

River symposium: 'Let's figure out how to do a good job'

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Imagine the future of the Colorado River and the numerous communities it supports. Can we balance water supply, hydropower demands and environmental health? On Saturday, Oct. 13, experts from across the West gathered in Moab to discuss that question.

The Future of the Colorado River: A Community Symposium, was organized by the Center for Colorado River Studies at Utah State University's Quinney College of Natural Resources and held at Star Hall on Saturday morning. The symposium featured various guest speakers ranging from academic researchers to policy makers. The overarching theme of the event revolved around the idea that we can never bring the river back to the condition it used to be in, so we must move forward. Jack Schmidt, professor and director of USU's Center for Colorado River Studies, claimed people in management positions often don't know what river residents want, so those of us who depend on the Colorado River need to articulate a vision for the future. The symposium was meant to provide the necessary context and empower the Moab community to create such a vision.

The first three speakers provided a scientific basis for the rest of the discussion. Paul Grams, hydrologist for the United States Geological Survey Southwest Biological Science Center, began the symposium with a technical talk about the effects of development, particularly dams, on the character of river channels. Grams began by speaking about changes to the "geomorphology of the Colorado Basin" in general. He said dams placed along the Green and Colorado rivers have resulted in less flooding, which in turn have created narrower channels. Sandbars are an important part of river ecosystems, and without flooding during the springtime runoff, they are disappearing. Using the stretch of river below Glen Canyon Dam as a case study, Grams discussed management strategies to address the problem. He claimed controlled floods can be used to transfer sand from the bottom of the channel or low elevation eddies to sandbars. The high flows released from the dam are too small to replicate natural floods, but it is still effective. Grams noted that releasing water in the fall is optimal for restoring sandbars, but it doesn't benefit the aquatic ecosystem as much as the spring would. "Timing, not just magnitude, is critical," Grams concluded.

Next, David Rubin, a researcher from the University of California, Santa Cruz, spoke about what can be learned from studying sand. Rubin said, "Sand is a natural record of the fluid process that build sandbars and other river features." Looking at how sand is deposited and the patterns it forms can inform scientists about river processes long after they've occurred. Rubin concluded by saying sand is useful for understanding past hydrologic events and informing management decisions.

Brad Udall, senior Water and Climate Research Fellow at the Colorado Water

Institute of Colorado State University, brought the challenges facing the Colorado River into stark relief. Udall gave a presentation about the impacts of climate change on the Colorado River. His key point was “climate change is already impacting the Colorado River basin and it will get worse.” Udall and other researchers coined the term “aridification” to describe the phenomena currently affecting the river. Aridification is more long term than drought and includes factors like decline in snowpack, earlier runoff, higher temperatures, drying soil and shorter winters. Udall called the period from 2000 to 2018 the “millennium drought” and said its conditions are worse than any similar length of time in the 20th century. He was hesitant to call the conditions the “new normal” because the changes are not predictable. Instead of devolving into pessimism, Udall said the challenges presented by climate change represent “an opportunity for change.” Udall said he gave up his desire to restore the river to how it formerly was and is instead focusing on the future. “We’re playing god, but we’re doing an awful job of it,” he said. “Let’s figure out how to do a good job.”

Udall’s final point led directly into the panel discussion that immediately followed his talk. The discussion revolved around the question of how to balance multiple uses of the river. Anne Castle from the University of Colorado, Chris Harris, executive director of the Colorado River Board of California, Clayton Palmer, environmental specialist for the Western Area Power Administration, and John Weisheit, conservation director for Living Rivers and Colorado Riverkeeper, comprised the panel. The title was, “Reliable water supply, efficient hydropower and environmental values: Can we have it all?” The panelists answered that question with a tempered “yes,” that it is possible to balance, but it will be challenging.

Each panelist had their own ideas about how that could be done. Castle suggested officials better utilize the flexibility of having two huge reservoirs at their disposal and that we should be wary of allowing politics to overwhelm science because that is what led to the current situation. Harris advocated for more transparency and inclusivity when it comes to coming up with new deals and compacts to govern river usage, especially by bringing Mexico to the negotiating table. Palmer talked about the government’s obligation to develop social infrastructure. He said hydropower could be thought of as a backup while we pursue other renewable energy options, or water in the reservoirs could be reallocated to where it is needed most, like the reservations. Weisheit discussed missteps in land management and said we should “focus on the beginning of the pipe, not the end,” which means adapting to nature and protecting watersheds rather than just looking at water usage. He emphasized the need to be proactive rather than reactive and how we should’ve developed drought plans much earlier than now.

The final two speakers at the symposium were a return to science-based topics. Sasha Reed, an ecologist for USGS, spoke about the future of riparian vegetation communities. Reed focused on invasive tamarisks and the strategies used to mitigate their takeover of the river banks. She talked about the negative impacts of nonnative trees, but she also mentioned how losing them could have implications for other species that have learned to rely on tamarisk. Reed described her current project that seeks to create a framework for predicting the

future of riparian communities. She said it is a balancing act between “what we want and what is possible.”

Phaedra Budy, also a USGS ecologist, was the symposium’s final speaker. Budy talked about the future of endangered fish that live in the Colorado River and its tributaries. She tied her talk back to the one that opened the symposium by discussing how hydrological changes, especially the lack of a proper spring flood, degrade fish habitat. Budy listed more simplified and homogenous habitat, dams preventing connectivity, and invasive species competitors as compounding factors that are threatening the Colorado River’s native fish. She then discussed several case studies showing efforts to eliminate nonnative fish. “Removal efforts have been positive, rapid and unequivocal,” Budy claimed. In conclusion, she argued that fish management must consider factors across long spans of space and time and “uncertainty is no excuse for inertia.”

The symposium ended with a brief period of discussion where audience members had a chance to share comments and ask questions. Former Castle Valley Mayor Dave Erley noted that politicians are often disconnected from reality. “We need some radical thinking and we need to be able to say no in society today,” Erley said. He pointed out that we can’t treat the Colorado River as an inexhaustible system, saying, “It would be a lot better for all of us to learn to live on less today.”