is a drinking water specialist.
        - Godec suggested that we might also need someone from the aquifer protection program.
- 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
    - Godec can invite someone from Arizona Department of Health Services who is involved in the study, if desired.
- State Lands issues

Please submit any clarifications and additions to:
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