

II

SECOND COBRE VALLEY FORUM ON WATER



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**WATER RESOURCES
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SECOND COBRE VALLEY FORUM ON WATER

April 9, 2019

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COLLEGE OF AGRICULTURE & LIFE SCIENCES
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**WATER RESOURCES
RESEARCH CENTER**

The University of Arizona Water Resources Research Center (WRRC) promotes understanding of critical state and regional water management and policy issues through research, community outreach, and public education.

INTRODUCTION TO THE DAY

The University of Arizona Water Resources Research Center (WRRC) has worked with the US Bureau of Reclamation and various partners in Cobre Valley since 2015 on projects intended to build awareness of local water resources and build capacity to plan for and manage water resources challenges. The results of the WRRC's stakeholder-driven needs assessment in 2016-2017 indicated the usefulness of public forums to increase coordination and communication around water among natural resources managers and stakeholders. In order to discuss the status of water resources in the region, current and future, the US Bureau of Reclamation funded the WRRC in 2018-2019 to assess water resources planning and management needs. The Water Forums are part of the effort to establish reliable water supply and demand estimates in the region and incorporate stakeholder priorities to evaluate key drivers and implications for the future. These findings are open to the public, intended as a helpful planning tool with transferable information for stakeholders and natural resources managers.

On September 6, 2018, the First Cobre Valley Small Town Forum on Water brought together over 50 decision-makers and water managers in the Globe-Miami area to decide on top priorities and areas for possible collaboration to enhance the water resilience of the region. The Second Cobre Valley Forum on Water continued that conversation with expanded participation.

On April 9, 2019, the Second Cobre Valley Forum on Water highlighted the interconnectedness of the watershed. Long-term economic opportunities and social well-being are dependent on a balanced water budget, which is also intricately linked to the management and health of our riparian areas and forests. *With the assistance of a conceptual water budget, drafted by the WRRC, we invite the Cobre Valley region to think holistically and individually about their contributions to the local water picture and the future of the region.*

The WRRC organized the first and second Water Forum with the assistance of a steering committee representing local water interests, including: Tri-City Regional Sanitary District, Town of Miami, City of Globe, Gila County, UA Cooperative Extension of Gila County, Capstone Mining Corp., BHP, Gila County Industrial Development Authority, Central Arizona Governments, and the Water Infrastructure Finance Authority of Arizona. The event was co-facilitated by Rural Communities Assistance Corporation (RCAC), which also is represented on the steering committee.

We thank Forum participants and steering committee members for their commitment to the health of their communities and watershed.

FORUM 2 GOALS

- Explore water supply and demand in Cobre Valley in keeping with a vision for the watershed with consideration of social, environmental, and economic resilience
- Receive updates from working groups and partners on water-related activities
- Set next steps and discuss how different partners can continue to work together and attract new participation
- Engage with decision makers about how they would like to see their communities adapt to water scarcity and lead in regional coordination efforts on water

MORNING SESSIONS: UPDATES & INFORMATION SHARING

Opening the Second Cobre Valley Forum on Water, Joe Heatherly, Town Manager for the Town of Miami and Tim Humphrey, Supervisor Gila County, thanked the audience for their participation and engagement in a topic that concerns all of us – our water. Public awareness is key to creating change and protecting resources. It was well communicated that this region depends on a future built through collaboration among a variety of entities such as businesses, citizens, and local governments. Supervisor Humphrey emphasized the importance of data and information about surface water and groundwater, which has not always been readily available in the past. The dedication and knowledge of local stakeholders is key to

The following sections provide summaries of the brief presentations from a variety of speakers.

Presentation slides, if available, are posted at:

wrrc.arizona.edu/Forums-Cobre-Valley

Water Supply and Demand

Water supply and demand is a complex and multi-scaled effort. As a milestone marker, this event served as an opportunity to hear how other work in the watershed might affect supply and demand and assist in gathering feedback about topics that may affect the region's water resources.

Ashley Hullinger, Research Analyst, UA WRRC

Since 2018, the UA WRRC has been researching water supply and demand estimates in order to define the general status of the watershed: as 'gaining' (i.e. more water is coming in than is leaving and water levels are rising), 'losing' (i.e. more water is going out than is coming in and water levels are getting lower), or 'steady' (i.e. as much water is going in as coming out and water levels are steady). A local steering committee and working group provided feedback at different points along the way to help the WRRC draft a conceptual water budget, comparing water supplies and demands in the region. The data sources come from a variety of sources, including Arizona Department of Water Resources, US Forest Service, Western Regional Climate Center, US Geological Survey, and personal communications.

In recent history, human demands outstrip annual groundwater recharge (supply) in the Cobre Valley, generally indicating a water deficit in the region (a 'losing' picture). The picture broadens when you include non-human demands (evapotranspiration) and unused stormwater supplies, which increases the gap between supply and demand.

Keep in mind that this data is conceptual and can be improved with more data. Any water budget or hydrologic model is based on assumptions. It is only as good as the data provided to us. For that reason, more research is necessary to make the water budget more useful for planning and next steps.

A water deficit does not mean that there is an immediate crisis, but the chances for long term security are strengthened by proactive measures. Other regions in Arizona have severe water deficits that cause groundwater levels to drop dramatically with effects such as dry wells, subsidence, and the loss of wildlife habitat.

The WRRRC is also considering how the current situation might change over time in light of different factors such as drought, changes in industry, and economic development in the region. Next phases of work will potentially explore scenarios that test assumptions and factors that could possibly impact the water budget, either positively or negatively.

Deborah Patton, Rural Communities Assistance Corporation

Everything is connected. The Tri-City Regional Sanitary District (TRSD) is an example of people coming together and creating compromise around difficult, sometimes divisive decisions. Nearly 90% of TRSD existing properties are in violation of the US Environmental Protection Agency (EPA) Clean Water Act (CWA) and the Arizona Administrative Code (AAC). TRSD is moving forward with USDA Rural Development to fund a state-of-the-art wastewater treatment facility to serve the many landowners in the region with outdated and failing septic systems and cesspools.

Victoria Hermosilla, Cobre Valley Watershed Partnership

With funding from US Bureau of Reclamation's WaterSMART Program, a new watershed partnership is being formed in for the Cobre Valley region. Victoria is the new Coordinator/Facilitator for the Partnership, and she is gathering information from stakeholders in the region to inform her planning activities. The Watershed Partnership will be established with nonprofit status in 2019, and the WRRRC looks forward to working with the group on future projects and events.

Please contact Hermosilla with any questions or if you would like to become involved:

Victorian.Hermosilla@gmail.com

520-559-3145

Recreation and Environmental Stewardship

The WRRC asked Bethany Cheney and Christopher Jones to present topics related to environmental quality and quality of living in the region. For instance, as a watershed, the role of groundwater in maintaining riparian ecosystems is important to how we can connect the public to their water resources. In addition, these topics raise critical questions such as, “how will projected increases in temperature affect these systems?” Recreation is also highly connected to opportunities for generating economic opportunities, while aligning environmental values and recreation activities. Other key elements of this conversation include adequate management of ecological services, integration of green infrastructure, and protection of riparian corridors.

Pinal Creek Trail Demonstration Site

Bethany Cheney, Gila County Department of Public Health

Bethany gave an update on the current efforts to establish a demonstration trail site as the first leg in the Pinal Creek Trail. This project has been in the works for almost 30 years, beginning in 1992 with the Pinal Creek Linear Park Concept Report drafted by the University of Arizona College of Architecture. In 2015, the Pinal Creek Trail Committee has been trying to create footholds and put shovel to the ground. In 2018, as part of the Recharge our Community Economy workshops, the Pinal Creek Trail demonstration site was identified as a potential first step in supporting a Regional Trail Concept that would bolster economic activities in and connections within the region.

In 2019, the landowner, BHP, authorized site access to begin planning of the demonstration site. Several next steps are in progress and will need to be carried out in order to see this dream come to fruition. A formalized agreement with BHP is necessary to build the demonstration site on their property. Once funding is obtained, a surveying and construction planning may begin. The Pinal Creek Trail Committee hopes that demonstration site will illustrate the many benefits of a local outdoor recreation site, and how it can connect to a larger trail system including existing sites such as the Old Dominion Mine Park.

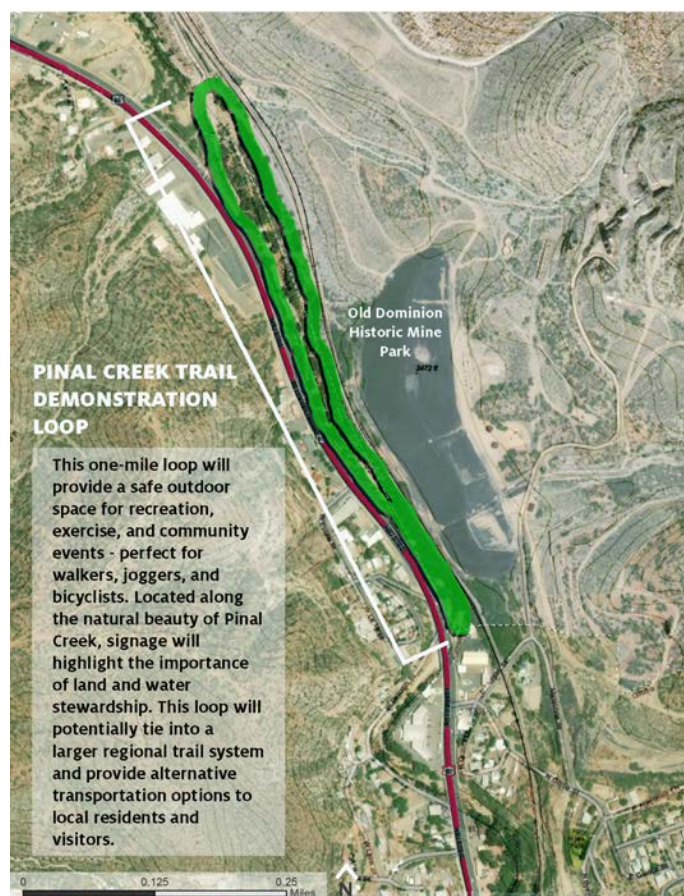


Figure 1. Pinal Creek Trail Demonstration Loop

Future of Cottonwoods in Cobre Valley

Christopher Jones, County Agent, Gila County Cooperative Extension

While trees use water, they also provide numerous benefits such as shade, heat island mitigation (lower temperatures), increased water infiltration, decreased erosion, and increased property values.

Many people in Globe-Miami value the presence of cottonwoods and sycamores along the waterways in the area. However, many people do not realize that these trees are reliant upon a variety of factors to live and recruit new generations of trees, such as groundwater levels, flooding frequency and duration, among others. Obligate riparian (trees willows, cottonwoods, sycamores, and ash) and shrubs that are restricted to streamside zones and their roots require access to groundwater. Other types of vegetation can be facultative species that are abundant in, but not restricted to, the riparian areas, including hackberry and desert willow. If local residents agree that they are a natural resource that is valued for environmental, social, and intrinsic values, then there may need to be steps to preserve them into the future.

Jones opened up an interactive discussion with the audience with questions such as: What does water for riparian ecosystem needs mean? How do we make sure our riparian area trees get the water that they need?

Some responses and counter-questions from the audience included:

- Several trails are proposed near riparian areas - perhaps channel restoration can help slow down water and let it infiltrate the shallow groundwater, helping provide water to trees.
- A study of the hydro-ecological system of these local waterways would be helpful in documenting the best ways to move forward.
- If we remove the trees, there will be more water available.
- Can BHP help with this issue?



Figure 2. Fremont Cottonwood (source: Al Schneider)

A certain amount of water is needed in a watercourse to sustain a healthy ecosystem; this means sufficient quantity with sufficient magnitude, frequency, duration, timing, and rate of change to support current and future trees. In light of these requirements, it may be helpful to form a working group focused specifically on environmental flows in the area. The Cobre Valley Watershed Partnership will also likely be a player in studying, restoring, and preserving healthy, native ecosystems.

Water and Economic Development

Water is essential to maintaining or growing the economic activities in Cobre Valley. To date, the primary water user has been the mining industry. However, stakeholders have pointed out that the cyclical nature of mining generates economic uncertainty. Before decisions are made, it is important to be prepared with information and ready to evaluate development and economic options in regard to their water use. Through WRRRC engagement and other local initiatives, community members have expressed interest and momentum around creating and building robust and diverse recreation options to attract ecotourism development that could generate economic opportunities that align with environmental and recreational values.

University of Arizona Cobre Valley Planning Student Project

Anthony Aceves, Holly Barton, Jhentille Cargill, Chase Cushing, Emma James and Mónica Landgrave Serrano - Graduate Planning Students, UA College of Architecture, Planning and Landscape Architecture

Over the spring 2019 semester, the WRRRC invited the College of Architecture, Planning, and Landscape Architecture to develop planning resources for the Cobre Valley area. As part of a capstone course, instructed by Professor Arlie Adkins, six graduate Planning students assessed the region and developed a framework to increase economic development opportunities for the rural communities through the lens of environmental stewardship. The students walked through the preliminary results of their project and described the process. Informed by site visits, research, analysis, and case studies, the development of the 5-4-3 Framework: 5 principles, 4 Recommendations, and 3 Sites.



Figure 3. Five Principles for Cobre Valley (source: CAPLA presentation, 2nd Forum, April 9th, 2019)

The pieces of this framework are sequential in that the five principles (Figure 3) formed the basis of the four recommendations. The four recommendations include:

1. Trails and Walkability
 - Trail development in preserved open space.
2. Events and Activation
 - Have public space dedicated to community events.

3. Infill Development
 - Commercial, office, residential development on site.
4. Signage and Identity
 - Regionally themed signs similar to wayfinding signs in Globe and Miami.

The recommendations acted as criteria in selection of three sites that were identified as ‘low hanging fruit’ that would have wide-ranging benefits for relatively low investment. The three sites are located in Miami, Globe, and San Carlos Apache Reservation (Figure 4).

3 Sites



Figure 4. 3 Sites proposed to develop (source: CAPLA presentation, 2nd Forum, April 9th, 2019)

Read more about the individual site recommendations in the final report, available to view and download here: [Cobre Valley CHEER: 5-4-3 Framework](#)

The Planning project group also worked with a Landscape Architecture group, instructed by Professor Kelly Cederberg, that developed a design proposal for a Cobre Valley Rail Trail – 9.4 mile multi-use trail connecting Miami, Globe, and the Tri-Cities area.

The Landscape Architecture project report is available to download here: [Cobre Valley Rail Trail](#)

Education and Engagement

The Water Resources Research Center (WRRC) is part of the College of Agriculture and Life Sciences Cooperative Extension. Among other objectives, the WRRC is working to provide water planning support for Arizona's rural communities and effective educational strategies. In the Cobre Valley, one of the main concerns is the water quality that is used for human consumption and activities relate to it, such as agriculture. Based on the results of the survey conducted by the WRRC, 20 percent of the participants are using harvested rainwater for watering their landscape. Hence, there is an important number of people interested in this type of practices. During the First Forum participants mentioned that education of the public on water issues is essential to increase conservation practices.

Project Harvest: A Co-Created Citizen Science Rainwater Harvesting Program in Rural and Urban Arizona Communities

Mónica Ramírez-Andreotta, UA Department of Soil, Water and Environmental Science/College of Public Health's Division of Community, Environment and Policy

Dr. Ramírez presented an overview and recent progress of Project Harvest, which involves citizens from several communities in Arizona. It is a co-created citizen science project that includes strong participation of women (Promotoras) in Dewey-Humboldt, Globe & Miami, Hayden Winkelman, and Tucson. This project was designed and framed with public participation at the forefront of scientific research. The process includes three elements: public participation/citizen science, peer education, and information design (Figure 5).

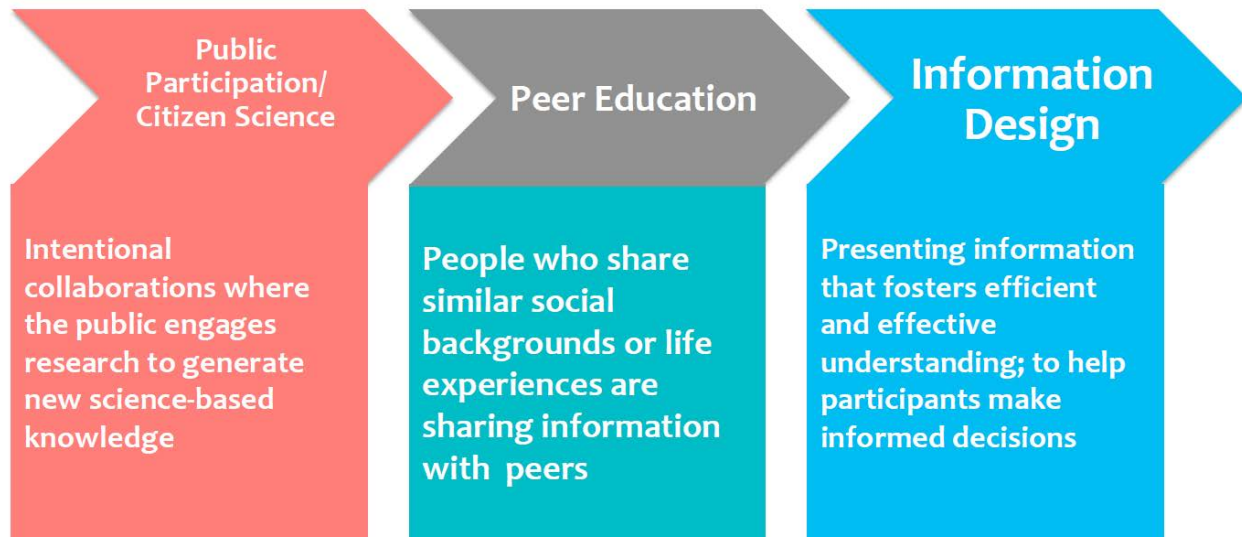


Figure 5. Public Participation in scientific research (Source: Ramírez-Andreotta presentation, April 9th, 2019).

The primary research questions of Project Harvest are: *Are there pollutants in harvested rainwater? If so, do these pollutants get trapped in soils? Do plants accumulate these pollutants? If so, in homegrown food affect health?*

To answer the research questions, the aim of this project was to identify possible contaminants in harvested rainwater. Standards/advisories were selected based on:

- How Project Harvest participants currently use their harvested rainwater
- Promotora recommendations and preferences
- Availability of useful standards or advisories.

The contaminants being tested are total coliform, *E. coli*, some heavy metals (Arsenic, Cadmium, Chromium, Copper, Lead, among others) and emergent contaminants (perfluorooctanoic acid and perfluorooctanesulfonic acid). Dr. Ramírez and several graduate students have worked with people from the communities above mentioned. During the first year (2017-2018), 163 people have participated and the early results are under analysis by project personnel. Research results will continue to be compiled and shared over the next two years, with opportunities for further engagement with the project ongoing.

How we Develop Lifelong Skills and Systems Thinking

Kerry Schwartz, Arizona Project WET, UA Department of Soil, Water and Environmental Science

A primary objective of the statewide program Arizona Project WET is to develop water stewardship and STEM learning through:

- Teacher professional development that evolves instructional practices and deepens content knowledge
- Direct student outreach that is embedded in or extends in-classroom instruction
- Community engagement

Project WET applies the Think Water framework, which is grounded in the research of Derek Cabrera, a cognitive scientist from Cornell University, who has created a way to map thinking so that teachers, students and evaluators can see it. Dr. Cabrera's theory of metacognition articulates the simple rules that govern all thought processes. This method proposes there are four simple thinking patterns that once learned and utilized leads to an ability to think deeper about any topic through a learned inquiry process. These patterns are summarized as:

- Make DISTINCTIONS
- Build SYSTEMS – Parts and Wholes
- Describe RELATIONSHIPS
- Take PERSPECTIVES

To walk the audience through this process, Kerry used the example of answering a relatively simple question, "what is a watershed?" You can use hand motions to communicate the idea, and you can describe a local watershed in ways that make sense to a local worldview. As Project WET does, you can use physical groundwater flow models to demonstrate water moving through terrain to the lowest point. Giving thinking a language and structure provides a framework and process for thinking about any topic. Systems thinkers are needed to solve complex, multidisciplinary issues like water security and sustainability.

AFTERNOON SESSION: POINTS OF VIEW

The panel discussion was a key part of the day, as we heard from water and natural resources managers about their perspectives on critical issues and needed work in the area. Following the updates and discussion of the morning, the WRRRC invited local and regional decision-makers and experts to give their point of view on the state of the watershed and the future of water resources management in the region. **Deborah Patton, Rural Development Specialist, RCAC** posed questions and moderated discussion among the panel and audience.

The panel included the following representatives:

Mayor Al Gamos, City of Globe

Kelly Mott Lacroix, Forest Hydrologist, US Forest Service Tonto National Forest

Freddy Rios, Division Manager, Arizona Water Company

Gerry Walker, Deputy Assistant Director, Water Planning and Permitting, Arizona Department of Water Resources

Questions

Deborah Patton asked four questions of the panel, listed below, and gave time for response from each panelist. The highlights from the discussion are summarized below.

1. From your professional and/or personal perspective, what are the most pressing natural resources issues facing the local watershed?
2. What are the greatest opportunities for this watershed?
3. What is one thing that you would like the public to know about their water?
4. What are proactive measures that rural communities, businesses, and individuals can take to help support long-term water supplies and watershed health?

Discussion

In this region, economic development is a major priority and water is a part of that equation. We need to make sure we have water to grow. Mayor Gamos emphasized that the connection between population growth and adequate water supplies should be included in initial planning for economic growth. Ms. Walker, speaking from the statewide perspective, added that we are looking at a dryer future in Arizona, which poses a larger challenge and open question mark throughout the state – what is our next source of water supply? In order to plan for the well being of communities 50-60 years into the future, we have to be asking these questions now. We should remember that one wet year does not undo 19 years of dry conditions and how those trends build over time.

Preserving groundwater as the area's largest natural resource for long-term resilience. Innovation and collaboration are important for this - Miami and Globe have an interconnect agreement in place to share water between each other to support the entire region. As a society that is providing for the future, we should consider groundwater recharge. The upgrades made by water providers are an important piece as well to invest in longterm sustainability of the region. AWC invests to make sure that their facilities are operating at optimal levels and producing safe water supplies. They have done so by addressing MCL exceedances and building a new treatment facility to combat arsenic contamination.

We always need more rain, but land management is key for water quality as well. Acknowledging that USFS is the land manager, health of the watershed starts in the highlands – how do we manage water as it drains? Mr. Rios noted that we have to maintain and improve the watershed as a whole to protect groundwater and keep it clean. AWC treats and delivers the end product. The Town of Miami has been served by AWC since 1955. AWC meets all regulatory mandates for potable water – water is safe and compliant with water quality standards. The interconnect agreement with City of Globe only increases the resilience and security of the region. AWC has storage for five million gallons in this area and they have been invested on infrastructure to improve hydrants and other upgrades, not just water.

Dr. Mott Lacroix provided clarifying information from the Tonto National Forest and actions the USFS is taking to improve watershed health. Looking at the condition of the forests in the watershed, five of the seven subwatersheds that make up Cobre Valley are impaired and two are at risk. A 2011 USFS assessment rated factors, such as riparian vegetation condition, influence of roads, soil productivity and erosion, and range vegetation, which go into the scoring of the “impaired” and “at risk” designations.

It takes a range of entities and individuals working together to affect watershed conditions at this scale. One way that you could categorize this type of action is through natural resources stewardship, shared among many. From the federal perspective, what does shared stewardship mean? Maximize limited resources – human, financial, and otherwise. This requires collaboration among different land and water managers and compromise to accomplish huge tasks such as forest thinning and controlled burns.

From the perspective of ADWR, Cobre Valley is starting at a good place with good local relations and low tension. People are not waiting for the crisis to hit, but talking about the issues beforehand. Water time is very slow (e.g. it took 50 years for Central Arizona Project to be completed). ADWR is looking for wells to measure for monitoring network, which could aid in this kind of planning. Additionally, the definition of WOTUS will be broader and include more waters under the jurisdiction of ADEQ and they will be working to address more things coming under their jurisdiction.

It is clear we have to work together to improve. Local stakeholders need collaboration, partnering, and education to maximize benefits and gains of technology. Education of our legislators in regard to the actual water situation is on the upswing – there is more going on than just Phoenix. It is important that rural communities speak out and be engaged. Water conservation continues to be important, as well as education of the youth. Best Management Practices are established all over the state and in Cobre Valley in order to secure sustainable water resources into the future.

AUDIENCE FEEDBACK

At the beginning of the meeting participants were encouraged to provide comments regarding the topics discussed. Overall, the CHEER proposal presented by CAPLA students received multiple call-outs and attention from the public and generated some questions. Also, some comments were made about the health of the forest and the role played by the Forest Service. Forum participants also expressed interest in water harvesting and indicated that more ecological studies could benefit this area.

One of the questions regarded the connection to the Safford Basin, which was discussed briefly in the Water Budget presentation at the beginning of the Forum.

Comments

Tree growth cycle and importance of subterranean flows.

I would really like to see better forest management.

Love CHEER!

500 domestic wells -
What impact do they have on ecosystem?

Slow flow - water harvesting

CAPLA Landscape Architecture students have an opportunity to identify alternative ingress/egress routes for the community as part of regional trail system.

Pinal Creek Trail needs support to achieve important sustainability in community by putting focus on the cottonwoods & sycamores for recreation & connectivity

D Distinctions
S Systems
R Relationships
P Perspectives

3D Learning

1.5% Growth will require 600 additional Acre-Feet

Connection to the Safford Watershed

The Arizona Water Protection Fund may be an option for funding to help protect obligate species along Pinal Creek and may be a funding source for the trail demonstration project.

5-4-3 CHEER!

Questions and Responses

Can stormwater be captured/stored? Or Does SRP have rights to it?

RESPONSE

In the state of Arizona, it is legal to collect any rainwater that falls on your property for future use. Rainwater can be harvested in rain barrels or cistern systems. However, the construction of large water holding structures requires prior approval. The likelihood of approval will be heavily dependent on the purpose of the project.

How can private water providers work with communities to create a stronger future?

RESPONSE

This question is something that the WRRC is interested in exploring and pursuing with stakeholders. Private water companies often have access to data and expertise that local communities could benefit from. The time, resources, and initiative to collaborate might be limited on both sides. One way to work together in the near-term is to review City, Town, and County policies and ordinances regarding water conservation, environment, and building practices.

Is the Cutter water field stable? Is there a limit on sale to Gilbert? Does Globe have recharge/storage rights for unused allotment?

RESPONSE

Groundwater levels in the Cutter Basin wellfield have declined over the last few decades, and the City of Globe is identifying alternative well locations. See pages 18-19 in the [Cobre Valley Water Handbook](#) to find out more.

The [1999 San Carlos Apache Tribe Water Rights Settlement Agreement](#) gives the City of Globe the right of first refusal in case of extra CAP water. Since City of Globe has had adequate water supplies in the past, it has not been necessary to purchase or store this extra, more expensive CAP water from the Tribe, but it could be an option in the future. If City of Globe declines to purchase the CAP water, as they have done historically, San Carlos Apache Tribe has the right to sell this water to Gilbert or other municipalities that are in need of water supplies for unmet demand or to meet their Assured Water Supply (AWS) designation required by the mandates of their Active Management Area (AMA). Globe is not located in an AMA and is not required to have an AWS designation, which is typically the reason for storing water or purchasing credits.

Is effluent from Globe and Miami wastewater treatment plants included in the evaluation? How about Tri City future plant?

RESPONSE

Yes, the treated effluent from both Globe and Miami were included in the water budget. Currently, those supplies are purchased and used by Freeport McMoran, Inc., primarily to mitigate groundwater contamination in the local basin, recharging the aquifer. Future supplies from the Tri City plant were not considered at this time, but can be included in future scenarios and budget iterations.

Did CAPLA work with Pinal Creek Trail Group?

RESPONSE

Yes, the CAPLA group met with the Pinal Creek Trail Committee at the very beginning of the project. The committee chair also provided guidance and feedback at regular intervals throughout the semester.

Except for mine tailings, there are no reservoirs upstream. Can we store some water so that it can get into the ground?

RESPONSE

There are many techniques to slow water down and increase infiltration rates. The main challenges are permitting and cost. Different groups, such as Cobre Valley Watershed Partnership, are interested in identifying sites and funding for such projects.

How were the precipitation stormflow values calculated? Do they represent an average/dry/wet year? How do you expect them to change? Seasonal variation impact on natural recharge data?

RESPONSE

Average stormflows were calculated based on two USGS streamflow gages (USGS 09498400 and 09497980) over a 20-year period (1998-2018) and local 100-year precipitation data from the Western Regional Climate Center interpolated over the study area. Seasonal variation is an important consideration for planned responses to stressed water supplies and increased demands in the dry season, typically May to July. These seasonal variations may shift in light of climate trends that depict more extreme storms and less regular winter precipitation (Demaria 2019).

Pinal County had problems with Johnson Utilities. What does local government do to protect us from similar water supply and quality problems?

RESPONSE

In Arizona, 58% of community water systems are privately owned, serving 19% of the statewide population. Some of these private water companies, including Arizona Water Company (AWC), EPCOR, and Global Water Resources, Inc. are known as experts and leaders in water management and planning, adhering to high levels of oversight and compliance. Regulatory bodies, such as Arizona Department of Environmental Quality and Arizona Corporation Commission, can take action against a private utility that is falling below state and federal standards. Locally, AWC endeavors to have transparent and open lines of communication with the Town of Miami and residents to achieve their mission of providing reliable and safe water supplies. Events such as these Water Forums are opportunities for corporate and district level water utility representatives to engage with local decision-makers and have been well attended.

NEXT STEPS

Over the last year, the UA WRRRC has been researching water supply and demand estimates in order to define a water deficit or surplus and look at how the current situation might change over time in light of different factors such as drought, changes in industry, and economic development in the region. This forum was an important step in determining what further research or resources might be helpful to Cobre Valley and how the UA WRRRC, Cooperative Extension, US Bureau of Reclamation and other organizations can support these efforts. Certain themes were revisited and emphasized, such as the importance of collaboration and the need for public education on water resources. The morning and afternoon sessions provided food for thought and some tough decisions for the communities when thinking about what stakeholders really value and how they want their region to develop over time. During the panel discussion, it was mentioned that there is a need for strategic collaboration with Salt River Project and with the US Forest Service to coordinate comprehensive land management in the larger watershed for positive impacts on water resources. The WRRRC looks forward to supporting the formation and potential research needs of the Cobre Valley Watershed Partnership, which will be an important player in these discussions moving forward. In particular, we hope to build on the current water budget to provide options to prepare for the future, including changes in economic activities.