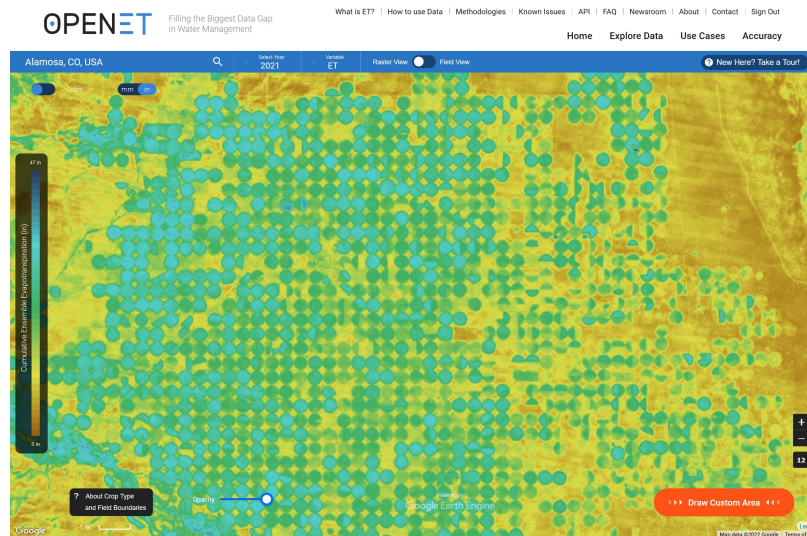


## December 2023: San Luis Valley Sustainable Agriculture Action Plan

*This document is in fulfillment of a grant to Mosca-Hooper Conservation District from USDA's Western Sustainable Agriculture Research and Education.*

This plan is area focused: Southern Colorado's San Luis Valley, the headwater region of the Rio Grande.



*Color screenshot from the OpenET tool, showing varying levels of evapotranspiration for 2021 in the central part of the San Luis Valley north of Alamosa, Colorado.*

Irrigation in this high, arid valley is from a combination of surface water from the Rio Grande and its tributaries, and pumping from confined and unconfined aquifers. Because these water resources are overdrafted and connected, managing for sustainability of agriculture involves the whole valley. In addition, water issues are connected to issues of community, economy, and power, as well as attitudes and beliefs that in some cases have been hardened by scarcity and conflict.

Because of these connections, our process of compiling stakeholder concerns and needs was deliberate and sometimes slow, as described in the Methods section beginning on page 3. The sustainability of agriculture in the San Luis Valley involves more than irrigation efficiency. For most participants in this process, sustainability involves transformational or attitudinal change in beliefs and behaviors, combined with an open-minded, peer-to-peer, grassroots search for adaptive strategies that can also help guide research and Extension.

## Summary of stakeholder concerns and needs

*This summary is NOT a classification or analysis of survey responses, but a thematic summary of the collective statement assembled from participant responses, which includes a great deal more detail.*

**SITUATION:** [There is a threat of groundwater pumping shutoff]. There is overuse of water, with scarcity, conflict, inequality, and competition based on water rights and costs of water, and an overemphasis on efficiency. Existing economic and legal structures and incentives tend to divide, to put power in the hands of a few. Collaboration is challenging; there's no framework for managing a shared resource.

Soil health is improving in some places and declining in others. Grazing opportunities, and the relationships between landowners and graziers, are changing. Community relationships are changing, and need to be strengthened. People are learning from each other, and people are capable. Although our opinions differ, our interests and concerns are very similar.

**WORST POSSIBLE OUTCOMES OF ADDRESSING THE ISSUES:** Failure. Shutoff, continued scarcity, high cost of water, continued conflict and farm consolidation, no change, disintegration or collapse of agricultural community. Ecological, economic, and social disaster. The **WORST POSSIBLE OUTCOMES** of **NOT** ADDRESSING THE ISSUES are similar.

**BEST POSSIBLE OUTCOMES:** Improvement in water, soil, air quality and health. Aquifers recharge, and more water is available. Ag economics improve with experimental, creative, value-added production. Divisiveness and fear subside, and those who give up their water are compensated. Power structures shift, and community, relationships, and quality of life improve.

**BELIEFS AND BEHAVIORS TO FOSTER THE BEST POSSIBLE OUTCOMES:** A belief in our neighbors, our community, optimism, patience. A belief that change can foster improvement, that farmers and ranchers can learn from each other, and that commonly held visions and solutions are possible. Facilitation based on listening and inclusion helps. People are ready to work cooperatively. Be adaptive, collaborative, curious, experimental, and willing to share techniques and ideas. Things can change for the better, but it will require active participation with our neighbors in new ways: one-on-one, in groups, and with existing events, groups, and organizations.

**STRATEGIES AND ACTIONS TO FOSTER THE BEST POSSIBLE OUTCOMES (SUSTAINABLE AGRICULTURE ACTION PLAN):** Have consistent meetings/field days, to share learning when the situation and timing is convenient for people to participate (such as neighborhood gatherings), with one-on-one outreach to invite participation, hands-on and on-the-ground peer-to-peer learning and examples, shared data and data analysis, shared meals, occasional outside speakers, and structured education. Experiment with outreach to include non-operator landowners, investors, local governments and subdistricts, schools, youth, and existing events and groups. Highlight economic opportunities such as value-added production and a more circular economy, and policy opportunities such as changing water use patterns and requiring revegetation when irrigation is discontinued.

## Methods

This planning process and document follows 10 years of farmer-rancher meetings in the San Luis Valley to discuss soil health, and a meeting in Alamosa in January 2020, facilitated by Jeff Goebel, attended by upwards of 80 farmers, ranchers, and stakeholders. A collective statement from that session is posted here: <https://soilhealth.app/SanLuisValley/posts/59>. At this time there was considerable momentum toward some kind of farmer cooperation, in addition to the groundwater management act district structure that levied fees beginning in 2012 for groundwater pumped, but COVID interrupted this momentum.

### 1. Interviews

Consultant Jeff Goebel and Mosca-Hooper Conservation District supervisor Patrick O’Neill conducted interviews with SLV (San Luis Valley) farmers, ranchers, and stakeholders in February 2023, and Patrick and Peter Donovan conducted interviews in November 2023. Institutional Review Board training for research on human subjects required by Montana State University for this grant was undertaken, and in this document the interviewees or the authors of the statements are not identified. Patrick O’Neill served as the project’s local coordinator and point of contact for fielding questions, concerns, or any necessary followup with interviewees.

The purpose of interviews with opinion leaders and community members is to determine the key issues in the community around adaptation, build support for the work we are doing, and begin resolving the issues. The interview process consists of open questions, an emphasis on listening, and a recognition of the importance and relevance of feelings, beliefs, and behaviors as well as information to the difficult and complex issues and decisions that people face. Both the interviews and the subsequent meetings use this basic process.<sup>1</sup> (<https://managingwholes.com/chadwick.htm>)

We had good overall receptivity to these long-form interviews framed around adaptation. The interviews lasted between 60 and 90 minutes. We completed 26 interviews with individuals, pairs, and small groups of people, including valley farmers, ranchers, Extension, NRCS, Rio Grande Water Conservation District, and citizens. Our questions followed this pattern and rationale:

**Situation and how you feel about it.** Answering this question allows each person to express an individual view and feeling. Some people will respond to others’ statements, or change their view after listening to others. This is an information-giving stage.

**Worst Outcomes:** These are feared future outcomes, often based on past experience, with a presently experienced emotion and physical reaction. When people believe them, they affect their perceptions, beliefs, values and strategies. They tend to be self-fulfilling prophecies when strongly held.

**Best Outcomes:** These are hoped for future outcomes, sometimes not previously experienced, but intensely imagined, with a presently experienced emotion and physical response. When people believe them, they affect their perceptions, beliefs, values and strategies. They tend to be

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<sup>1</sup>For an introduction to and outline of this process, see *Beyond Conflict to Consensus* by Bob Chadwick.

self-fulfilling prophecies when strongly held.

**Possibility Thinking:** An acknowledgment that both worst and best outcomes are present and inherent in each moment, up to, and often after the event. This balanced view helps people understand each other, and allows the movement toward desired outcomes.

Introductions (as a grounding, inviting participants into the here and now)

What is the situation as you see it, and how do you feel about it?

What are the worst possible outcomes of the situation if it is not resolved?

(Reflect back on what you heard)

What are the best possible outcomes that you want to see as a result of confronting this situation?

What could be done to meet the needs of all the parties?

What is your advice about who else we should interview?

What conditions would facilitate your, or other's, participation in resolving this situation?

Do you have any questions of us or about this process?

Closure—how do you feel about the interview and what did you learn that will help you be successful?

## **2. Meeting November 10 and 11, 2023**

These were day-long public meetings in Monte Vista, Colorado at which facilitator Jeff Goebel asked similar open questions: the situation and how you feel about it, worst possible outcomes, best possible outcomes, and beliefs, behaviors, strategies and actions to foster or enable the best possible outcomes. We collected participants' statements on 3 x 5 notecards for later transcription.

During these meetings Jeff Goebel also had participants reflect on the roles of a facilitator and recorder, in order to grow skills and capacity for meetings and planning that is inclusive and equitable.

## **3. Final meeting at Monte Vista to review plan, December 4, 2023**

About 15 people attended, mostly ranchers and farmers. Jeff Goebel facilitated. We read out a draft summary, summarized the previous interviews and meetings, and asked similar questions as in the previous meetings.

One theme was that people have become used to governments and organizations addressing or solving their problems and implementing plans, often accompanied by the opportunity to offer comments. How the best possible outcomes developed in these meetings (that most agreed with) could or would translate to action was not always clear. Many statements made at this

meeting about the situation, beliefs and behaviors, and strategies and actions were added to the Collective Statement that begins below, and some contributed to the summary above.

People recognized incentives, power structures, and systemic barriers to change, but a strong theme in the meeting was teamwork and community building. “I learned people may be ready to work cooperatively toward shared success.” “I learned there are others working in the same field.”

There was also a strong interest in continued participation, and most were optimistic about collaborating to address the issues, and hopeful and committed to continued group effort to address the issues. “There is a core of people willing to do something,” and to support efforts that are underway.

Commitments by participants included:

- Host a field day, peer-to-peer learning opportunity.
- Support the MHCD peer-to-peer learning effort with soilhealth.app (a community science platform), with grazing exchange if needed, as well as training and facilitation for peer-to-peer learning and hands-on soil health demos.
- Help with data collection and/or soilhealth.app
- Work on economic marketing solutions to facilitate a more circular economy.

Facilitator Jeff Goebel observed that when people are able to acknowledge worst possible outcomes, and affirm best possible outcomes, realizing that their thoughts and feelings are widely shared, specific strategies and actions will emerge from this movement itself, amplified with people’s creativity.

The Mosca-Hooper Conservation District, the convener of these meetings and planning process, has received a small grant from the Colorado State Conservation Board that will be used to begin implementation of this Sustainable Agriculture Action Plan in 2024.

Questions and concerns remained, such as:

- We are going to continue doing this meeting and discussing, aren’t we? We are going to stay in regular and consistent contact, aren’t we?
- How do we define success for what we are talking about—how do we know we’ve been successful? Is it just making more money? Must it also include air quality, food security, etc.?
- How do we get to a shared, circular economy?
- What does being made “whole” look like—the farmer who takes a payment for water instead of using water, what happens to the hardware store, grocery store, parts store, etc. in town that won’t realize sales to support those acres—are they included in the idea of being made “whole”?
- How do we build the patience and time to do this work? And to fund it patiently?

## Collective statement

*The following is a collective statement of needs and priorities from the interviews and the meetings, organized by the open questions we used and grouped by topic or theme. These is a collective statement, not a consensus statement. It represents the views of all who participated, in their own words (in some cases translated from Spanish). This refreshes the experience and the memory of listening to others, and reveals a larger, collective context for the participants' thoughts and feelings. These statements are assembled and presented to participants so that they too can see this broader, collective picture. Not all participants would agree with all the statements, and not all the statements may appear to fit.*

### What is the situation and how do you feel about it?

Dire is too strong of a word. [A colleague] keeps me informed about the drought scale in the valley.

If I don't pump it my neighbor's going to.

Prior appropriation doctrine has set ranchers against ranchers.

Some people want to pump till it's dry. They want a guarantee that they won't lose their water right.

I'm uncertain why more of my neighbors in the Sargent area are still holding out with their old practices that use so much more water.

Regional scale, I do think people are recognizing the overuse of our groundwater resources, looking at more collective solutions. We still have some challenges, of not willing to adapt, with this 22-year dry period.

Flood irrigation farmers having expectations of water in constant supply, [and] overuse of water with flood irrigation.

[There is] an overemphasis on efficiency, lack of acknowledgment of recharge from flood irrigation.

The value of water is more than just for ag projects—[it has value for] wildlife.

[We can] acknowledge [an] overemphasis on efficiency of water application and the lack of acknowledgment of recharge from flood irrigation.

Everyone thinks we got water issues and no change is failure.

There is this narrative—you're either a land steward and will make no money, or you rape and pillage the land and are a titan of industry.

Every time you put people in a room for a meeting they agree and agree—but then they go home and do different, or sue each other. There's two kinds of people—those that's willing to do, and those that's willing to let others do for them.

There's a mindset—get west of the County Line and they have Rio Grande Canal water. I remember a past-president of that Canal who told me you guys wouldn't have water east of

the County Line if Rio Grande Canal users didn't send it to you [in seepage/deep percolation that flows east]. Sargent High School—there's a perception that you're not really a part of that community unless you are from west of the County Line. My hat's off to Jeff McCullough [two farms west of the County Line]—they're not selling their water credits. East of the County Line, you really need to know how to farm. Historically, you could buy two quarters east of the county line for the price of one in Sargent. With the CREP deal, much of that land set out has been east of the County Line.

It's changing. A lot more people statewide are trying to keep their soils covered. If they're struggling [financially, or with limited water], they seem to do a better job [with soil health].

Some [people] are doing things really well, many are not.

[There's a] diversity of people and production methods.

Lots of opportunity to improve.

[I'm] optimistic.

To plant a cover crop after harvest, it's expensive, it takes effort.

I think of one of my neighbors who told me he keeps a guy driving tractor through the fall to keep him busy and in wages—but without thinking about how much diesel is being burned, how much depreciation is happening on that big tractor, or how much soil is going to blow in the spring from doing it that way.

We have a neighbor who is expanding their farm, but as they've gotten bigger, they're taking on more land, and they're doing more fall tillage work—doing things as if they were farming out west—and are going backwards in some ways. Doing nothing in the fall is better than tilling in fall and leaving the ground bare to blow in the spring. We're tractor-rich here. It's not for lack of machinery.

It is really compelling to see what we do here and look at it economically—it makes sense for financial reasons, too. Where water is an increasing cost, [we] need to use this most efficiently. Whether people get to conservation from love or from economics, maybe the outcome can be the same.

Ranching for Profit / Holistic Management—these concepts and principles are more accessible to some. There are still some people who associate soil health with hippie bullshit. Ranching for Profit idea of how do you use your effort to increase the economic return instead of just a natural bottom line—how to reframe the concern so both are achieved?

We've been in with Quivira and Holistic Management crowds for a long time, and recently with Ranching for Profit we have been around people who are thinking deeply about money. Maybe these are the people who usually would just grunt and walk out of meetings about soil health. On [a statewide committee I'm on] I've been trying to get a better sense of what others care about, and that's part of why I went to the Ranching for Profit course.

Money is not the solution but it definitely helps. When money comes in the room, everything else loses value.

[Farmers] are incentivized—and in really massive ways with tax incentives—to invest [profits] in

stuff—buildings and machinery on our farms—and not to invest in people (either on our farms or in our community [with processes like this]). And many of my neighbors are making use of water, or are creating bare soil, because they are incentivized to do that, not to do it another way.

Export economy is linear, people are compensated for that.

I am seeing cattle grazing happening on lots of places I haven't seen it before. To me, that's a benefit. Lots of cattle are born in the south half of the Valley. It's a benefit for the community when the hay they grow is sold for cash (benefit to the local economy), and they bring their cattle north to these circles for wintering. Those cows don't need such high quality hay as what could be sold.

I'm excited about the opportunity to feed and raise cattle—also a lot of work.

It won't be an option to pump more. I'm enthused about cell grazing on dryland pastures. We've doubled the amount of grass, moving every 6-7 days.

We're still looked down on as sheep ranchers by cattle ranchers. We could see the differences having sheep grazing in coordination with cattle in Dalhart on the circles I grazed with a cattleman there. Big differences, and quick, within one month. But nobody around here believes it or will spend time thinking about it. Here I've almost given up on working together with cattle ranchers. Ranchers here in the SLV don't see it. Mosby, Heigel, Clifton Curtis—they're the ones who I'm still talking to about the idea. Summer grazing on circles is expensive. I can only pay \$0.10/day for these sheep, and people want \$0.25, but that can't work, so it's tough. They want the feed to pay for itself with the grazing, but the benefit will come to them later, in the following year in their potatoes. Dad still does some summer grazing at [a potato farm]. But it's a lot of work—to take 1,000 head onto 120 acres, that feed disappears quick. Lots of little flocks are disappearing in the valley, and a few of us have increasing numbers—me, my dad, and a guy down south have increased our numbers. Tom Barr says he's at about 10,000 head that he shears each year now. There used to be so many sheep here, not anymore. Lamb price is poor. Wool goes mostly to China.

Forest Service is obsolete—dialogue with them is non-existent. I won't talk to those people. They've had a sudden reorganization in the local Forest Service office—not sure why that was—but I don't know who's new or who is involved with permits. Bighorns are a major problem according to the local office, yet not in Crested Butte, and not in NW Colorado where there are huge herds of sheep. I don't understand that—there's got to be bighorns in other places, not just here. Winter pasture for sheep have been easy to get—Weston Entz has been a great advocate for that. I've been searching for feed as far away as WY, NE, SD—with price of fuel, it doesn't make sense to truck them farther than WY though. There is so much competition for feed here in the SLV—there are fewer of us, but the competition is tough—could graze ranch ground together with cattle, but I don't have takers on that.

[There is] conflict with Monte Vista wildlife refuge administrators over our public lands grazing leases.

Economic and legal structures push to divide, to aggregate power to a few. There's not a framework to allow the administration of a shared resource. A profound challenge to



collaboration is the power question. [There is] a tendency for people on boards to protect themselves.

Acknowledge shared concern, [and] see resource base as held in common.

Power—boards of RGWCD and Subdistrict 1 have morphed into people doing power plays or using destroy-from-within tactics, but RGWCD staff is highly committed to seeing new things tried.

The water situation caused me to start learning. I was inspired by what Lyle Nissen has done with cover crops and cattle because they have such limited water. Here [in the western part of the valley] it's not nearly as bad, but we could do a lot better.

More education about the situation? It's not going to change because everyone has a new sprinkler. [We need] fundamental change in how we think about farming, collectively change our mindset. We keep trying to pound people with education, master irrigators, landowner workshop for new landowners.

The Master Irrigators course seems to be a forum where people can hear about getting animals back on the land. Soil health events—water conservation comes up. STAR Plus gathering last year brought together the same group of people.

Water. That's probably one of the toughest things to do is get farmers and ranchers to sit in a circle.

How can we make this different than it has been the previous two times we attempted to start this process? We seem to get the same group of people showing up, and the same outcomes each time.

Famine, drought, hardship are in the future. How do we give ourselves tools right now? It's in relationships.

We're trading land for trinkets. But making cohesion between people is what we need to do.

Here in the valley, these cultures are rooted in community, they were formed out of necessity. We're all these proud little towers. How do we make that connection? I don't think it's the technology. It might be an outside threat like climate change. But when you approach it from climate change, that's when people splinter. Focus on the positive.

We're not particularly good at neighboring. We need to figure out "what's the need we're trying to serve"? People's choice is to do things based on their own understanding of their needs.

Most of my interactions with neighbors happen at water meetings. I'm not a member of Cattlemens any more. Potato growers have their own meetings.

[At the Southern Rocky Mountain Ag Conference, Jeff McCullough said, "Years ago, we realized we could grow better potatoes following cover crops as compared to following barley, and that the water was worth too much to put towards the barley."] It was important for [Jeff McCullough] to have said what he said, so his community [Sargent neighborhood] could hear it. About three years ago I read in potato magazine an interview with Jeff when he had made that same comment—maybe since it was written down, it can be called real.

When we did it [rotating breakfasts with ranchers] I set it up with ranchers—their own alliance. Scientists are good, solutions come from the dialogue. The other thing I noticed, in that many-year gap from when I left working for the state and then came back, was when I came back Extension was a fraction of what it once was; Cattlemens Association, Woolgrowers all also fractions of what they once were. Community has lost a lot of ground.

Federal people won't come to meetings in the SLV any more, don't meet with ranchers. Feds won't go to the state Woolgrowers meetings, either.

The NRCS is broken.

I don't go to the Campus Cafe, maybe I should—that's where it all happens, isn't it? I like finding out who calls me dumb for not baling my hay.

What do they care about? What do they love? People in Midwest studies said to want their operation to be viable financially so they can pass that on to their children. Family legacy is a motivating factor, soil health as the way to get there.

Larry Brown's work coming back into Extension has been great. The Master Irrigator program has been great—the interactions between class members have opened up new opportunities. Consensus work is important—important for local people to take ownership in leadership roles, e.g. Science Fair Board.

On occasion, a little confused when there is so much information to memorize to share.

I try and figure out what young people need and support them.

We've got some very talented, wise, smart, capable people here. The efforts you all [Mosca-Hooper Conservation District] are doing with farmer-to-farmer, that's absolutely important and having good results.

What's the value of the natural resource? Water is the thing that keeps the community together.

### **What would be the *worst possible outcome* of addressing these issues?**

Water gets shut down. People go out of business. Nothing changes.

Wells getting turned off. FSA programs not being watchdogged—fraud within programs—e.g. surface water credits being rented on lands enrolled in CREP.

Threat of the water is the thing that touches on everything. We'll see how the new iteration of the Subdistrict 1 water plan will do. In this valley, it's easier to get money (credit) than it is to get water. You could borrow money from now till hell freezes over, but you won't get water like that. Neighbors who have said they'll grow barley no matter what, so long as the price of water stays below \$300/acre-foot. Jeff [McCullough] quit barley before we did, because they saw it wasn't worth just trading dollars to grow barley.

Costs get more extreme, water levels and artesian pressure in wells goes down even more, pastures don't grow well, lose public lands leases.

Disenfranchisement of smaller farms due to cost of water.

Have to sell our water. Can't raise crops or livestock.

Running on thin margins and luck right now. If costs don't decrease, not sure. Currently I'm building a few feedlots here.

Anger/fighting

Harboring feelings of resentment towards Mosca-Hooper Conservation District.

Increased mismanagement.

Some solutions requiring consensus and may be too slow.

Approaching challenges from a single focus that is not far reaching or more encompassing of all the variables.

Coming up with ideas that go nowhere.

Implementing bad ideas.

Getting hung up on misunderstandings or conflicting ideas.

Some solutions may not work to replenish the aquifers.

Government agency trying to step in and control the situation.

We continue with top down approaches, lawyers, bureaucracy.

Missing out on a more productive or useful meeting or conversation.

We don't reach the right people.

Failure, resistance, lack of energy that forecloses future efforts.

Lack of concern.

Lack of result.

No change, fewer farmers and ranchers.

No change, Subdistrict 1 farmers drive themselves off a cliff relative to water use; all the talk and pot-stirring with consensus process stuff goes nowhere.

Nothing changes, power doesn't get shared.

People going back to what they are already doing. We need people to change. If you can communicate, you can change minds for sure.

Sustained drought, not adapting, no change.

Things stay as they are, aquifer doesn't budge, people pay for water instead of conserving it.

Things wouldn't change—continue on the path of shutting down farms and ranches and equipment dealerships.

Continued widening division of community.

Lose the ranch, kids don't have the chance to have a place of refuge.

No change, agriculture crumbles and towns dry up.

We can't figure the water balance out. If water goes to \$500/acre-foot (Subdistrict 1's current proposed plan of water management), my company will be out—will not farm where fees are

that high. Communities will collapse, or go to super sparse populations. Culture of farming will be demolished—people will have to move away from SLV, way of life that's been built over these 100 years will be lost.

We gave ourselves more control, but didn't accept responsibility.

If things don't change, climate becomes unlivable—catastrophes like tornadoes and massive droughts drive people from the San Luis Valley.

**What would be the *worst possible outcome of NOT* addressing these issues?**

Decline in water quality exponentially.

Depletion of available water overall.

Less and less people get water reliably and annually.

Dust bowl.

Loss of aquifers.

Decline in the ecosystem.

Collapse of historical connection to nature in the valley.

Loss of communities.

Dying off of small towns.

Ruins small farms and small business.

Continued consolidation of water issues.

Pay-to-play leaves only the wealthy and corporations in business.

Subdistrict 5 shut down for a short period. It was scary for that community, watching their alfalfa fields dry up. North Star farms, 100 families. Big farms buying out small farms. Prices might do us in, just the cost of water. People simply can't afford the new market, the cost of replacement water.

Large economic failure. I don't see a successful alternative to an ag community. A large portion of our community will not be able to figure it out. Devastating, greatly change this community, don't think anybody's not going to be affected. Hospitals, the college, everybody.

Like the Irish potato famine. The connections are breaking down.

Deaths of despair.

Economic base which places more stress on environment and vibrancy.

I'd make more mistakes. You can learn a lot on the internet, but more from other people who have done it here.

Principally, to look for the best solutions to the problem.

**What would be the best possible outcomes of addressing these issues?**

[We] conserve more water for future use.

[There is] creativity in low water agriculture.

Healthier Rio Grande.

It snows, neighbors see it's their time to start changing their practices to conserve more water.

Measurable and progressive positive data in soil, air, and water quality and health.

Natural springs and more water in the rivers.

Preparing for climate change.

Soil health.

Visible positive change in soil, water, air, and agricultural health.

Stabilizing decline of irrigation water supplies.

There's enough water for everyone to do what they need.

Water conservation beyond ag is encouraged.

Water recharge.

We've fantasized about that a lot. Farmers would have grazers on their land. We'd have covered soil around the valley. Large scale, where everybody is doing it. No bare dirt in Center.

No bare soil policy.

Wildlife areas improve.

[Less fossil fuel and fertilizer use] would serve the vast majority of people. In the extractive models of farms, would these practices serve their bottom line? There are entities are are not motivated by what family farmers and ranchers are motivated by. But maybe it doesn't need to work for them.

Agricultural production is the basis of the communities economies.

Conflict with public lands administrators can be turned to opportunity, land can recover on a landscape (micro basin) scale.

Creative experimentation and follow through with alternative crops and value added to agriculture.

Economic stability.

Economy.

Experiments succeed and fail but we learn.

Financial safety nets in place for our producers to try new thing and experiment in the spirit of conserving and creating water.

Increase in work opportunities.

Maybe a processing plant in the area, to add value to animals produced here.

Our cattle are better quality, because of the elevation, we don't use so many chemicals.

People who love money would be covered. People who love the land would see less fossil fuels and fertilizers used.

Powers that be begin to cooperate with farmer-to-farmer learning.

Radical experimentation is encouraged and funded.

Residents/homeowners are encouraged to plant trees and gardens that attract rain water.

Small businesses grow.

More small business.

Successes are documented, with attention and motivation.

That we can figure out how to make people whole (financially) who are opting out of water use.

University.

Water lawyers move to West Virginia.

Water users who give up, that they got out being paid for what they lost. "I chose to get out, my kids don't want to farm." The majority of the farms remain, because they changed their crops, or whatever they did. The maximum amount of acres we can sustain is still farming and ranching. Like the Hazard ranch, they didn't want it to be sold off for developers.

Work.

A growing sense of community and hope.

A passionate and compassionate and growing sense of community and response to all age groups.

Abundance here, but currently exported. Food insecurity in the San Luis Valley could be different.

Independent living in the Valley.

Better community.

I love the idea of abundance—it's birds and flowers, not just truckloads of big brown potatoes. And community supports each other.

Closer relationships—hands shaking across fences instead of putting noses up at one another. With talking and communicating we could share data.

Collaboration with friends, new businesses, abundance.

Cohesive sense of value.

It takes off/spreads.

Communal vision.

Community resilience.

Gratefulness of communities in SLV.

I learn something new every day talking with my grandpa. If I could talk with more ranchers I could learn more from them, [this] would be good for the community.

I really enjoy raising cattle, I want to keep doing that if I can make a living with cattle, keep doing that.

If we could sit down and talk about grazing things together, cattle, sheep, goats. Benefit to ranchers, benefit to the community as well. As margins are thinner, people get the benefits if they could be talking with each other.

Increase in commoning, communication, values, and behaviors.

Increased collaboration and partnerships amongst landowners.

Incremental reduction of divisiveness.

Fear of water security ceases to exist.

Individually, farmers and ranchers help each other find answers to help themselves. Then bigger problems can be answered. Processing, marketing. People are talking more and realizing they're trying to solve the same problems. As that kind of thing happens you have more pride in your community and your business. Best possible outcome is that it could change the underlying pride in our community that people feel.

It has to be done collaboratively, collectively to meet people's needs. The projects that had more people involved, more history, more knowledge base, were more successful because there was support to do that, finding the resources they needed.

Kids can chose to come back if they want, know they have a home on the land that can be a good life for them.

Live out my whole life, farm, be sustainable, make a living for all of us, doing what we enjoy.

Look at life, look at us flourishing! The best possible outcome would be the sloughing off of these incredibly harmful power structures that exist. This unstable nature of power, it's been sloughing off, but it's continuing to grow. We want to be primed for the opportunity: let's form stronger bonds, let's collaborate to make a real evolutionary leap. The weaving together . . .

People being successful by using other people's help. A positive thing for everybody.

People working together to make it work, instead of "I'll survive but you will not" kind of scenario. People want to get livestock back on the land. Cattle working well, however the problem of manure piling up in places on pivots is real. Sheep work better in getting manure better spread around.

A sense of contentment and hope.

Valley culture stays the same.

Vibrant safe communities with economies based in agriculture.

We figure out how to navigate the push-and-pull of family ranch operation with different partners carrying different responsibilities, coordinating better for the benefit of the land and family work-life balance.

Best things would be if things change. Getting word out about what doesn't work is easy, but working also to tell about what is working.

One does not participate in these events to make the case about what is occurring.

### **What would be beliefs and behaviors that could foster or enable the best possible outcomes?**

Belief in neighbors.

Community first.

Be supportive of your community.

Optimism.

Patience. Stubbornness.

Willingness to try.

Belief that change can foster improvement.

Work for the benefit of others and environment as well as ourselves.

Work together.

Everybody's got different needs and goals. Would be really hard to meet everybody's goals. The only way we can be cow-calf producers is to migrate.

Farmers and ranchers want different things. My goal is to do the right things, to still be in business. Not focusing much on the biggest calves. Profit is important. Sometimes you have to invest and let the profit go, so you can do better later.

We don't have time, individually, to fix this problem. As a farmer, you may only have 30–35 chances (harvest-years) to get something right. We can see each other as competition—but we don't have 35 years to solve these problems [individually—we need to work them out together before time runs out].

There is a role for groups that will bring people together. More direct collaboration with neighbors. [I am] committed to building partnerships like that, and to the (patient) work of understanding what works for each neighbor, and recognizing what's worked in the past and highlighting that. We need to look at it as community building work.

I remember what Ray said to me 30 years ago about big equipment. My grandparents didn't have it and couldn't use it. I can't afford it so can't use it. Doing similar things on the ranch, but for different reasons. The finite game is all about beating the other person. The infinite game is played to better oneself. My 26 years of being self-employed taught me we never claim victory or admit defeat, because we haven't quit playing the game.

Belief most people can [work for the benefit of others, environment, themselves].

The solution to the actual problems [might be found].

If you get everyone together to work on the big picture, then the like-minded people can find each other and work on that together.



The climate might be more conducive now to something getting going. You can see cows now where not before. Could be the wind is favorable to allow the fire to carry, if we can figure it out.

[An effective facilitator is] someone who's a little bit outside the bubble. 3 broad questions. A little bit of detachment helps.

More often than not, needs to be facilitated and supported. What do farmers/ranchers feel they need? Small groups better than large groups.

So the one or two times more we can get together, then in the interim they talk and work with each other.

Something structured where we're not trying to fit everybody into the same mold. For people to be able to take what they need. We can't be everything to everybody. We have to make it an open invitation and an open enough dialogue for people to feel ok about coming.

Coming to a core belief.

Awareness of larger context.

Join forces with local groups.

Keeping everyone involved in the process.

Asking for their advice.

Listening. Listening, real dialogue, curiosity.

Go slow.

Questions more powerful than answers.

Willingness to show up.

[A feeling of] safety.

Having better conversations with neighbors—that they seem to presently talk about the same old things, but not get to the meat of how they might be able to do, and to think about things differently.

Demonstrations—hands on.

Have a feedback loop that can be shared with the farmers, agencies.

Share data on results.

Sharing data about safe-to-fail experiments.

We should tie up loose ends, to finish data analysis on projects we have underway, to be sure we know what the data about that has to say, and learn from it.

Be a curious participant in field days and meetings about collaboration and adaptation. Be both a learner and a teacher of others.

Be an experimenter. Use your experience and creativity to come up with safe-to-fail experiments (not the whole farm or ranch) and enlist help in monitoring the results and sharing them with your neighbors.

Support farmer-to-farmer learning.

Be more adaptive in [our] operations, and collaborate with peer producers.

An example: a French farmer collaborative in which farmers share the burden of each taking on some experiment that some others in the group are also doing, then coming together at year's end to share what worked and what didn't.

Come together as a team with ideas, helping neighbors be adaptive with new techniques with positive perspective and diversity.

Consistent human connections with neighbors to share peer/peer learning, grassroots organizing.

Proof of concept work.

Hopeful, seems we don't have a lot to lose in trying to address ag issues as consequences of inaction similar to those of failed actions.

Education.

We all created the problem, it will take us to fix it. We need to implement evidence-based solutions and promote them to the entire community, communication is key.

Open and honest communication.

Identify the behaviors.

Building relationships.

The acknowledgment of power structures, the unviability of power structures continuing, taking away the myth that technology would come up with a solution. The greater part is the connectedness between beings—of our country, of the world, different species—I don't know if that's possible, to get rid of selfishness.

Acknowledge entrenched power structures that prevent us from managing shared resources as shared resources (e.g. individual water rights).

Work with and within the limited natural resources.

Youth education.

We must engage RGWCD groups.

Use existing social structures and events, spring ag conference, school functions e.g. basketball games.

Engage potato committees, coop, existing power structures.

Role for organizations/groups: Cattlemen's, Woolgrowers.

Get more involved with soil conservation district and work more effectively with producers.

Continue becoming involved in emerging collaboration efforts resulting from this group.

Continue my existing collaboration efforts one-on-one, try to bring others in. Continue becoming involved in emerging collaboration efforts resulting from this group.

More engagement working together towards a common goal.

[There is] opportunity/necessity of building community in the process. Recognize what's already working.

Support groups getting together, help the neighborhood group if they form, to help keep these conversations going.

Take the time to exchange ideas and experiences/experiments with neighbors and producers.

More emphasis on long-term financial incentives for producers to try or adapt or change practices.

### **What would be strategies and actions that could foster or enable the best possible outcomes?**

[Meetings with] 1-2 hours of info.

A couple of hours with a particular topic—very beneficial to have a chance to interact with people doing things different than your regular—if we did that for a morning 8:30 gather, 9:00—12:00 session, lunch, then rotate for different topic in afternoon. That can allow people to come up with ideas—good ones. Next, how do you implement these ideas? That's where it all falls off, typically.

Winter time discussion.

More small opportunities.

It's (silver) bb's, not silver bullets. It will be a number of things that come together to solve these things.

One-on-one outreach to prepare.

Use one-on-one interviews to engage people.

Big groups breaking out into small groups, back to big meeting.

Many farmers don't want to admit they're using EQIP. Small group settings would be really helpful.

Small, neighborhood gatherings that include facilitation, good questions, documentation, food.

Do a field tour using data we have and and present to RGWCD and staff. Carbon, waterholding capacity, \$ benefits.

Meeting people where they are.

[Facilitation and diversity of people is helpful.]

Developing a schedule to be as consistent as possible.

Consistency.

Consistent offerings.

Events with meals.

How to get people to come to meetings? Food. Stock and veterinarian demos. Good speakers.

Some incentives for participants.

Examples are needed and hands on demonstrations.

Field days with hands on learning, demos, experiments.

Hands on workshops where something is taught before the meeting would be of interest.

Having meetings some summer evenings, at somebody's farm, at 7 pm so you have an hour or an hour-and-a-half to look at something together. And maybe have a bouncehouse so the kids and rest of the family will come along, too. Needs to be at a place where you can kick the dirt and see things and talk.

I think there's a lot of guys who would enjoy a more structured way of learning. People who are interested would participate and enjoy it. And, selfishly, a guy like me learns the most.

I've learned a lot more going to these conferences and talking to the ranchers who attend. I've gotten better information and a better understanding through that than I have with online learning or book learning that I've had.

Interest in ways to have discussions about water use that are more fruitful.

Pull people from outside of the valley to give some of these talks. Farm Bureau chapters from the SLV could help, I'm sure Farmers Union could too.

A lot more people don't want to be, or can't be in person [at meetings]. Recordings or transcripts might be helpful.

County commissioners—having our farm's own field day, and inviting some neighbors at the same time. Maybe they learn by osmosis. It could be urban in Alamosa—and they don't know what we do. And they get to vote. Do we need to understand if we're doing the right thing, too?

Talk to presidents of subdistricts?

Offering meetings, townhalls.

Something that is needed is for FSA employees to be paid well—I believe [there's a] need to increase salary until the quality of person needed for the job is attracted to work at the post within FSA.

Amber Pacheco is working on a new water project—the water exchange cooperative—this would be a great project with which to use consensus process, to get people to talk openly with one another—this project will require transparency.

The hard part will be figuring out when and how to have these interactions. Short window when everybody has down time. Makes me wonder if you could get dual purpose out of official meetings.

Take advantage of regular and annual meetings.

There's always people who won't come to the meeting. I was on the committee to pass a bond for the new school. Ahead, we figured out who each voter in the district was, and contacted them each. And we got ahold of the loudest folks who likely would be mouthy about the bond,

to make sure we had someone paired up with them to fill them in on what it's about. When it went to a vote, it passed easily. How to get the ones who are entitled—that's the thing—the ones who feel they have water.

Email lists, facebook posts.

Intentional invitations.

Citizen scientists in an organized effort.

Community-led science—we should lead community-led experiments on our farm, and force ourselves to invite neighbors, and take ownership.

Start talking to my neighbors about soil cover.

More direct collaboration, for example between grazers and crop farmers. Structure to build grassroots change?

School ag involvement.

Ag fair.

School science and ag fair.

Co-ops.

Definite need for public outreach among neighbors on water savings.

Speaking to our neighbors.

Farmers market.

First Southwest Bank has put a lot of emphasis on stuff like this—maybe it would be worth talking with them.

Some non-operator landholders aren't educated at all. They don't go to meetings.

And how new landowners can be contacted and conversed with. There's new landowners from investment groups in the valley. Utilizing people who are doing something good, to spread the word, even non-formally.

Investor, landholder groups probably need to be part of the conversation.

How to get that corporation to see, that'd be something.

The farmers that I meet that are in hardship, that have been struggling out there on the periphery, for them to be connected to each other seems significant – not just the successful ones – but the people on the periphery. They have incredible resources and desire.

Unfortunate thing happening now—a group that has no surface water has banded together. Working on the notion that the right to pump is from a State issued well permit. Now you have a group who is unhappy at Subdistrict meetings. To complicate that, there's an investment group that is funding the lawyers for the (SWAG) group to some extent. But you could sway the investment group—somebody could do a social media campaign and influence those individual investors with \$700 in the fund with a shaming campaign. But some of the folks from here who are in that group, I don't know if you could influence them with such a campaign.

Free education.

Focus and dedication to a valley wide vision for education.

Public land health and enjoyment.

Successful and consensual policy making and implementing that reward the individual, community and environment.

Set a strategic plan with accountability and measurable data.

Safe-to-fail experiments with monitoring.

Revisit to assess and adjust as you go along.

Stabilize resource depletion then chase actions to replenish the resource.

Change existing surface water use patterns to share the resource more efficiently.

Change the existing ground water use patterns which are not likely to work to replenish the aquifer.

Solid work management.

Doing what is working—planting seeds, REC, NRCS.

If you could figure out how to increase recharge efficiency by 5 percent, and to increase application efficiency by 5 percent, that's real wet water, not paper water. Depends on what problems you want to solve.

Rob Jones created a niche market. They were the innovative ones, and now they're saying follow along if you agree.

I see the potential of adding value with farming practices that connect with soil health.

[Highlighting] economic opportunity.

Offering something of value.

Value in our resources.

PR person.

People need to be forced. The line's been drawn in the sand. Science Fair Example of leaders needing to step up to avoid collapse of program and kids not getting to participate. People have been forced into figuring out they have to work together with the water situation. Master Irrigator project would not have worked 5 years ago. Now people see they need to know more and it's become popular. Learning from CREP/FSA lack of enforcement—lack of mitigation options for bare ground on CREP fields.

Requiring a revegetation plan. The Bowen effort may help us figure it out, 3 circles, over 7 or 8 years, each year they add 3 circles. Colorado Open Lands Dick Sparks helping with the revegetation plan.

Incentivize revegetation outside cash crop growing season.