THE SUN GAZETTE

Communities still gaming out what the future of groundwater will be

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Residents, panelists and stakeholders game out the future of groundwater in Visalia

VISALIA – Community members, local activists and advocacy organizations met last week to discuss sustainable groundwater markets at a roundtable in Visalia.

The event included a presentation on groundwater issues, a panel discussion with experts in water sustainability and a game centered around understanding groundwater markets.

“We need to come together as a community to figure out this issue [of groundwater sustainability],” said Michael Prado Jr., a member of the Sultana Community Service District.

About 60 people attended the gathering on July 2 at 210 Cafe in Visalia. Self-Help Enterprises, Community Water Center, Leadership Council for Justice and Accountability, the Environmental Defense Fund and the Union of Concerned Scientists hosted the evening.

Adriana Renteria, the regional water management coordinator for the Community Water Center, gave a presentation on groundwater and how the resource is managed under the Sustainable Groundwater Management Act, or SGMA. The law is the first framework for sustainable groundwater management in California’s history.

SGMA was passed in 2014 in reaction to how poorly groundwater was managed during California’s recent drought, Renteria said.

Surface water, or water from sources like lakes and rivers, was massively depleted during the drought. When people and the agriculture industry needed to use groundwater, the water found beneath the earth’s surface, there was little regulation on how much could be pumped or how frequently.

The objective of the law is to dictate stronger groundwater management and avoid undesirable results, such as surface water depletion, reduced groundwater storage and land subsidence.

Under SGMA, local governments and water agencies formed groundwater sustainability agencies, or GSAs, to develop detailed plans on recharging subbasins and maintaining groundwater supply.

GSAs also develop groundwater markets, which dictate how groundwater should be allocated among groundwater pumpers, including how much they can pump and trade with other users.

The potential benefits of a groundwater market include encouraging water conservation and reducing the economic burden of limiting how much groundwater is pumped by the agricultural industry, Reneteria said during her presentation.

Reneteria also explained the necessary steps to build and implement a groundwater market. The GSA should first understand the baseline conditions of the subbasin, such as groundwater conditions, and the sustainability criteria, like setting a threshold for undesirable results.

Once those points are understood, the GSA can set equitable allocations, which involves setting a pumping cap and understanding groundwater users' needs and legal requirements.

The next step for the GSA is to establish rules on trading groundwater, purchasing water and incentivizing groundwater recharges.

Reneteria said GSAs should be transparent about their process and decision making by ensuring public access to meetings and materials.

To better understand groundwater markets, attendees at the meeting played a groundwater market game, which was developed by the Environmental Defense Fund and the University of Michigan to teach players about the challenges of managing scarce groundwater resources.

The game went for five rounds, with each round representing a year of groundwater use. Players were assigned one of six roles: broccoli grower, a rural family, an urban water utility, alfalfa grower, a community water system or almond grower.

If a player is one of the growers, their objective was to make the most money, either from selling crops or units of water. The other three players needed to obtain enough water to meet their needs.

In the middle of each table was a bowl filled with blue beads, representing groundwater. Each player was given a spoon to represent their well and a cup for their holding tank. The spoons varied in size, for example the almond grower had a tablespoon while the rural family had a teaspoon.

During rounds one and two, players could pump as much water as fast as they could, which represented how the open access system worked pre-SGMA. During round three, players were allocated water based on how much they'd used in the past. Round four introduced a groundwater market system, but without protections for drinking water users. Round five also included the market, but with drinking water protections.

Once the market system was in place, players could buy and sell water to either make money or meet their needs.

Prado Jr., from the Sultana Community Service District, said while playing the game, he saw how important it is for the group to work together and support the needs of others, a concept that should be applied outside of the game.

“We all have interests in all aspects, whether we are a farm, the community, the rural family,” Prado Jr. said. “We got to work together to make it right.”

The roundtable also included a panel discussion with Stephanie Anagnoson, director of water and natural resources for Madera County, and Nell Green Nylen, a senior research fellow with the Wheeler Water Institute at UC Berkeley School of Law.

Nylen’s research focuses on how local groundwater markets function under SGMA. To develop a successful groundwater market, she said there are key considerations made that vary from place to place, such as land use, social and economic realities and how much water is available for pumping.

Anagnoson, whose agency oversees SGMA compliance for Madera County, said that for GSAs to be successful, they must rely on input from stakeholders and include them throughout the planning and implementation process.