

**July 10, 2019**  
**MEETING SUMMARY**

**Meeting Attendees**

*Community Working Group members present:*

Pam Bennett – Queen Valley Community Liaison  
Anthony Huerta – Town of Superior  
Arlynn Godinez – Superior Unified School District Board / Maricopa County  
Todd Pryor – Town of Superior  
Jim Schenck – Rebuild Superior and Legends of Superior Trail  
Silvia Werre – Top of the World  
Ricardo Provencio – United Superiorites  
Pamela Rabago – Superior Chamber of Commerce  
Bruce Wittig – Queen Valley Fire Department  
JoAnn Besich – Superior Optimist Club  
Hank Gutierrez - Superior Copper Alliance  
Lynne Nemeth – Boyce Thompson Arboretum  
Mila Besich – Town of Superior  
Fernando Shipley – Cobre Valley Regional Medical Center Board  
Tiffany Rowell – Superior community  
Woody Cline – Gila County Supervisor  
Cathy Melvin – Gila County  
Rick Cartier – Superior Chamber of Commerce

*Community Working Group members not present:*

Fred Gaudet – Arizona Trail Association  
Karen Kitchayan Jones – San Carlos Apache Tribe  
Tino Flores – Copper Corridor Economic Development Coalition  
Anna Flores – Town of Kearny  
Sylvia Kerlock – Town of Winkelman  
Jeff Bunklemann – Central Arizona College  
Gloria Ruiz – Town of Winkelman  
Martina Burman – Town of Kearny  
Tweedy Armitage – Superior Historical Society  
Lynn Martin – JF, JI Ranch  
George Martin – JF, JI Ranch  
Richard Matthews – Queen Valley Water Board  
Cecil Fendley – Queen Valley Water Board

*Resolution Copper Company:*

Hesston Klenk – Resolution Copper Communities Manager  
Vicky Peacey – Resolution Copper Senior Manager Environmental  
Brian Seppala – Resolution Copper

*Facilitators – Godec, Randall & Associates (GRA):*

John Godec, Debra Duerr

*Speakers:*

Vicky Peacey - Resolution Copper Mining  
Greg Ghidotti - Resolution Copper Mining  
Tim Bailey - Montgomery Associates

Doug Oliver – WSP Global, Inc.

*Public Guests:*

Steve Casillas

James E. O'Donnell – PG Agua

David Herrera – PG Agua

Tony V. Solis – Town of Superior

Alison Hing

Jesse Garner - PZcom

## **Introductions & Housekeeping**

John Godec welcomed everyone. He noted that the CWG has now been meeting for 6 years. He asked those present to introduce themselves. He asked if anyone had anything they wanted to bring up. It was reported that IMRIS will be giving a presentation on their proposed perlite mine expansion on Friday at 6:00pm at Town Hall, with the main topics to include access to LOST and employment. They are reopening the Camp David pit along Forest Road 4. Access to the pit needs to be restricted due to MSHA regulations. They are developing a lower grade pit to provide materials for water-resistant gypsum board.

Godec pointed out the maps of the RUG plan including a new campground at Castleberry, which are posted on the wall for CWG review and information. He said that the RUG had met this morning to review and discuss the campground idea.

## **Review of Water Paper Suggested by CWG**

Godec reminded the group that at the last meeting they asked the facilitators to do a summary of water-related discussions the CWG has had over the years. There is a 3-page summary in the CWG packets tonight, and a full 32-page document is posted on the website. This paper serves as an introduction to Resolution's talk at this meeting.

He noted that the Forest Service presentation at the March CWG meeting indicated a reduction in flows in Queen Creek of 18%. A similar presentation given at Queen Valley the following night included a slide showing these data. He said that he had talked with Mary Rasmussen at Tonto National Forest today, and she indicated that the Draft Environmental Impact Statement (DEIS) should be printed by mid-August. A public hearing in Superior is scheduled for Tuesday, September 10, which is the night before the CWG meeting. Rasmussen also said she would be willing to come to the October CWG meeting to discuss the DEIS and comments.

From Resolution, we would like to know tonight: What is the mitigation strategy for the initial dewatering and for stream diversions relative to impacts to Queen Creek.

In addressing a comment from the last meeting about Kearny's new wells, Hesston Klenk clarified that Resolution had asked Kearny if they had water to spare for Resolution to purchase – they did not and are having a water crisis. Resolution then approached Winkelman, who

offered to sell water. Apparently, Kearny's water situation is the most complicated in the region.

Another question from last meeting was whether Superior could be a water storage facility for Resolution. Vicky Peacey responded that there is no storage capability here since the geology of most of the area is comprised of bedrock which provides little or no storage capacity, while the Magma Irrigation District is underlain by alluvial sands. Alternatively, there's not enough space at Whitlow Dam for the large amounts needed, and the base is also rock and clay. Various uses of Whitlow Dam were discussed. Resolution will be storing about 300,000 acre feet of water.

### **Presentation and Discussion of Resolution Copper Project Water Use**

Greg Ghidotti – Resolution Copper Mining

Vicky Peacey said they will be going over what the Forest Service has done regarding groundwater impacts. Surface water impacts are different and have not been fully figured out. She told the CWG that Resolution only found out the results of the Forest Service assessment at the same time as the CWG did, at the presentation in March. Future supply is a big topic and could be the subject of a future meeting.

Peacey said that there is a difference between two aquifers located at the concentrator fault, whereby the common notion was that nothing would be affected west of this area. The main concerns were water in Queen Creek, effects on springs, and effects on wells. Resolution noted that they know what the effects of their operations are now, since they monitor that constantly, but the EIS looks out 200 years to evaluate the buildout of the cone of depression, so this was not an analysis performed in the past.

Greg Ghidotti showed a video of the mining process. Groundwater monitoring wells were shown from Queen Valley to Pinto Valley and to the south. Groundwater-dependent ecosystems (GDEs) were also plotted; these include seeps, springs, and some riparian areas. Resolution doesn't know for sure whether these are all connected to groundwater but a conservative approach was taken. A cross-section of the geology was shown including pumping of water over time. Through 2013 there were no reductions in any wells on the west side of the concentrator fault or to the east in the White Tail formations or Apache Leap Tuff, indicating that the mine site (located in older bedrock) is not connected hydrogeologically to the adjoining formations.

During mining, the ground surface will begin to crack at 8 years, and caves over the rest of mine life to a depth of about 1000 feet. The mine is located mostly within the Queen Creek Basin boundary, which is why surface flows to Queen Creek are diverted into the crater. Some design measures may be able to be used to prevent some of the drainage into the crater. Devils Canyon is in the Apache Leap Tuff, and it was observed that Apache Leap Tuff is related to groundwater, and parts of this will be drained into the pit. This formation being breached is both a groundwater and a surface water issue, then.

A comment was made that the mine dewatering will affect the groundwater levels regionally, and, given drought conditions over many years, refilling aquifers is unlikely.

A CWG member asked if there is a plan to use the collected water (in the “bathtub” that will be the crater) at the end of mining? Resolution doesn’t know what the quality of the water will be at that time so can’t say what it could be used for.

Ghidotti clarified that the 18% reduction in Queen Creek flows is calculated during storm events, and is cumulative over the mine life. He noted that recharge doesn’t generally occur from storm events because the runoff in the mountains moves too fast to recharge. Therefore, there is not a 1-to-1 correlation between the amount of diversion and amount of recharge. It was mentioned that a current function of Whitlow Dam is to slow down flows when needed.

A CWG member observed that it’s nearly impossible to predict what fracturing will do to water supplies. There are people here tonight who remember what happened when the tunnel was build in 1952 and certain stream flows stopped “overnight”.

Tim Bailey of Montgomery Associates talked about GDEs. He was on the groundwater working group put together by the Forest Service, which included independent and agency experts. GDEs were shown on a map. These include springs and streams, as well as areas at Top-of-the-World, Superior, Boyce Thompson Arboretum, and Queen Creek as groundwater-dependent communities. These GDEs were identified over a period of years through field surveys, testing, and modeling, which have identified 16 springs, 8 stream reaches, and 3 communities. He mentioned that Ranch Rio Tinaja is not connected to the regional groundwater but is shallow and ‘young’. A spring in Devil’s Canyon was shown as an example of a GDE in the Apache Leap Tuff. Peacey noted that the Forest Service characterized GDEs very conservatively, if there could be any question or uncertainty.

Doug Oliver of WSP described the groundwater modeling process that was conducted as part of the impact assessment. The interagency group agreed that predictive runs would be for 200 years. The life of mine is 52 years including 12 for construction and 40 for operation. Post-closure is 148 years. the No Action alternative was considered to be pumping from shafts 9 and 10 only. The Proposed Action adds block cave dewatering. Results are shown separately for the Apache Leap Tuff Aquifer and the Deep System west of Apache Leap.

The models looked at effects on each GDE (seeps and springs and wells not in the perched alluvial system) over the 20-year period. Oliver showed graphics of the 10-foot drawdown in the Apache Leap Tuff at 52 years with the Proposed Action impact. This line comes close to Top-of-the-World and could have effects on Devils Canyon to the south. Impacts will continue past mining through the post-mining period out to 200 years. A CWG member pointed out that the concern of this group is groundwater that people depend on. The drawdown in the ‘deep system’ to the west of the Apache Leap Tuff (under Superior) was shown at the end of life-of-mine at 52 years. In the No Action alternative there is drawdown from mine shaft pumping, and the Proposed Action creates more drawdown in a smaller area nearer to the Leap. It was noted

that Superior does not get its drinking water from wells in the immediate area. However, there are a few wells that are 350-400 feet deep and these could be impacted.

A CWG member asked if this will affect the IMRIS perlite pit, which is where the Arboretum gets its water. Resolution thinks there is a possibility this could happen.

The CWG asked for clarification about whether this will affect both aquifers, which seems to be contrary to what was reported before. It was clarified that both will be affected. The discrepancy may be because the current models look out farther into the future than was previously evaluated.

CWG members felt that mitigation should be in place now, since pumping has been going on for 10 years. They wondered what the baseline was before Resolution started pumping and what has this region already lost. Peacey noted that you'd have to go back 100 years before Magma to see what the real baseline is. She agrees that mitigation should start right away. If a seep or spring dries up, Resolution probably couldn't bring it back but could possibly replace it. Monitoring needs to start right away.

Resolution has developed a draft mitigation and monitoring plan in response to the DEIS analysis, which was completed a couple of months ago. This plan includes a commitment that monitoring will continue with regional indicator wells for impacts to GDEs. If impacts are indicated, another well would be installed closer to the GDE. The types of mitigation available include:

- measures designed to replace current uses
- passive mitigations (preferred), such as a spring box, guzzler, or stormwater capture
- active mitigations, such as solar wells

An illustration of a spring box was shown. This is a box built into a hillside that captures water and releases it through a pipe. A guzzler is, essentially, a stock tank for wildlife. Stormwater capture would be performed using a series of check dams to capture and retain water that would be released throughout year. Oliver showed an example of mitigation at the Bitter Springs, a newly discovered spring, using a spring box.

It was noted that these mitigations only work for specific sites on a case by case basis, but they do not bring the groundwater up for an entire area. Regional lowering of groundwater is the background cause of the GDE impacts. There is no "magic bullet" for massive groundwater recharge.

Town of Superior CWG representatives said that they are trying to save their dying riparian area which is already compromised, and now it appears there will be additional impacts. They said the town should have been included in discussions about possible mitigation. Peacey emphasized that Resolution hasn't known this information about groundwater impacts for very long and has just found out about surface water impacts. Resolution is still working on a mitigation plan, therefore, and would appreciate another 30 days before considering it final. Another CWG member recalled that a couple of years ago Rio Tinto made a conscious decision

to reduce its engagement with the community, and observed that this is the result. The community should have been involved in mitigation planning rather than having it dictated to them.

A CWG member suggested that sometime in the next 20 years all the wells will need to be dug deeper, so Resolution should be proactive about doing this before it happens. Peacey agreed and said that monitoring would start immediately upon issuance of the Forest Service Record of Decision. There was discussion about starting mitigation before impacts are felt, and the need to have these commitments and actions in place in case the mine changes ownership or some other unforeseen event takes place. Peacey noted that the 18% loss of surface water in Queen Creek seems to be a major concern. In response to this she reported that Resolution still has no surface discharge permit, which has been held up in litigation. She feels that Resolution needs to find a way around the continuing need to renew discharge permits, which is likely to be litigated every few years. She wants to find a way to put the water back in the creeks.

Peacey apologized for not working more closely with the CWG recently while they were concentrating on the DEIS. She asked the CWG for time to discuss in detail the monitoring and mitigation plan at a near future date.

The Mayor emphasized that everyone needs to work more closely together during what she considers to be this narrow window of opportunity to influence decisions and future outcomes.

### **Public Questions & Comments**

There were no comments from the public.

### **Next Meeting**

The next CWG meeting is planned for:

**Wednesday, August 14**  
**5:30 pm**  
**Superior Chamber of Commerce**

The planned topic for the August 14 meeting is Bronco Creek Exploration's plans. Resolution asked to return to discuss mitigation in September.