

Augmentation Questions

- What is augmentation? The concept of a well depleting water from the river out of priority, and then putting water from surface sources or wells pumped close to the river into the underground by soaking it into the underground from ditches or ponds. What is taken out should be replaced in time, place and an amount to create a neutral effect. Question is does it actually happen?
- What is an augmentation credit? Does it exist in reality or theory?
- Does the water returning from augmentation match an accretion with a depletion? If augmentation is done close to the time and location the well pumps it is likely, but the farther apart from the time the water is augmented to the time the well pumps the more unlikely it becomes to match them up.
- Does augmentation truly create a neutral affect that justifies well pumping being out of priority?
- Is there any pumping limits on wells relative to what they augment?
- In 2012 at the state line the South Platte compact with Nebraska was not fulfilled but hundreds of wells above that pumped unlimited water, should there have been more water in the river because of augmentation accretion?
- Can you put dye in the water to test the flow of augmentation accretions?
- Has this been done anywhere?
- Shouldn't out of priority activities (well pumping) exchange for being allowed to take water ahead of a senior water right be confirmed to be happening, and that a fair and equal trade was made for doing so?
- Why are most augmentation decrees stipulated and never come before a judge?
- Why do people who object in court about augmentation decrees never go back and look at how they are performing? Could it be their house isn't in order either?
- Why did the State Engineer allow more wells to be drilled around Sterling without truly knowing the effects of augmentation in reality? The State shut down well drilling in the early 70s in an attempt to stop the damage already done.
- Precipitation is the main source that feeds the river and underground. Then return flows started from irrigation systems. Could augmentation being claimed to exist at a certain time actually be old return flows or precipitation?
- Does augmentation water that is coming to the surface, given credit for augmentation?

- Why are there so many different formats for augmentation accounting?
- The 1278 study addressed this extensively.
- Were these attorneys and engineers dealing with scientific facts and reality or was it just theory and assumption, or a computer model?
- Is there ever an audit run to match river flows to claimed accretion matching depletions?
- Who should conduct an audit? (Not the State that would be a conflict) Has the State hidden the truth for years?
- Are people socially and economically intimidated from talking about this?
- What percent of water augmented is truly matching accretion with depletion in time 60, 50, 40, 30, 20, 10%?
- If it isn't matched 100% is there a neutral effect? What are the factors for replacement? 80% sprinklers 60% flood irrigated.
- Why with so much at stake was there never dye tests done on every plan and augmentation site?
- Do you have any actual control over when the water returns to the river? Like you do with a surface system.
- With wells pumping unlimited amounts of water claiming to be augmented and senior surface rights not fulfilled are wells now a better water right?
- If you are certain that your augmentation works than fine, but there appeared to be many uncertainties from the assumption made. What could be said if you are defending something you know isn't working?
- Well pumping from farms, feedlots, dairies, towns, and cities, and all of the businesses associated with this is huge economically and financially. Is augmentation with all of its uncertainties the reason that keeps this going at the expense of senior service rights and damage to others from high groundwater. Is augmentation an excuse to keep wells going without much real knowledge of its actual workings?
- If accretions are not matching depletion could this be considered fraud?
- Who doesn't want the questions relating to the actual real workings of augmentation answered?
- Why are questions related to augmentation working in reality always answered with a reference back to an engineer's assumptions?

- How much real science and real time results are really known about augmentation?
- If augmentations accretion and depletions aren't matching up. Is it any worse than people who want to turn wells on without augmentation plans? Do you see the hypocrisy?
- Does the water court system allow for fair participation or do the people with the most money win because of high attorneys fees?
- Should the state engineer have more scientific input on augmentation?
- Where augmentation degrees based on science or assumption?
- Does Wyoming have a water court system?
- Could the state engineer better handle water situations in a fairer and more consistent manner than water court?
- Ask the state engineer if they have a hard time administering augmentation degrees?
- Why are the people at the end of the river who have the longest time to augment, short on accretions? (2012 accounting)
- If there is no call on the river what value do augmentation credits have?
- Is the water court system a convenient excuse for the State Engineer to argue against any complaint because he says it went to court and everyone agreed to it? Only those who could afford to participate!
- Does priority offer protection to senior surface rights? Or does a complaint have to be made? (The operation of GASP) Now unconfirmed augmentation plans.
- What does the State Engineer truly believe is going on? Setting aside court decrees and political correctness or self-serving political interests.
- Many laws 120 years ago were administered quickly to serve justice. Now days if it's murder, theft, immigration, nothing gets dealt with quickly. Has the priority system fell into the same politically correct atmosphere? Does priority mean anything relative to Well pumping? Has a right that was once exclusive now giving way to an inclusive society?
- Should the wells have been placed in the priority system? Knowing their junior dates were going to stop their operation. Then creating a fantasy situation to keep them running. Were the people in 1969 as confused as people today?
- Will future generation recognize the insanity which has been going on here?
- When augmentation water pops up out of the ground isn't the aquifer full?
- When water from augmentation comes to the surface, is credit given for it?

- What monetary value is placed on augmentation credits? And is it done just to create income even if the credits aren't used?
- Are people augmenting to make money, beyond keeping wells pumping?
- How does a person ever know what amount of water is in the river from the North Water District?
- Property taxes are paid to the district but no report on what we get!
- Why did Northern get involved with Three States Agreement?
- Why do people submit to ridiculous government policies(Three States)
- When the river is flowing strong from natural precipitation, do people try to augment to create long-term credits? Yet the aquifer is full in many places because of precipitation. What's the point?
- What kind of monetary value is put on augmentation credits? And does this create incentive to produce them on an accounting sheet without knowing when they really return?
- If augmentation credits timing is not correct, what kind of damage is done to senior rights?
- Do municipalities ignore this issue because of their own well pumping?
- Do municipalities ignore this because if well pumping was not justified it would show a far less supply of water for their future needs and create a much higher value for senior surface rights which they need for the future? (Supply and Demand)
- Is their incompetence? Is there corruption in administering and operating the river? From all involved. Is it for self serving economic gain?
- If the river is low say 30 AF running in it. There hasn't been any rain and it is hot and dry and return flows are slow. If the wells are depleting 150 ft. from the river and there is only 30 feet of natural water the wells depletion would pull the river below the surface by 120 acre feet. Therefore 150 AF of accretion would have to be there in place, time and amount to return the river to its natural condition at 30 AF. Junior wells depleting 150 AF and senior rights with 30 AF. Raises more questions than answers. How can you replace something that was never there in the first place? What are the chance the accretion matches the depletion?
- If 2 people had a garden on top of a hill and I told the other person to take a bucket down to the river and get water, but when he returned there was no water in the bucket because there was a hole in the bucket. Would that be an accurate comparison to augmentation?
- If augmentation water returns to the river before the time it is claimed to, is there a hole in the bucket? Is augmentation water returning quicker than it is claimed to?
- Will the actual functioning of augmentation ever be exposed?

- Relating to a water co-op that is trying to trade augmentation credits, is it not an accretion that is being exchanged? Does the term credit even fit? If their terminology is wrong what is the chance their theory of augmentation is right?
- What damage is being done to senior surface rights by their own people who have a friend, relative or business associate or even themselves in their own self-serving interest who want to keep wells pumping out of priority? Is this not a very self destructive behavior on part of surface owners?
- What future does surface rights have, without the certainty of augmentations theory working in reality?
- If the depletions of the river where added up the river should be dry. If the accretions were added up the river should be flooding. But neither is happening. How far off is the real knowledge of what is going on. Is the real workings of groundwater not as advanced and understood as many claim?
- What lies ahead for a system that is built on theories and assumptions and removed from reality and certainty?
- If the river and underground are connected than isn't it gravity and elevation that determines water movement? Could augmentation be like taking water from one end of a swimming pool to the other end? What really changed?
- Are those who argue the merits of augmentation doing so to protect senior rights or to protect well pumping?
- How can you replace something that isn't there? The river and aquifer fill from the bottom up. Senior surface rights pulling off the top. Until electricity and pumping technology come into play. Then the water is pulled off the bottom. With over appropriation and many seniors waiting their turn how do you know what the natural state of the river should be?
- With 100 AF of available surface water and 400 AF of well pumping depletion's is a 300 AF hole created below the surface?
- What if the accretion is only 200 AF is there 200 AF of injury to seniors?
- Does it take 400 AF of accretions to bring the river back to 100 AF of available water?
- With well pumping changing the level of the river how do you know what it would have been without the pumping? Shut them off?
- The availability of water to a well is relatively certain. The availability to a surface right is unknown. Yet the senior rights are suppose to be entitled to water in priority with dates far seniors to most wells.
- With no more understanding of accretions or depletions timing than there is, can any of these theories work in reality?

- If in 1969 when wells were put in the prior appropriation system wasn't the first in right first in time doctrine left to sort things out?
- Why were out of priority augmentation decrees brought into place? Was it for justification of wells existence?
- Why buy into or allow augmentation decrees? Didn't priority provide surface rights security ?
- Does augmentation work in reality as stated to in the decrees? Isn't the timing of the waters return the key issue here?
- If priority is being ignored and not exercised relative to well pumping how long before the law is changed when people recognize the flaws with augmentation? If you got along without aug decrees working as stated you can continue to do so!
- Does anybody ever do the math and add up what the depletion that are in a certain area and what the accretions are suppose to be and relate it to river flows.
- Should wells have ever been allowed to pump an amount of water that took the water level below the surface of the river?
- Is the true availability of replacement water a mystery? Is a depletion a mystery?
- Is there any monitoring done of aquifer levels related to augmentation operation to create any type of certainty.
- How fast does a well extract water from the aquifer? So how fast is water moving into a well to keep it flowing?
- Does augmentation protect senior surface rights or does it protect well pumping? Or both?
- Wouldn't priority have protected senior surface rights? Without question, had it been executed!
- Why was priority not allowed to work?
- If you truly wanted to protect your senior right why would you ever gamble on augmentation?
- So again, is augmentation for wells or senior rights?
- You have to wonder was all of this an attempt to put a square peg in a round hole?