

Pagosa Daily Post

Water District Revelations, Part One

Bill Hudson | 6/18/08

I really enjoyed the joint meeting between the Pagosa Area Water and Sanitation District and the San Juan Water Conservancy District on Monday afternoon.

Well, maybe I should clarify that. Actually, the part that I enjoyed happened outside the meeting room door, after the two districts decided to go into Executive Session, and the audience participants were asked to leave.

I was standing outside with Pagosa Springs SUN reporter James Robinson, Town Councilor Mark Weiler, local business owners Steve Van Horn and Lisa Reeves and retired attorney Bruce Dryburgh, and we were discussing such interesting subjects as SJWCD President Fred Schmidt's record of defrauding his business associates, the two water district's continuing commitment to an unjustifiably large reservoir, the total lack of public input allowed on the several issues that the two boards approved that afternoon, and the curious fact that the two boards had spent just 30 minutes discussing their \$150 million reservoir — and then spent 45 minutes discussing a \$25,000 cloud seeding program.

The meeting itself, by contrast, offered only a few entertaining moments — along with a few interesting revelations. One enjoyable exchange came late in the meeting after reporter Robinson noticed that neither the PAWSD board nor the SJWCD board make audio recordings of their meetings. (To tell the truth, I have never even noticed anyone taking minutes of the meetings.) Audio recordings of government board meetings are pretty standard procedure in much of the civilized world, up to and including the Archuleta Board of County Commissioners.

(Here at the Post, we record the PAWSD and SJWCD meetings — and other governmental meetings we attend — on our handy dandy Olympus digital recorders. We make these recordings partly for our own amusement, because sometimes we can't believe what was actually said at meetings, and we have to play them back to reassure ourselves that we really heard what we thought we heard.)

When Mr. Robinson suggested that audio recordings of PAWSD and SJWCD meetings, if made available to the taxpaying public, might help the two water districts generate an sense of transparency in regards to their decision making, a couple of board members spoke up, seemingly in support of the idea.

“You have a ton of money on the table, you have a ton of perception problems,” Robinson advised the two boards. “You've got issues with Dry Gulch and you have a lot of taxpayer money on the table, and anything you can do to be transparent will add to your credibility.”

Robinson then noted, as an example, that SJWCD President Fred Schmidt had been quoted in the press (see, for example, Glenn Walsh's Monday [Post article](#)) as saying in a public meeting that

the Colorado Supreme Court decision remanding the district's application for additional water rights needed for the Dry Gulch project, was unimportant — and wouldn't it be useful if the public could go back and check to see if that quote was accurate?

(Mr. Robinson is certainly welcome to our Post audio recording of Mr. Schmidt making that statement; so far he has not asked for it.)

Windsor Chacey spoke next. Chacey, who serves in her volunteer capacity on both water district boards, seemed at first to be in favor of making the recordings as suggested by Robinson — but in the end, her position was less clear.

“I think that's an excellent idea. The thing that I'm concerned about is that we have had the press, we have had Mr. Hudson's website, we've had a lot of input, and you have heard us. And people have used what they have heard [to write articles published on] Mr. Hudson's website. And I think one of the things that is important to recognize is that people can definitely use this [audio recording] and then — maybe — I'm sorry, Bill, but get some of your figures right. I think this is an important aspect. The one concern that I have is that I would have to always remember that I was on tape. Which isn't always easy to do.”

“As you have seen, this is a very informal board. Both boards are very informal, and yes, I do sit on both boards. And I think one of the things that needs to be recognized is that we do get along. We don't necessarily always agree on everything. But it's important that, as soon as audio [recordings] are done, then we are not going to get all of the nuances that are important to help people make informed decisions.”

Chacey noted that some of the materials used at the meetings is in written form and is not generally made available to the public, so the public would not get that information in an audio recording.

“I'm sure all of you are aware that this is a very different board, and our interactions are different than, say, the County [BoCC]. One of my concerns is that information that I might find important and valuable to making an informed decision would not be available to you. And I hope that people would recognize that on the tape.”

“But the problem is, [Mr. Robinson] has basically identified something that Fred Schmidt said, in maybe a jocular manner — and all of us say things in a jocular manner — but we're very serious about what we're doing. And I think the people who use this tape, they [need to] use it for beneficial uses, recognizing how we are, personally and as a board. But then there are people out there who are very willing to use a tape in a destructive, non-community-interest venue.”

Chacey's implication seemed clear: using an audio tape to write articles that agree with water district board decisions would be a “beneficial” community purpose. To use an audio tape to compose criticism of water district decisions would be a “destructive” use.

Chacey then summed up her thoughts. “We have never been un-transparent. We always refer people to Shelley [Tressler, PAWSD Finance Director] and you are welcome to call and talk to

any of us. And I think most of you can agree that I am pretty transparent.”

SJWCD board member Fred Ebeling stated that an audio recording of water district meetings might tempt “people” to “take bits and pieces of [a recording]” and use them out of context.

“Oh, goodness,” PAWSD board member Bob Huff retorted, “they will just as easily take bits and pieces of written notes. We can’t be against transparency; we aren’t talking about transcribing these, we’re just making an audio tape available. You can’t be against transparency. I can’t tell you how many times I’ve been misquoted in the papers — you read it and you say, did they attend the same meeting I attended? So it can happen if you’ve got the tape, or you don’t.”

SJWCD board member Jack Delange echoed Huff’s comments about inaccurate newspaper coverage; Delange said he “wouldn’t mention any names,” but said he had, in the past, submitted letters to “the newspaper... and they screw it up.”

PAWSD board chair Karen Wessels also complained about inaccuracies in the media. “Obviously, things can be taken out of context and misrepresented, even though you quote it accurately. A good journalist or a good media person will [present it] in the context that it was meant. Obviously, there are a lot of numbers that are being stated in these meetings; even the pros have to refer to their documents to get those numbers right, and quite frankly, some of the media has taken these things out of context and warped it.”

Wessels — who also serves on both water district boards — was quite accurate about the “pros” having to refer to their own documents to “get the numbers right,” since that very thing had happened just a bit earlier in the same meeting.

Water District Revelations, Part Two

Bill Hudson | 6/19/08

On February 16, 2006, the following short summary of the new PAWSD Water Resource Fee appeared in the *Pagosa Springs SUN*, written by reporter John Middendorf:

“The resource fee is earmarked for the development of raw water, and applies to any new developments or expansion of water use. Based on studies on the cost of water development to the year 2040, the fee's amount has been set at \$7,265 per equivalent unit (E.U.) of water. Carrie Campbell, PAWSD district manager, said though developers have been notified of the planned fee, ‘the amount (of the fee) may come as a surprise.’

“The resource fee comes at a time when new Pagosa Springs housing developments are being planned at an increasingly frequent rate. During a meeting with Blair Leist, director of Archuleta County development, Bob Huff, PAWSD board member, reported that Leist said, ‘Big things are coming along beyond our capabilities.’

“Huff referred to the 1,125 new homes that are being planned at Blue Sky Ranch (which is not in the PAWS district), the Blue Sky Village development (which will be in the PAWS district), and

other ‘big-time developments.’ Huff asked Leist, ‘How much can we put on these people in getting them to address growth issues?’ to which Leist reportedly answered, ‘A lot, a lot.’”

That newspaper summary gives, I think, a good sense of the trepidation Pagosa Springs, as a whole, was feeling about unchecked growth at the beginning of 2006. We thought nothing could stop the growth, and that we needed to take drastic measures to protect our community.

Two years later, the picture looks totally different. Businesses are closing almost weekly, it seems, and construction of new buildings has slowed to a crawl. The real estate market is in the toilet, all our government entities are cutting their budgets, and tourist visits to the Visitor Center in downtown Pagosa are 25% lower than last year.

The Pagosa Area Water and Sanitation District and San Juan Water Conservancy District boards, however, continue to plow ahead with their claim that Pagosa Springs really needs a 35,000 acre-foot reservoir.

At Monday’s joint meeting, a presentation by Durango water engineer Steve Harris made it very clear that he wants to see the full-size 35,000 acre-foot reservoir completed by 2040 — because it’s simply “more economical” to build the largest reservoir possible in the Dry Gulch basin — whether or not we need it.

Harris is an interesting character, a man who comes across as confident and straight-forward. Although he is qualified as a water engineer, PAWSD and SJWCD have chosen to allow Harris to define their entire Dry Gulch Reservoir project — including doing the demography projections and the calculation of impact fees.

Is Harris really qualified to make population projections? And is he qualified to calculate appropriate impact fees?

Let’s first look at Harris’ qualifications for defining impact fees. At Monday’s meeting, Harris was asked whether he could explain the difference between a “fee” and a “tax.” This difference is very important, in light of recent Colorado law — especially the TABOR amendment, which specifically prohibits the leveling of new taxes without voter approval.

When asked if he could explain the difference between a tax and a fee, Harris replied:

“No, I can’t. I’m an engineer. You’ll have to get someone else on that question. I know impact fees have a special legal definition, and I’m not going to get into that. I flat out don’t know the answer to that question.”

Changes to the Colorado Revised Statutes 29-20-102, made as part of Senate Bill 15, specifically gave local Colorado government entities the right to charge “impact fees or other similar development charges to fund expenditures by such local government on capital facilities needed to serve new development.”

These laws were based on the legislature’s belief “that local governments will be better able to

properly plan for growth and serve new residents if they are authorized to impose impact fees as a condition of approval of development permits. However, impact fees and other development charges can affect growth and development patterns outside a local government's jurisdiction, and uniform impact fee authority among local governments will encourage proper growth management.”

As such, CRS 29-20 specifically states:

“A local government shall quantify the reasonable impacts of proposed development on existing capital facilities and establish the impact fee or development charge at a level no greater than necessary to defray such impacts directly related to proposed development. No impact fee or other similar development charge shall be imposed to remedy any deficiency in capital facilities that exists without regard to the proposed development.”

The courts have interpreted this clause to mean that a developer *may not* be charged “impact fees” that are greater than his approximate impact on capital facilities. If 60,000 new homes and businesses are causing the need for a new reservoir, for example, then each of those 60,000 new home or business must pay its fair share of the capital facilities expansion costs.

In other words, you may not charge the entire cost of the new reservoir to the first 20,000 new homes and businesses; you must fix your fees to *spread the cost over all 60,000* of the new homes and businesses which are contributing to the impacts.

It was very clear, from Harris’ statements on Monday, that he either does not understand CRS 29-20 in regards to impact fees, or he has chosen to ignore that statute. He and the PAWSD board have chosen to charge the entire cost of a new 35,000 acre-foot reservoir project to the first 21,000 new Equivalent Units, when such a reservoir would actually serve about 60,000 EUs.

To quote Steve Harris at Monday’s meeting, when asked how many new EUs would be served by the new reservoir:

“It’s probably in the neighborhood of 60,000. I’ve got that on some table someplace, but I don’t have it with me.” Later, during a break in the meeting, I suggested to Harris that it looked like the first 21,000 EUs were being charged for the entire cost of the \$150 million project.

“That is exactly what we are doing,” Harris replied. “We are charging the total cost of the reservoir to the first 21,000 EUs.”

PAWSD now serves 7,000 EUs quite nicely with about 2,000 acre-feet of water annually. If we take into account the new PAWSD policy to add a “one-year safety margin,” we would serve 7,000 EUs with about 4,000 acre-feet of storage.

The new reservoir would add about 9 times that amount of storage, or enough storage for about 63,000 additional EUs.

Under the current fee schedule devised by water engineer Steve Harris — who admittedly knows

nothing about the difference between taxes and fees — the first 21,000 EUs are being charged at least three times what is allowed by Colorado law.

The PAWSD board apparently claims the right to set any of its fees — including the Water Resource Fee — at whatever level the board thinks appropriate, without paying any mind to CRS 29-20 and the numerous Colorado court decisions that have clarified the rules governing impact fees. To justify that right, PAWSD has cited CRS 32-1-1001, which states, simply, that special districts have the right to:

“Fix and from time to time to increase or decrease fees, rates, tolls, penalties, or charges for services, programs, or facilities furnished by the special district...”

Unfortunately for the water districts, the terms “fees,” “rates,” and so on have definite legal meanings. The right to “fix and increase fees” does not give the water districts an indiscriminate right to levy *taxes*, for example. And quite simply, some of the “fees” currently being collected by PAWSD appear, due to their basis, to be taxes rather than fees. (For a more thorough discussion of this topic, see our [earlier Post article](#).)

But the fact that PAWSD is ignoring CRS 29-20’s requirement to fairly calculate and assess impact fees is only half the problem. CRS 29-20 also states, “No impact fee or other similar development charge shall be imposed to remedy any deficiency in capital facilities *that exists without regard to the proposed development.*”

The PAWSD board has clearly allowed the replacement of existing capital facilities — facilities that would have to be replaced anyway, whether or not any growth occurred — to be included into their Water Resource Fee calculations. Here’s the PAWSD math from their 2005 document, *Capital Investment Fee / Water Resource Fee, Basis and Purpose*:

35,000 AF Dry Gulch Reservoir w/ Land Cost... \$75,830,000
Pump Station and Pipeline to Snowball... \$6,747,000
Snowball Pipeline Replacement... \$6,000,000
Treatment Plant Capacity Expansion... \$32,512,584
Unlisted Items, 20% of Total... \$24,217,917

Total Estimated Cost for 2040 Facilities... \$145,307,501

In case the water district board members wish to do the math based on their own board-approved documents, at least \$6 million of the Water Resource Fee appears to be earmarked for pipeline replacement connected to the existing Snowball facility. If new growth is being charged a fee partly intended “to remedy [a] deficiency in capital facilities that exists without regard to the proposed development,” that is clearly a violation of CRS 29-20.

(I have not yet researched the \$24.2 million included for “Unlisted Items,” or the \$6.7 million for the “Pipeline to Snowball.”)

The current PAWSD Water Resource Fees appear to be illegal on two counts. First, the fees being charged to the first 21,000 EUs are *at least* three times their fair share — and second,

PAWSD is leveling impact fees to pay for existing facility repairs.

But water engineer Steve Harris — and the PAWSD board of directors, and the SJWCD board of directors — are plowing ahead nevertheless.

Water District Revelations, Part Three

Bill Hudson | 6/20/08

At Monday's joint Pagosa Area Water and Sanitation District (PAWSD) and San Juan Water Conservancy District (SJWCD) meeting, Durango water engineer Steve Harris was asked whether his demographic projections are being updated on a regular basis. Although he has no training as a demographer, Harris began publishing projections for the Dry Gulch Reservoir project in 2003.

PAWSD has been using Harris' demographic projections to justify both its new Water Resource Fees and its ongoing application for new water rights out of the San Juan River that would potentially fill that new reservoir.

Harris responded to the question about whether the Dry Gulch population projections are being updated, by making a distinction between "updating" and "reviewing."

"We are 'reviewing' our projections on a yearly basis. And then the [PAWSD] board decides whether they want to officially change those to a new set of projections, or not."

Harris did not explain why a water district board would go to the trouble to make new projections, but would then officially choose not to use them. *Continued...*



Durango water engineer, the brains behind the proposed 35,000 acre-foot reservoir, explains the numbers at Monday's PAWSD-SJWCD meeting.

The question was repeated to Harris. Had Harris' projections — whether 'reviewed' or 'officially updated' — changed in the past two years, since the PAWSD Water Resource Fees

were put in place?

“Yes. Do you want to hear those figures? I'll have to look in my paperwork. Let's see. In the 2003 PAWSD report, we were at about 41,000 Equivalent Units (EUs) by the year 2040.”

Really? 41,000 Equivalent Units by 2040? PAWSD is now at about 7,000, I hear.

“No, wait, I was looking at population. 28,000 Equivalent Units [in the 2003 projections]. And the latest estimate we have is about 22,500. When I looked at it, after 2007, the projection was about 22,500.”

That figure, Harris explained, included the existing 7,000 EUs. If PAWSD board members Windsor Chacey and Karen Wessels will trust me with a calculator, it sounds like Harris was, in his 2003 report, projecting 21,000 *new* EUs by 2040. (28,000 total minus 7,000 existing equals 21,000 new.)

And indeed, that is the approximate increase which the PAWSD Water Resource Fees are based upon, according to the official 2006 PAWSD Dry Gulch “Basis and Purpose”:

35,000 AF Dry Gulch Dam and Reservoir w/ Land Cost \$75,830,000
Pump Station and Pipeline to Snowball \$6,747,000
Snowball Pipeline Replacement \$6,000,000
Treatment Plant Capacity Expansion \$32,512,584

Subtotal \$121,089,584
Unlisted Items 20% of above \$24,217,917

Total Estimated Costs for 2040 Facilities \$145,307,501

Funds Collected by Proposed County/Town Impact Fees (-\$6,389,206)

Total Costs to be Collected Through WRF Component of
CIF \$138,918,295

Estimated EU increase from 2005 to 2040 21,900

Interim Water Resource Fee per Equivalent Unit \$6,343

The Water Resource Fee has since been increased to \$7,210 per EU. I am still ignorant of how the \$6,343 figure became \$7,210.

Again taking our calculators out, we see that Harris' new projections — which we must remember have been carefully calculated, but never officially accepted by the PAWSD board — show that he now believes we will have 15,500 additional EUs by 2040, rather than 21,900.

That is a 30% drop in the projected number of new EUs, based on 2007 figures — which as noted are not official projections.
A 30% drop since 2005.

But the PAWSD board has not yet decided whether to officially choose to use these new projections, made by the same water engineer who made their 2005 projections. Harris is emphatic on that point:

“We have not lowered our projections. The new numbers are merely a review. We did not recommend that the PAWSD board change its estimate yet, because the it wasn’t significantly different enough to make a change. Because that isn’t a significant difference. We’re not changing everything every year — because then you’re going up and down and you never know what you’re going to do.”

As noted, Harris is not trained in demographics. To assert that a 30% drop in projected population is “not significant” perhaps highlights his inexperience in demographics — or perhaps just his arrogance. And that same inexperience — or arrogance — appears to be reflected throughout the PAWSD board and staff.

If we note that PAWSD is now serving 7,000 EUs with water storage of 4,000 acre-feet (and note please, that includes their “one-year water storage safety margin”) we can again take out our calculators (I happen to be using a Casio ML-831):

15,500 new EUs would require 8,857 acre-feet of new water storage by 2040. (32 years from today.) Extrapolating along the same straight line, it will take Pagosa Springs at least 45 years to require a 12,500 acre-foot reservoir — the size Harris recommended in 2003.

Harris and PAWSD are currently claiming that they need to collect a Water Resource Fee of \$7,210 per new EU because that fee will fund a 35,000 acre-foot reservoir to be completed by 2040.

In fact, according to Harris’ latest calculations, PAWSD will not need a full 35,000 acre-foot reservoir for quite a while.

126 years, to be exact. The year 2134.

“We are not fluctuating what the Water Resource Fees is based on, dependent upon the year to year projections,” Harris stated Monday, in answer to another question. “The Water Resource Fee is based on the 35,000 acre-foot reservoir.”

Well, that much, at least, is clear.

A good deal of the rest of Monday’s meeting concerned a proposal to expand the water districts’ cloud seeding program, as presented by Vail cloud-seeding guru, Larry Hjermsstad, and in an interesting twist, a key question behind the Dry Gulch reservoir reared its ugly heads again during that conversation.

Water District Revelations, Part Four

Bill Hudson | 6/26/08

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In earlier installments of this article series, I discussed conversations at last week's joint Pagosa Area Water and Sewer (PAWSD) and San Juan Water Conservancy District (SJWCD) meeting. The first part of that meeting focused on a presentation by Durango water engineer Steve Harris — the engineer who has been encouraging the two Archuleta County water districts to apply for new water rights, and to build a new reservoir using those rights, that by all accounts (even by Harris' account) far exceed any current needs. In [Part Three](#), I noted that the reservoir the size Harris wants to see built in Dry Gulch, would — by his own numbers — not be needed for at least 120 years.

Curiously, the new PAWSD Water Resource Fees are based on exactly such an over-sized reservoir: 35,000 acre-feet.

The controversy around the reservoir reared its ugly head again — momentarily — a bit later in the meeting, during another presentation on a somewhat different, but certainly related, subject: cloud seeding. *Continued...*



Cloud seeding generator in Nevada. Photo courtesy Desert Research Institute.

SJWCD president Fred Schmidt — who has been in and out of court a good deal lately, facing various fraud charges connected with his private business dealings — put an end to the brief

question and answer period around Dry Gulch, and then invited a presentation by Durango cloud-seeding guru Larry Hjermstad. Hjermstad was asking the two water districts to participate in an expanded cloud seeding project, that would be partially funded by the states of New Mexico, Arizona, Nevada and California, all of whom ultimately use shares of the water that flows down the San Juan River and into the Colorado River.

In fact, as was noted during the discussion, the “Lower Basin” states of California, Nevada, New Mexico, Utah, and Arizona have water rights considerably senior to those owned by PAWSD or SJWCD — meaning that, in a drought situation, those states could theoretically order Archuleta County to stop drawing water out of the San Juan. Only a few agricultural water users in Archuleta County have adjudicated water rights senior to the 1922 Colorado River Compact. That compact requires that Colorado and the other “Upper Basin” states assure that at least 75 million acre-feet of water be allowed to flow down the Colorado River to serve the Lower Basin states.

Obviously, the Lower Basin states have an interest in the San Juan Range snow pack, since that snow pack provides water for municipal, industrial and agricultural use by millions of people in those states. Hjermstad has been negotiating with those states to share in the cost of cloud-seeding programs throughout western Colorado, and he told the water districts that he was fairly sure he could squeeze \$20,000 a year out of those states. He said that the Colorado Water Conservation Board and the Southwestern Water Conservation District had also agreed to put money into his project.

A little background on cloud seeding. Scientists at a General Electric laboratory stumbled upon the concept of cloud seeding in 1946 when they discovered that dry ice shavings caused supercooled water droplets — which remain liquid even at freezing temperatures — to solidify into tiny ice crystals. More droplets attach to the frozen crystals until they get big enough to fall as rain and snow. The process can augment precipitation, but can't conjure a storm.

By the early 1950, 30 countries around the globe had weather modification programs. The United States' Department of Defense, Weather Bureau and Bureau of Reclamation all supported millions of dollars in research and operations.

For the next few decades, researchers focused on how seeding might increase or decrease rain and snow, dissipate fog or suppress hail. Military scientists, convinced they could slow the storms or change their courses, even tried seeding hurricanes. Supporters billed cloud-seeding as a meteorological panacea.

The Bureau of Reclamation bankrolled Colorado State professor Lewis Grant to design the five-year-long Colorado River Basin Pilot Project in the San Juan Mountains of southwestern Colorado in the early '70s. By then, the federal government was pouring \$20 million a year into weather modification research, and the bureau hoped results would prove that cloud seeding could keep its reservoirs full.

An estimated 10 percent increase in snowfall for southwestern Colorado would add enough water to support roughly 800,000 more people in both the Rio Grande and Colorado river basins.

Larry Hjernstad was one of Grant's graduate students at CSU. After graduation, he was the contractor in charge of forecasting and seeding for the Basin Pilot Project.

The official statistical analysis of the five years' worth of research was a disappointment. Government scientists found no real difference in precipitation between seeded and unseeded days. But after Hjernstad took a second look at the numbers, he found a "very significant result" that supported Grant's findings from earlier studies in Climax, Colorado.

Convinced that wintertime cloud seeding could predictably enhance snowfall, Hjernstad went into business in 1976 as Western Weather Consultants and began seeding the clouds above Vail — during an infamously dry winter.

When a series of wet years swelled the Colorado River in the late '70s and early '80s, cloud seeding went out of favor, and was looked upon as pseudo-science. With statistical proof lagging and Reaganomics squeezing the federal budget, multimillion-dollar research packages disappeared. Overall federal funding for weather modification research since has dried up to about \$500,000 a year.

Leaders of the National Oceanic and Atmospheric Administration "came to the conclusion that they really didn't understand enough about rain and how it happened, so they really didn't feel comfortable modifying it," says Andrea Ray, a research scientist at the NOAA Climate Diagnostics Center in Boulder.

Most ski resorts turned to more expensive but proven snow-making techniques. Farmers saved their money for crop insurance and irrigation equipment. Atmospheric scientists turned their attention to other experiments.

A 2003 report of the National Academy of Sciences reviewed every research-based weather modification assessment since the Academy's first analysis in 1964. The expert panel concluded that "scientific proof of the effectiveness of cloud seeding was lacking (with a few notable exceptions, such as the dispersion of cold fog)."

The Archuleta County water districts have used Hjernstad's services in the past, notably during the historic 2002 drought. From the discussion last week, I understood that Hjernstad had been paid several thousand dollars last winter on a contingency basis — money simply to ensure that he would do cloud seeding if it proved necessary. When the natural snowfall came in at 160% of normal, I am guessing that Hjernstad's services were not needed.

Now with additional funding from the Lower Basin states, CWBC, and SWCD, Hjernstad was asking the water districts to kick in \$25,000 to assure an ongoing cloud seeding program in the San Juan Mountains — a program with a little continuity, for a change.

Considering that PAWSD and SJWCD are charged with assuring water supplies to the people of Archuleta County, did this \$25,000 contribution really make sense? The answer turned out to be

more complicated than I had imagined.

Water District Revelations, Part Five

Bill Hudson | 6/27/08

Yesterday, I wrote about Larry Hjernstad's presentation at the joint PAWSD and SJWCD meeting on June 16. Hjernstad was trying to get the two water boards to help fund a yearly cloud seeding program — to the tune of \$25,000 a year — to help assure increased snow pack annually in the San Juan Mountains. Additional funding would be provided by various Colorado water boards, and by the states of Arizona, Nevada, California and New Mexico, all of whom ultimately use water from the San Juan River.

As Hjernstad noted, winter snow pack — water conveniently frozen by nature during the winter months, and deposited over thousands of square miles of mountains — is the leading form of water storage for all of the Southwest. Hjernstad claimed that his cloud seeding program would increase snow pack in certain areas by

Hjernstad faced detailed questioning from several board members. Why, for example, would PAWSD and SJWCD kick in \$25,000 — more than \$2.00 per resident, when all the millions of people in California and the other Lower Basin States would be kicking in only about \$15,000 total — yet would end up collecting most of the water? PAWSD pumps only about 6 cfs from the San Juan River, as I recall.

And did Hjernstad have any scientific proof to share with the water boards, showing that cloud seeding even worked?

Hjernstad shared his statistics from the Vail area. Generally speaking, of course, you hope that the statistical research is supplied by an independent agency, but research is notoriously expensive, so Hjernstad does his own research. He said that his numbers show snow pack increases of from 5% to 25% in the Vail areas where he has his propane-fired cloud seeding generators located. Hjernstad noted that snowfall increases are tricky to measure, because the plume from his propane-fired generators is controlled by wind conditions.

Several water district board members harped on the theme of unfairly large contributions by SJWCD and PAWSD.

At that point, a gentleman stood up in the audience; unfortunately I didn't catch his name.

“I've been doing cloud seeding in the Gunnison Basin for the past 20 years, and everything Larry is saying is right on.” The gentleman noted that the Lower Basin states are contributing close to \$400,000 total for cloud seeding programs throughout the Upper Basin states.

“Las Vegas just did a \$500,000 study to find ways to supplement their water, and they looked at everything from harvesting ice-bergs and hauling them down to San Diego and then trading them for Colorado River water — and the thing that came to the top of their list was weather

modification. So there are a lot of people in the Southwest who believe [cloud seeding] works.

“Why do we want to take part in this program, when as you say, most of the water is going downstream? The reason we are talking about cloud seeding and weather modification is: we don’t want a call placed by the Lower Basin, on the Upper Basin states.”

As noted yesterday, the Lower Basin states — California, Nevada, Arizona and New Mexico — are party to a 1922 Colorado River Compact that guarantees that the Upper Basin States — Colorado, Wyoming, Utah — will allow at least 75 million acre-feet of water to flow down the Colorado River system to serve the Lower Basin. If that amount of water should ever drop below 75 million acre-feet, when measured flowing through the monitoring station at Lee Ferry, Arizona, the Lower Basin states can legally demand that Colorado and the Upper Basin states must cut their water usage.

Such a call has never been made, to my knowledge. If global warming is a reality, such a call may be forthcoming in the near future. What would such a call mean to Pagosa Springs’ water supply?

“If a call is placed,” the gentleman in the audience stated, “then everything based on water rights junior to 1922 isn’t going to be diverted here; the water is going to go downstream. So what we are trying to do is cooperate with them, work with them, to make sure that 1922 Compact call doesn’t come on. Because if that comes on, there’s going to be a lot of diversions here that are just going to be closed — and the water is going to go downstream. So that’s why the cooperation.”

PAWSD board member Bib Huff then posed an intriguing question to the PAWSD water engineer, Steve Harris, who — as noted earlier — is the brains behind the \$150 million, 35,000 acre-foot Dry Gulch Reservoir proposal and the \$7,210 Water Resource Fee.

“Steve, could you comment on a call from the Lower Basin states that would rely, significantly limit the water that we have available to us, even through all our water rights?” Huff asked.

“If there is a call,” Harris answered, “water rights perfected prior to 1922 will not be called out. The only water rights that PAWSD has, that would fit that criteria, would be the Snowball water rights. All the rest would be precluded from diverting.” This would of course include any new water rights perfected for the Dry Gulch project.

The good news, Harris said, is that a new agreement signed by the 1922 Compact states “pretty much precludes a call until about 2022. There’s less than a 1 percent chance of a call before 2022. But you’ve heard me say this before, if Lake Powell wasn’t the size it is, we would have had a call in 2005.”

Huff then asked Harris, “In case of a call, if we have sufficient water storage [such as the Dry Gulch Reservoir] then that is not affected, right? It’s stream flow that’s affected by a call, isn’t that right?”

Harris hesitated for just a split second.

“Probably.”

“Probably?” Huff responded, and a nervous laugh broke out among the members of the two water boards.

“Probably. Not positively,” said Harris. “And this affects everybody. Navajo Reservoir, everybody. And the legal issue is: by storing that water, you possibly caused the call. You deepened the call. So one side is going to argue, your storing caused the problem; you’re going to have to release it. I think it’s more of an issue out of federal dams, than it would be out of locally owned dams.

“But I think it’s probably going to be okay.”

The water problems in Nevada, Arizona and California have been growing, year by year. Some analysts say that a call by the Lower Basin states is merely a matter of “when,” not “if.”

The Dry Gulch Reservoir, with no natural water source of its own, would be filled completely by diversions from the San Juan River. By the current timeline, the Dry Gulch Reservoir would not be completed until after the 2022 deadline mentioned by Harris — the date that Lower Basin states might begin making calls on Colorado water.

Could this mean the Dry Gulch Reservoir would never be allowed to be filled, in the first place?