

September 12, 2018
MEETING SUMMARY

Meeting Attendees

Community Working Group members present:

Bruce Wittig – Queen Valley Fire Department
Hank Gutierrez - Superior Copper Alliance
Pam Bennett – Queen Valley Community Liaison
Sylvia Werre – Top of the World
Jeff Bunkleemann – Central Arizona College
Pamela Rabago – Superior Chamber of Commerce
Anthony Huerta – Town of Superior
Richard Matthews – Queen Valley Fire Department
Roy Chavez - Concerned Citizens and Retired Miners
George Martin – JF, JI Ranch
Arlynn Godinez – Superior Unified School District Board / Maricopa County
Tiffany Rowell – Superior community
Lynn Martin – JF, JI Ranch
Fernando Shipley – Cobre Valley Regional Medical Center Board
Rick Cartier – Superior Chamber of Commerce alternate
Tweedy Armitage – Superior Historical Society (Prospective CWG member)

Community Working Group members not present:

Todd Pryor – Town of Superior
Karen Kitchayan Jones – San Carlos Apache Tribe
Fred Gaudet – Arizona Trail Association
Jim Schenck – Rebuild Superior
JoAnn Besich – Superior Optimist Club
Cecil Fendley – Queen Valley Water Board

Resolution Copper Company:

Hesston Klenk – Communities Manager

Facilitators – Godec, Randall & Associates (GRA):

John Godec, Debra Duerr

Speakers:

Mike Crimmins, University of Arizona

Public Guests (and others not signed in):

Mila Besich-Lira – Mayor, Town of Superior
Robert McConnell & Cindy McConnell
Melvin Werre
Tim Bayley – Montgomery Associates
Todd Keay – Montgomery Associates
Lane Read
Jesse Garcia

Introductions & Housekeeping

Members reported that the Panthers football team has a 4-0 record so far this year and are favored to win the championship; but “you can’t count your chickens”. Upcoming events include Second Friday, a car show, and Fiesta this weekend. John Godec pointed out the extra furniture in the room, which has been donated to the Chamber of Commerce. He told members to call Sue Anderson if anybody knows of a business that could use any of these items.

Godec updated the group on the search for new CWG members. He introduced Tweedy Armitage of the Superior Historical Society who is here tonight as a prospective member.

Subcommittee Updates

The Community Monitoring Task Force will go out in the field on September 26 for the third-quarter well sampling. Bruce Wittig, Hank Gutierrez, and Richard Matthews (as a replacement for Cecil) said they will be attending.

The RUG hopes to meet in October to learn about Resolution’s mitigation consultations with Forest Service.

Statewide Drought Issues

Mike Crimmins, University of Arizona

Godec introduced Mike Crimmins, a climatologist from the U of A. He noted that Crimmins is not here working for Resolution or as a representative of the company but is an independent researcher. Crimmins said that he is a statewide specialist with the university’s Cooperative Extension Service. He clarified that he is not a water expert but deals with climate. In this regard he has been a member of the Governor’s Drought Task Force for 10 years, and has worked with the Martins and the Forest Service in the past.

In his presentation, Crimmins provided a definition of drought as an extended period of below-average precipitation. Drought has effects on natural and human systems. Sensitivity to drought can sometimes be mitigated, through planning and other measures.

Drought happens, and is part of normal climate variability; it is not uncommon based on paleo records. Drought is different from aridity in that drought is temporary, whereas aridity is caused by more than temporary increasing temperatures and evapotranspiration. He described the hydrologic cycle, noting that Arizona has a high rate of evapotranspiration. He showed examples of this from Safford data, where water evaporates at a higher rate than it is replaced through precipitation (creating a water deficit), and from Flagstaff where there is a similar situation even though it receives a higher amount of precipitation.

Characteristics of droughts include

- Meteorological – below average moisture

- Hydrological – impacts on water resources
- Agricultural – insufficient soil moisture
- Socioeconomic – impacts on people and social systems

Some areas of Arizona are rated at a “D4” drought level, which is exceptionally dry, according to the US Drought Monitor. This situation has occurred in about the last year. This is partly due to the fact that last year was a strong La Nina with very little precipitation. This equates to record dries, in the lowest 10% of the scale. The last year also equates to very high temperatures.

Crimmins showed a graph charting precipitation in Superior since the beginning of 2016 that indicates there has been a great deal of climate variability over this period, with some wet monsoons, dry winters, wetter winters, and dryer summers – in other words, a little bit of everything. He showed illustrations of this year’s monsoon season, which varied in intensity at various locations around the state. He noted that although the last few months have been wet, we are quite dry when averaged over longer periods. There has not been an extended wet period in Arizona since the early 1990s. To approximate this, we would need to have a wet summer/wet winter/wet summer consecutively. This one wet summer has not ended the drought. In essence, “normal” for us is dry and wet is an anomaly.

Precipitation by year since 1900 was illustrated, showing that the wettest years over the century were 1902, 1941 and 1992/1993, whereas the current period is very dry, representing the worst drought conditions in a hundred years. The ‘old school’ Palmer Drought Index confirms that this is one of the four worst periods in the reporting timeline, and these conditions would only be expected once or twice per century. In terms of predictions, it would not be unexpected for the current drought to last another 10 years. There is a better than 50% chance of an El Nino this coming year. NOAA seasonal precipitation outlooks predict above-average rainfall throughout the southern US tier. Temperatures, however, are predicted to be above the 1981-2010 seasonal average between now and May 2019. Temperatures have been above average for the past 20 years, with this August/September being the warmest on record.

Group comments and questions included the following:

- Intensive summer rains tend to run off and not recharge, while winter rains are longer duration and lower intensity, and recharge aquifers.
- What is going to be done to conserve water in the Valley; is the state doing anything to reduce water use?
 - Crimmins said this is not his area of expertise.
 - The facilitators will try to assemble a meeting that addresses water policy and planning.
- There are many opinions based on politics and money about the state of water resources in Arizona.
- We are in a 20-year drought. This region will take 20 million gallons of water per year out of the groundwater. What can be done about this?
 - This will be a topic for another CWG meeting.

- Is the Southwest getting more arid? Some scientists are now talking about aridification rather than drought.
 - That is a critical question that climatologists are wrestling with.
- Looking back over recorded time, is this situation worse than in the past?
 - Probably not as far as precipitation goes, but temperatures are warmer.
- There is a concern that groundwater levels will continue to drop if Resolution continues to withdraw groundwater, and it is not being replenished through precipitation.
 - Hydrologists from Montgomery Associates were in attendance and offered to come back for another discussion on this topic, which is quite complicated. They are doing work for Resolution.
- Does anyone in Arizona regulate water use and conservation?
 - Local water companies are supposed to monitor their resources and prepare contingency plans, as larger cities and the state do.
 - Areas that receive CAP water dampen the overall effect of drought, which can be very localized, because they receive constant amounts of water from that source. Reservoirs can manage drought better and more than groundwater management programs.
- Godec said that the CAP and the state are preparing drought contingency plans, and they have been invited to discuss their work with the CWG.
- A member noted that banking water doesn't mean that the water will be there when needed; this is a significant issue for the Resolution Copper Project.
- A member suggested that the CWG makes it clear when meeting presentations are about "science" or about "policy", so we don't get sidetracked.
- What is your forecast about how much longer this drought will last?
 - It's not possible to predict with any accuracy. "Plan for the worst, hope for the best." We know that multi-decade droughts occur in Arizona.
- If it's warming, wouldn't this encourage more El Nino activity?
 - This is a current topic of discussion in the climate community; so, we don't know.

Finalize Recommendations for Cultural Heritage Project Concepts

The group reviewed the description of the three concepts they developed as well as comments received from the community about these concepts. Comments submitted favored Theme 2, the train-related concept, although it was noted that this idea could only be implemented under certain conditions related to Resolution's processing plant and tailings locations; therefore, the group agreed that this should not be the only suggestion put forward.

There was discussion about combining the concepts inherent in Theme 1 and Theme 3. Members suggested that the elements of these themes could be developed over longer periods of time, with the innovation center being the best possibility for spurring economic development, and the train being the least likely and farthest out in the future.

The Mayor observed that the CWG has developed three themes, and the MOU asked for 3-5, so this exercise has been very helpful in focusing the feasibility studies. She emphasized that anything that's done will likely take quite a bit of time and will likely be staged. For immediate sustainability, the plan must be phased in. A goal of the Town of Superior is to provide higher education, so it will take time to build relationships with universities like UA, ASU or Colorado

School of Mines. It was suggested that we start with something that can be done now. The town noted that there are immediate needs in the next 2-5 years, so we should look for opportunities to combine these concepts with short-term projects as well. The Mayor gave a hypothetical example of adding a second story to a planned library that could serve as an innovation center.

The CWG agreed to put these three concepts forward to the joint Resolution/Town of Superior committee, and those representatives confirmed that the concepts would be sufficient as a starting point for evaluations. They may take elements of these to create additional concepts, as well.

Descriptions of the three concepts are as follows:

Theme 1. INNOVATION & CULTURAL CENTER

This could include a renovation of the Harding School on Main Street to be a showcase for history & innovation. Both Magma Mine history and hands-on displays including a virtual Magma Mine tour showing old traditional mining methods including a possible virtual/3D model of the historic West Plant site or a walk-through replica and oral history archived and accessible to visitors. Could also include learning opportunities on new and future mining methods showcasing the Resolution Mine along with a virtual underground tour. Lecture and theater space provided both for education and entertainment. The building might include the traditional Superior red brick, a remembrance wall or memorial to past miners. Saved Magma Mine equipment including the locomotive could be displayed. Ample visitor parking would be available with connections to Downtown Superior by shuttle and to area trails and recreational facilities.

Theme 2. DEVELOP A MAGMA TOURIST TRAIN & DEPOT

The filter and load out of copper concentrate by rail from Superior to San Tan would require reactivation the historic Magma Railroad, serving the Resolution Mine as well as other possible commercial users. Potentially, a tourist train from San Tan to Superior could become the premier tourist rail system running from a major metropolitan area to a historical mining town with world class outdoor recreation assets. A spur line might be built near the current Lone Tree gate and include a Magma Railroad Train Depot. Tourists could debark to visit Superior and the surrounding area. The Depot could feature the same things outlined in the Innovation & Cultural Center (Theme 1) along with a welcome area for arriving guests. It could be housed in a depot or split with the Harding school depending on what studies show to best layout and cost. The Depot/Innovation & Cultural Center would be built in phases along with the economic and population growth in Superior. This option preserves history, looks to the future, improves local quality of life, and provides a positive economic impact for Superior.

Note: Likely feasible only if Resolution Copper uses the existing Magma Rail Line for mine-related purposes that could be combined with tourist traffic. It is not believed to be economically possible to develop a stand-alone tourist train.

Theme 3. WEST PLANT SITE/SMELTER STACK RE-CREATION or COMMEMORATION

Find a way to recreate the smelter stack. Options suggested by the public include a cellphone tower with a wrap to make it look like the original brick round tower, a holographic stack, i.e. a permanent light show, or a light beam pointed skywards to commemorate the stake and past miners. Another possibility would be a model stack on a reduced scale. A display wall could be put around the side featuring historic photos, local art, mining and environmental history. The cellphone tower could generate income. The holographic stack or the light beam could be visible for miles attracting visitors to Superior.

Update on West Plant and Smelter Demolition

Hesston Klenk reported that demolition started on some of the smaller buildings at the West Plant site today, and the larger buildings will begin demolition shortly. On this schedule, the stack could be demolished during the last week of October or first week of November. Klenk reported that air quality data have been collected for several years, and the site is surrounded by air quality monitors now; these will track air quality during construction and there are provisions for managing fugitive dust, and work can be shut down for violations.

Discussion of CWG Operating Policies

John Godec asked the CWG members whether they would like to modify the operating policy to allow for elected officials to be members, since we now actually have several long-standing members who are serving in varying elected roles. The group agreed to do this. The group also agreed that the policy should be modified to remove the requirement for representing specific organizations. This will allow more flexibility in inviting new members who may not represent specific organizations but who have much to contribute. The group also agreed to do this. Godec was asked to provide a revised draft for review and adoption.

Public Comments

A visitor asked if Resolution has decided what they're going to do with #9 locomotive. Klenk responded that it will be saved, but its final resting place hasn't been determined. It could be incorporated into the innovation/cultural center.

Future Meeting Planning & Next Meeting

BHP will attend in October to discuss soil sampling work. Resolution representatives will come in November to update the group on tailings alternatives, since the Forest Service declined to come at this time. The group also asked that the topic of water be continued in future.

The next meeting is scheduled for:

*Wednesday, **October 12, 2018**
Superior Chamber of Commerce
6:00pm*