



Tributaries of the San Juan River such as the Animas River (pictured here, a section north of Durango, Colorado) define more than 7,500 square miles of rugged beauty, as well as a massive resource extraction operation including 40,000 drilled wells and 300 oil fields. CC BY-SA 3.0 AHodges.

Defining wellbeing one dimension at a time

AGU's Thriving Earth Exchange facilitates a values-based approach to the San Juan Basin's threats and opportunities

Durango, Colorado sits at the midline of the northern border of the San Juan Basin, a 7,500-square mile area known for its dramatic natural beauty—an ecotone where the desert meets the mountains. It's also known for its massive resource extraction operations, with 300 oil fields and 40,000 drilled wells, as well as the largest coal-bed methane field in the world, ranking second in total gas reserves. A conversation—any conversation—about the basin's future must be about environmental and economic factors. Where those factors intersect is in the nebulous territory of “wellbeing.” Is it synonymous with health, or is health merely one dimension? Where do environmental interests end and economic interests begin?

In recent years, the basin's communities have added other questions to those perennial concerns about the extent to which climate change will add complexity to the goal of well-being across a precarious landscape. To wit, two

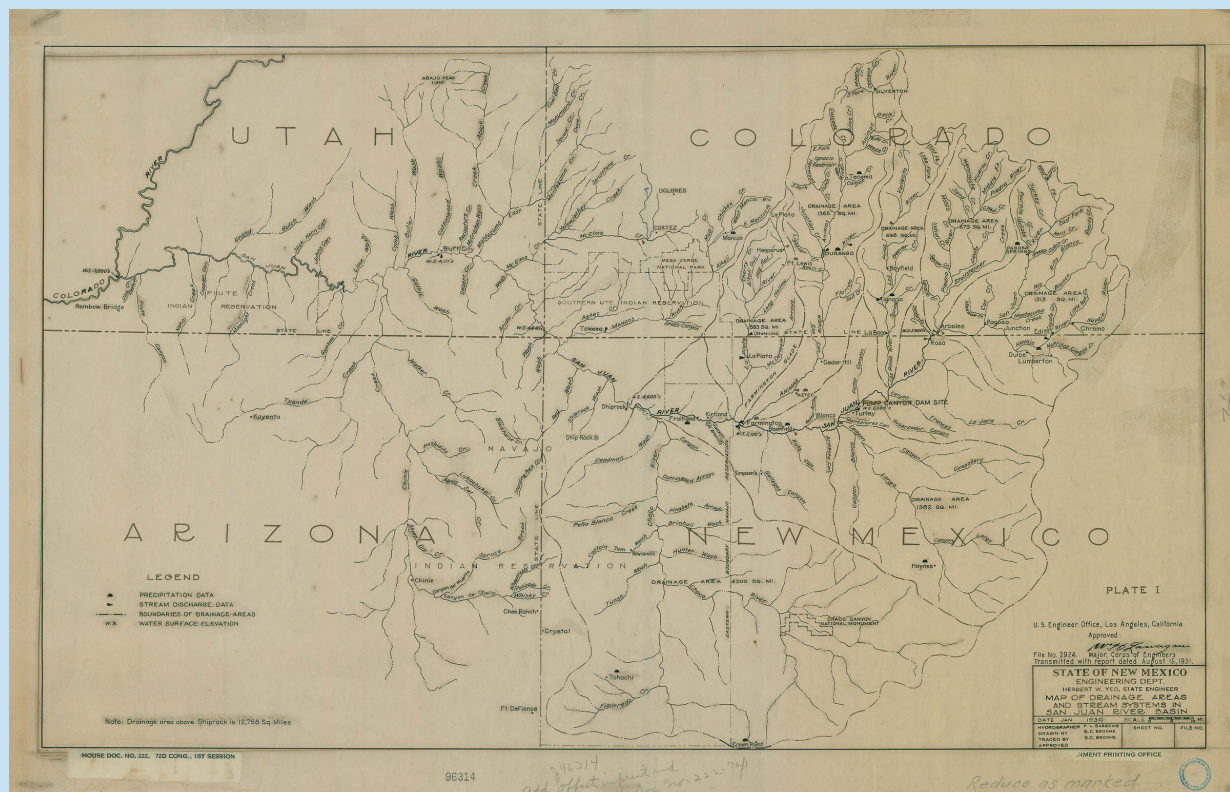
major wildfires in 2018 burned more than 55,000 acres of land, or about 85 square miles, and in 2015, more than three million gallons of acidic drainage water that had been contaminated with heavy metals from the Gold King Mine spilled into the Animas River—a tributary of the San Juan—the iron-oxides turning the water orange. The immediate aftermath for flora and fauna were not devastating, though there was tremendous uncertainty. Despite bioremediation efforts on the river and official declarations that the water had once again become safe, the event devastated the crop yields of the local Navajo Nation communities who chose precaution, so did not irrigate their traditional agricultural lands with it.

Wellbeing, in the end, isn't one dimension of this region's challenges. It's an expression of all the dimensions that matter for the basin's agricultural, economic, environmental, social, and tribal futures. A conversation—any conversation—must unfold with that in mind.

The real question is about who to convene (and how). Can they center process and relationships rather than outcomes? They wanted to try.

Setting the framework for community science

In 2021, Heidi Steltzer, Professor of Environment



This 1930 map shows the San Juan River Basin and its tributaries, which more accurately define the ecotone where the desert meets the mountains than the political boundaries defined by the “Four Corners.” Public domain.

and Sustainability and at that time Coordinator of Environmental Science Degree Program at Fort Lewis College, and Adrian Uzunian, Director of Public Health Innovation at San Juan Basin Public Health, created a series of forums or conversations among diverse stakeholders to address the dimensions of wellbeing. They approached AGU’s Thriving Earth Exchange and secured support to create what they call, “A values-focused approach for community conversations about the economy, environment, and well-being,” coalescing around Durango’s and the region’s needs, but providing a framework for other communities elsewhere to think about wellbeing as the basis of critical inquiry because this focuses attention on what they want to move toward, together.

At Durango and in dozens of communities around the country, AGU’s Thriving Earth Exchange serves as a connector and facilitator to bring together communities who have self-identified concerns, fellows who organize and administer community-based projects that address those concerns, and experts who can address the specific scientific issues that come to bear on the projects. The Thriving Earth Exchange trains and convenes fellows during the course of their projects, offers limited monetary support, and provides opportunities for fellows to create awareness of the scientific challenges that projects raise and, ideally, help solve, as well as opportunities

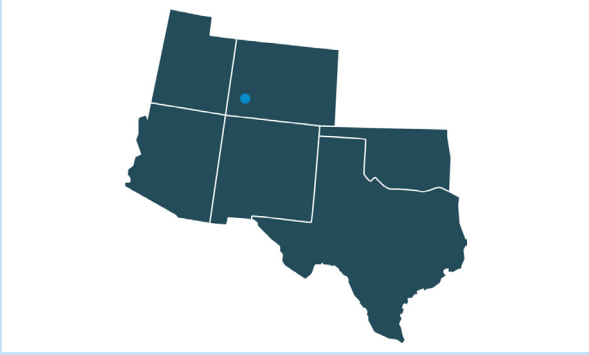
for fellows to share their work.

Between 2021 and 2022, Steltzer and Uzunian convened 50 people in Durango during five separate forums representing a diverse cross-section of local government partners, non-profits, higher education, public health, and other stakeholders. Topics discussed included communication and connectivity, housing and food scarcity in light of equitability, interconnectedness among people and their environments, and reconciling political divides. The forums were facilitated by Sandhya Tillotson with Sagebrush Ltd.

“A values-focused approach,” in this case, signified the organizers’ intentions to go beyond acres burned, wells drilled, or gallons of water contaminated and deal directly with community anxieties exacerbated by COVID-19, but foundational to the experience of living in the San Juan Basin. But, what do values have to do with a discussion about the science—and reality—of what Leo Marx called “the machine in the garden,” not to mention climate change’s threat to both machine and garden?

For the organizers, values and science are mutually supportive aspects of wellbeing—and our actions.

“We all have values—they’re fundamental to being human. Yet, our values can be disconnected from our



At Durango in the southwest corner of Colorado, and in dozens of communities around the country, AGU's Thriving Earth Exchange serves as a connector and facilitator to bring together communities who have self-identified concerns.

actions when we lack focus, intention, and presence,” said Steltzer, recipient of the AGU Sulzman Award for Excellence in Education and Mentoring. “The first step is to reenter the question of why—starting with ‘why’ unlocks all sorts of things for a group like the ones that contributed to this project and came to the forums.”

Parsing the value-add

For Adrian Uzunian, science has two roadblocks that are easy to identify but maddeningly difficult to dislodge: effective communication, particularly to lay audiences, and political partisanship, which is a distraction at best and deeply undermining for science at worst. As head Director of Innovation with San Juan Basin Public Health, he spends most of his time managing and participating in local projects that address behavioral health to foster sustainability, reforestation efforts, and food networks—all dimensions of wellbeing.

To get to the ideal scenario for effective community science conversations, he says, means everyone has to show up ready to put their personal differences aside in service to developing an interpersonal dialogue.

“Today isn’t the first time in history that our country has been polarized, but there is a concerning level of animosity now that seems different. It’s more caustic and more urgent,” says Uzunian. “We’ve been pushed online where you have to react to things, and we’ve been pulled away from caring about people and their interests in real time and in-person. So, this project was an attempt to address that trend and to rebalance self-interest and community interests.”

Over the course of five forums in Durango, Uzunian and Steltzer (and their facilitator) steered community members through open conversations about community issues. For some attendees, the outcome of those conversations was the forum itself, as a gathering people for



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a chautauqua of sorts, weaving ideas and personal narratives together to find common ground. For many participants, the outcome of those conversations needed to be more concrete. Follow-up takes many forms – attending a new event to engage with folks we’d hoped would be at the forum, meeting with someone one met at the forum, a conversation with someone in the community in which you can say, ‘yes, we talked about that during the Wellbeing Forum’. These have taken place for Steltzer and Uzunian and hopefully many others. They also plan to disseminate what they did and how it went with other communities hoping to parse the challenges posed by the physical world—of gardens and machines—with the anxieties of our social spheres, especially in light of pandemics and syndemics.

A third possible outcome of this project is the chance to broadcast to a wider audience the challenges that scientists face in communicating precisely “just the facts,” as Steltzer says, in a world that thrives on the beliefs and impressions that are conjured rather than measured. For Uzunian, one way to engage government partners, non-profits, higher education, public health, and other stakeholders, as was the case with this project, is to highlight the inquiry that science represents rather than the facts. “Finding a way to reframe difficult concepts and things as a question—rather than a foregone conclusion or solution—is a more productive way of seeing things,” he says “That was a huge part of this values-based approach.”

A related benefit of this outcome? It can scale to communities of any size and of any political persuasion—red, blue, or purple, so to speak, not to mention rural, semi-rural, urban, or regional.

If that third possible outcome is to succeed, then science needs partners in the media to effectively communicate the capacity of scientists to “know” and “tell,” but also to observe and listen. Science also needs partners in the media who can balance the rigor of reporting with the flexibility of the human experience, according to Steltzer.

“The media often comes to scientists like to me to ask a question about the science and then they go to someone else to ask a question about values. It doesn’t occur to them that values and science can be talked about in the same breath by the same person. But there’s an opportunity to change that,” she says.

“What I want to say to them is that we can’t get people to trust the process of science or what we learn through science without values, which is about storytelling and curiosity and wonder and the thorny issues that construct our beliefs and practices as people. Science is so much more interesting when it opens a sentence rather than ends a conversation.”

“A values-focused approach for community conversations about the economy, environment, and well-being,” is a project of AGU’s Thriving Earth Exchange, which advances community solutions to some of the most vexing environmental challenges. Thriving Earth Exchange helps scientists, community leads and sponsors work together to conserve natural resources, mitigate climate change and create awareness of natural hazards and their impacts on communities.

Learn more at thrivingearthexchange.org.

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