

Seeking Clarity on the Proposed Dry Wash (DW) Reservoir

May 7, 2023

Background: A group arose from a neighborhood meeting called to discuss the proposed Dry Wash reservoir; with only a few days notice, that meeting had well over 200 attendees. The interest among Ivins residents for additional information is considerable, and a smaller group agreed to investigate the issues in more detail. Our group has historical perspective, technical knowledge, legal expertise, public relations experience, and other skills. Many people have approached our group to offer their skill set because they are passionate about being stewards of the land. This document summarizes the issues raised at this point.

Our group has two overall objectives:

- I. Determine whether DW reservoir is needed and appropriate**
- II. If DW reservoir needs to be built, eliminate the negative impacts on Kayenta/Ivins.**

We have a large number of questions, but most of them stem from three key issues:

1. Should an irrigation reservoir be placed in a residential area as opposed to a state park;
2. It *appears* that the need for a reservoir and its operation and maintenance have not been carefully thought through. Perhaps they have been, and the public has just not been informed (if so, this group can assist with that task);
3. An Ivins perspective – there are significant costs to Ivins residents (with respect to taxes, the loss of open space, and potential nuisance); what would be the benefit to Ivins residents?

This document is broken into three sections, with questions for different audiences.

Part 1: Questions for the WCWCD and City of Ivins regarding the plan for the reservoir, the need for the reservoir, and the maintenance and operations of the reservoir.

Part 2: Questions for the Ivins City Council, administration, and others, regarding the costs and benefits of the DW reservoir and possible alternatives.

Part 3: Questions/Requirements if the Dry Wash reservoir is built in order to eliminate negative impacts on Kayenta/Ivins.

Part 1: QUESTIONS FOR WCWCD AND IVINS CITY

GOAL: Determine if DW reservoir is needed and appropriate

1. Updated EA needed: The Environmental Assessment (EA) being relied upon is 20 years old, was primarily about Graveyard Wash, considered a different-sized Dry Wash reservoir from that being discussed today, and appears to not be up to modern standards. More housing has been built in the last two decades in the neighborhoods surrounding Dry Wash, and firm plans have been made to expand that neighborhood. The city of St. George, which, along with the BLM, commissioned the original EA, apparently rejected the idea of using the DW site after the 2004 study. A project this big in Ivins deserves adequate study. Most reservoirs are not built in residential communities. Would an updated EA support construction of a reservoir in DW? If a reservoir is supported by such a study, would we learn things from a current EA that would identify issues in design and construction of a new reservoir?
2. Is there a financial model for this project? What is the cost of building and providing water from this reservoir? (such as construction costs, acquisition of surrounding property, construction of infrastructure, pumping costs, maintenance etc.) Some of these costs are expected to be borne by the WCWCD, which of course ultimately comes from the pockets of county residents, and others may be borne directly by the City of Ivins. What is the plan for this cost-sharing?
3. DW would be a small reservoir. How much is gained by building this reservoir? What is the expected annual contribution of secondary water from DW (that is, not the total capacity, but the annual throughput)?
4. Is there a distribution system in place yet for this water? We know that most post-2000 developments were required to internally plumb their developments for secondary water, but has the City of Ivins developed the plumbing to connect these developments to the secondary supply? If not, is it premature to build the reservoir? Policies and technology are changing quickly and if it's not needed *now*, why is it being built now, if not simply to meet a 20-year timeline for an outdated and likely inadequate EA? Are there at least clear distribution plans for the future? If so, what are they, and what is the schedule for establishing them? Who will be paying for this, and on what schedule? Where will the water go from the reservoir? How will it get to the end user?
5. Is a reservoir in DW needed in the long run? Could conservation measures, Warner Valley reservoir, the Lake Powell Pipeline, purchase of water rights from alfalfa farmers, ongoing conversion of farmland to housing, and/or slower growth make DW reservoir irrelevant?
6. We know that the City Council had said, but not written into law, that there will not be motorized recreational use of the water in DW. Is it possible to ensure that Ivins will not have recreational water use in the DW reservoir? If recreational water use can't be eliminated or controlled, this reservoir would damage the Kayenta neighborhood. All

the other modern reservoirs were established along with state parks allowing recreational use.¹ Is it appropriate or advisable to put a reservoir in a residential neighborhood when recreational water use is not going to be permitted? Who would ensure that this reservoir does not become recreational?

7. Will it be possible to control dust from the DW reservoir? Especially with reuse water, toxins can accumulate over time. If it's not possible to control dust from the reservoir, it would be inappropriate to put a reservoir in a residential neighborhood. Comparing the area covered by a "full" reservoir (~50 acres) with that covered by a "conservation-level" reservoir (~20 acres), there could be about 30 acres, over half of the reservoir area, annually exposed to drying out and subject to wind erosion.
8. There is still a question whether any private property beyond the land presently owned by the WCWCD will be affected by subsidence, landslides, and erosion. When will testing and engineering studies be available? This issue may expand the land/property affected beyond the perimeter of the proposed reservoir and land owned by the WCWCD, a concern that was raised in the very first preliminary engineering concept study in 1997 (Dames and Moore). In such event, what is the source for funds to compensate for such governmental taking? At first glance, this concern seems to be well-founded, and the taking may result in considerable expense.
9. If the infrastructure of the reservoir broke and affected Ivins property owners, who would pay for damages? Ivins or WCWCD? What if WCWCD did not respond adequately? Would the City be required to initiate a lawsuit to collect damages? This is an important question to settle now, since the track record of reservoir planning by the WCWCD is not outstanding, as Quail Creek (collapse of the main dike) and Sand Hollow (establishment of a perched water table) have demonstrated.
10. Would insects be a nuisance to the surrounding neighborhoods as they are to areas near Ivins Reservoir?
11. Would there be an odor from the reservoir?
12. What percentage of the reservoir's water is expected to evaporate?
13. Currently, is there a timeline for the start of construction of the reservoir? It's our understanding that engineering studies have started.
14. Please provide a public process so the residents can be assured that a reservoir in Dry Wash is the best use of the land. We were promised community meetings over a year ago, and these have not yet been held.

¹ Ivins reservoir recreational use is established, in part, as a city park named Fire Lake, but it seems that control over its use is being abrogated by the city.

Part 2: QUESTIONS FOR IVINS CITY COUNCIL AND ADMINISTRATION

Goal: If a reservoir is built in Dry Wash, what are the implications for Ivins City taxpayers and General Plan?

1. How much would maintenance cost the City? Under the 2004 EA, the following maintenance issues are required, and need to be addressed by the City and/or WCWCD:
 - a. Dust and debris control
 - b. Insects
 - c. Invasive species control
 - d. Establish and replace riparian habitat
 - e. Sediment removal
 - f. Weed control
 - g. Access control

We would like to know how much this would cost the City and how residents can be assured that such costs will be included in future budgets before the City agrees to the reservoir. Would Ivins be responsible for all of these issues, or would WCWCD cover some, like sediment removal? Access control?

2. Transportation Plan: The City of Ivins has a long-term transportation plan, and the development of Kayenta has depended on the veracity of this plan. If the DW reservoir is constructed, we will lose Sage Way, which, in the Transportation Plan, is a critically important access in and out of Kayenta, and the already-established water distribution system there would be lost. We will need a replacement road and water distribution lines. Has the City of Ivins or the WCWCD budgeted for these?

3. Ivins City General Plan:

Was the Dry Wash Reservoir proposal tested against the goals of the General Plan? The proposed Dry Wash Reservoir appears inconsistent with several major goals of the General Plan, specifically Goal 2 about preserving the “Natural Setting”, Goal 4 about fostering a resort destination, Goal 5 about maintaining a strong sense of identity, Goal 8 about considering transportation impacts, and Goal 9 about providing a wide range of recreational opportunities. Indeed, there are whole sections of the Plan describing the future of Dry Wash as a natural, scenic area. There is no mention of a reservoir.

Dry Wash Reservoir is a commercial industrial land use in an area intended to be a nature park in a big and scenic landscape. The EA for this facility was written ten years before the General Plan was adopted and did not consider Ivins City plans; nor did Ivins City factor in a major reservoir within City boundaries. The goals of the General Plan are in conflict with repurposing Dry Wash from a natural, scenic area to an irrigation reservoir.

Since there is no mention in the General Plan of rezoning Dry Wash for industrial use, a rezoning application at the very least needs to fully consider the impact on Ivins City and its residents. Rezoning to accommodate this industrial use needs to be fully vetted by the Planning Commission, including public hearings. Considering the imminent updating of the General Plan, this change of use from natural/scenic to industrial/commercial needs to be considered in the context of an updated General Plan. In any case, whether the reservoir goes forward or not, it has major implications for the General Plan and the future of Ivins City.

4. If an Ivin's treatment plant to convert Gunlock reservoir water to culinary water is built, would we still need DW reservoir?
5. What is the benefit to Ivins residents/taxpayers of the DW reservoir?

Part 3: QUESTIONS/REQUIREMENTS IF DRY WASH RESERVOIR IS BUILT

Goal: If a reservoir is built in Dry Wash, we, the citizens of Ivins living near the proposed reservoir, will likely insist on the following actions and knowledge.

1. No recreational water use: It must be permanently stipulated that there be no recreational water use on the reservoir. Kayenta is a unique community, providing peace and serenity and a natural experience to its residents, as well as visiting hikers, birders, bikers. Recreational water use would ruin the character of Kayenta and negatively impact the property rights of those who have built or bought homes in Kayenta.
 - a. How will WCWCD ensure that there is no recreational water use? Or will that be Ivins City responsibility? Or both? How can we have confidence that either entity will indeed follow up on that responsibility, given what we see at Fire Lake?
2. Water Quality: While the water may (or may not) be tested as it leaves the treatment facility in Bloomington, evaporation in the shallow, broad DW reservoir will only lead to more highly concentrated levels of contaminants. We need adequate testing of water and plans for what to do if the water quality is below standards or harmful.
 - a. Who will monitor water quality in the reservoir?²
 - b. What contaminants are in irrigation water versus culinary water?
 - c. If irrigation water is used on plants/grass, are the insects and animals who pollinate or consume the plants contaminated?
3. Dust control: When the water level is low, the contaminants in the water are left as dust covering up to 30 acres. When the wind blows, those contaminants will be airborne and we will be breathing those contaminants. PFAS are especially troublesome. How will that be monitored and mitigated? *Can the water level stay constant*, to avoid this problem, or does that negate the benefit of the reservoir? Can we learn from the Great Salt Lake and Salton Sea, which are both experiencing serious problems resulting from dust?
4. Insect control: We assume DW reservoir will be sprayed for mosquitos, similar to Fire Lake. While Fire Lake Reservoir does not have mosquitos, other insects are excessive in the summer and are a terrible nuisance at Crescent Moon and homes that are nearby.

² Becky Warren has researched this question. Here is what her understanding is: The Water Conservancy District does no monitoring of quality. (Source: Brie Thompson, Water Conservancy District). At Fire Lake Park, Ivins City monitors only for E. coli and one other pathogen. (Source: Chuck Gillette) DEQ (Division of Water Quality, Utah) monitors some larger bodies of water. They do not monitor irrigation water as they have no authority. (Source Ben Brown, DEQ division of water quality). So who is ultimately responsible for monitoring water in the reservoir?

Will someone be able to control non-mosquito insects arising from the DW reservoir? (If so, can we do that for Fire Lake as well?!)

5. Access control: how will people be prevented from water recreational use? Who will be responsible for that?
6. Someone – either WCWCD or Ivins City – must indemnify property owners if the reservoir fails and results in damage to homes. Will a bond be posted to insure a source for funding such damage? Or will private insurance be purchased?
7. Subsidence: Most recently the heavy water flow and a broken pipe at Ivins Reservoir have caused subsidence problems in the Crescent Moon Village Building C (Kayenta) and surrounding homes from the Ivins Reservoir. How will the City or WCD prevent subsidence caused by the new reservoir? What inspections and monitoring will be done to address such potential problems before they become a major issue? What liability will Ivins City or WCWCD have in the event subsidence occurs from the proposed Dry Wash Reservoir,? As in #6 above, what is the source for compensation for damages? Does the City/WCWCD plan to post a bond? Self insure? Or purchase commercial insurance since potential damages may be very costly.
8. How can invasive species be managed, such as tamarisks seeding on the banks. There are on-going heroic efforts by Desert Preservation Initiative to rid Kayenta washes of tamarisk/salt cedar trees. They are only 10% done. As the water level fluctuates, how will you control the proliferation of the invasive species, as they have been allowed to along Fire Lake and Ivins Reservoir?
9. As much as possible, the reservoir should adhere to Kayenta Standards, with respect to protecting views, stewardship of the land, and maintaining a natural desertscape and night sky.
 - a. All construction debris must be removed once the project is completed. (no boneyard)
 - b. Kayenta’s Architectural Control Committee (ACC) should be consulted with respect to the aesthetic design of the reservoir. For example, Kayenta has specific design guidelines for buildings within the community such as building color and height. Any buildings constructed in connection with the reservoir should conform to Kayenta building standards. Further, Kayenta is a night sky community; how will the night sky standard be maintained?
 - c. How much time will the reservoir take to construct? What measures will be taken to assure neighbors that the construction of the reservoir will be timely completed? Will the contractor be required to post a bond to assure timely completion?

- d. What measures will be taken to minimize the nuisance to Kayenta neighbors during the construction period? Will the Ivins City roads be allocated additional maintenance during this period in order to keep them in good repair? Will there be any use of Kayenta roads by the contractor during construction, and if so, how will Kayenta be reimbursed for maintenance and repair costs associated with construction usage?
10. Preserve or re-establish, where possible, the hiking and biking trails between Hwy 91 and Kwavasa.

