These comments on the Great Salt Lake Basin Integrated Plan draft Work Plan were received through the Division of Water Resources' online comment form. The 68-day comment period was open from November 15, 2023 through January 8, 2024.

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Great Salt Lake Basin Integrated Plan Draft Work Plan

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Name (this is **not** required if you wish to submit your comments anonymously):

David Thieme

Email (this is **not** required if you wish to submit your comments anonymously):

dtskygazer@gmail.com

In what ways are you connected to Great Salt Lake?

I own a townhouse in Salt Lake City and I'm concerned with the future of water here in Northern Utah.

Do you think the challenge statement in Section One (page 4) of the Work Plan accurately characterizes the challenge(s) we are facing?

- ○ Yes
- ◉ No
- ○ Other:

What do you think is the most significant challenge we face in relation to Great Salt Lake?

One above average winter and Utah's Government acts like the 10 year drought is over. If the state is aware of the drought conditions, then why do they keep expanding huge 3,000+ home developments?

Do you think the goals and objectives in Section One (pages 5 and 6) adequately address what must be accomplished by the Great Salt Lake Basin Integrated Plan?

- ○ Yes
- ◉ No
- ○ Other:

Are there any specific recommendations that you feel are missing from Section Four (page 21) that you believe would help us better understand the water challenges in the Great Salt Lake basin? If so, what are they?

This report contains too much FLUFF! Where's the SCIENCE?

What do you think is most important in order for the Great Salt Lake Integrated Plan to be successful?

Transparency! If the state is truly concerned about the future of water availability, then who's accountable for the overgrowth of Salt Lake City?

What do you feel success looks like in relation to the Great Salt Lake Integrated Plan?

Responsible population growth. Approving 3,000+ housing communities seems irresponsible. Even Phoenix is limiting new development.

Do you have any additional comments in relation to the Work Plan?

In true Utah fashion, there is no proactive approach. They always wait until there is a catastrophe and it's too late. If it's true, what scientists are saying about the Great Salt Lake, if we don't figure this out NOW, the air will be so toxic it won't matter anymore.

Would you like to receive periodic email updates on the Great Salt Lake Integrated Plan?

- (●) Yes (if so, please be sure you have provided your email in question two)
- ( ) No

Please share additional documents or images that may be helpful.

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Name (this is **not** required if you wish to submit your comments anonymously):

Stuart Eyring

Email (this is **not** required if you wish to submit your comments anonymously):

Stuart.eyring@gmail.com

In what ways are you connected to Great Salt Lake?

Individual

Do you think the challenge statement in Section One (page 4) of the Work Plan accurately characterizes the challenge(s) we are facing?

- (●) Yes
- ( ) No
- ( ) Other:

What do you think is the most significant challenge we face in relation to Great Salt Lake?

Creating a balanced budget for the GSL, with a climate-realistic target elevation, and managing to it.

Do you think the goals and objectives in Section One (pages 5 and 6) adequately address what must be accomplished by the Great Salt Lake Basin Integrated Plan?

- ( ) Yes
- (●) No
- ( ) Other:

Are there any specific recommendations that you feel are missing from Section Four (page 21) that you believe would help us better understand the water challenges in the Great Salt Lake basin? If so, what are they?

Yes. Please provide details regarding the “legal right” of water right owners and water share holders to take water at various snowpack, reservoir, streamflow and aquifer levels. This will help us understand the controllability of the human consumption component. For instance, while supply varies according to water year, should we expect annual demand to be essentially constant unless “executive orders” are issued? Do executive orders have actual power or are the water districts and local water entities independently accountable for mandating / enforcing reductions in allocation according local basin conditions? The bottom line: If the legal effect of water rights is the most impactful part of the “annual GSL budget” equation, then that should be clearly stated in the situational analysis.

What do you think is most important in order for the Great Salt Lake Integrated Plan to be successful?

1) Accurate measurement of flows to the wetlands after reservoir evaporation and human consumption; 2) accurate measurement of flows from the wetlands to the GSL after wetland evaporation and evapotranspiration; and, 3) accurate evaporation measurement from the GSL after direct precipitation. My personal view is that, based on the GSL shallow bathymetry, each additional foot of lake elevation brings with it an extremely high relative rate of evaporation — i.e., if current above-average summer temperatures persist then, even with zero human consumption, the GSL annual low elevation would still drop below 4,200 feet more than 50% of the time.

What do you feel success looks like in relation to the Great Salt Lake Integrated Plan?

An annual (special emphasis on “annual” as this should be done each year) budget report for the GSL which estimates the total available water supply, expected uses, and net flow to the GSL and end-of-water-year elevation after evaporation. A corresponding report of the actual with a statement explaining where the errors in assumptions were relative to the prior year’s budget. This is essential for “continuous improvement” of GSL planning and management (every good business does this to avoid cash flow problems and eventual bankruptcy).

Do you have any additional comments in relation to the Work Plan?

Please be respectful of the individuals who dedicated time and effort to creating the West Desert Basin (2001), Bear River (2004, Table 3), Weber Basin (2009, Table 5), and Jordan River (2010, Table 7) River Basin plans by referencing their GSL inflow assumptions in your report and providing a clear explanation of what has changed since their original plans. Please pay special attention to Table 5-4 in the West Desert Basin Report (2001) which contains estimates for the inflow from all basins as well as direct precipitation. The GSL Strike Team ignored the data in these plans and their easy-to-read format in the 2022 assessment that they provided to the State Legislature. Please don't allow that same omission from the integrated plan.

Would you like to receive periodic email updates on the Great Salt Lake Integrated Plan?

- (●) Yes (if so, please be sure you have provided your email in question two)
- ( ) No

Please share additional documents or images that may be helpful.

West Basin Table... Bear Weber and ...

Table 5-4
Inflow to the Great Salt Lake
West Desert Basin

	Bear River	Weber River	Jordan River	West Desert	Precipitation	Totals
Gaged Stream Flow	1,414,000	372,300	363,500	-	-	2,149,800
Ungaged Surface Flow	16,100	109,400	72,000	-	-	197,500
Sub-Surface Flow	20,200	48,600	2,900	58,000	-	129,700
Spills from Willard Bay	-	110,000	-	-	-	110,000
Precipitation	-	-	-	-	1,003,000	1,003,000
Total	1,450,300	640,300	438,400	58,000	1,003,000	3,590,000
Percent of Total	40.5	18	12	1.5	28	100

TABLE 3
Estimated Water Budget
for the Utah Portion of the Bear River Basin

Category	Water Supply (acre-feet)
Total Precipitation	4,000,000
Used by vegetation and natural systems	1,903,000
Basin Yield	2,097,000
Agricultural Depletions	536,000
M&I Depletions	21,000
Wetland/Riparian Depletion & Reservoir Evaporation	340,000
Flow to Great Salt Lake	1,200,000

Source: *Utah Water Data Book* (1961-1990 average annual supply and present depletions) [3]

TABLE 5
Estimated Water Budget

Category	Water Supply (acre-feet/yr.)*
Total Precipitation	3,453,000
Used by vegetation and natural systems	2,277,000
Basin Yield	*1,176,000*
Exports out of basin	37,000
Available Supply	*1,139,000*
Agricultural Depletions†	160,000
M&I Depletions†	87,000
Other Depletions‡	230,000
Flows to Great Salt Lake	*662,000*

* Values based on 1961-1990 period of record, except as noted.
† Based on irrigated cropland observed in 2003 and M&I data collected in 2005 by the Division of Water Resources.
‡ Wetland and riparian depletion and reservoir evaporation.

TABLE 7
Estimated Water Budget

Category	Water Supply (acre-feet/year)
Total Precipitation	900,000
Used by vegetation and natural systems	503,000
Ground Water Recharge	219,000
Surface Water Flow	178,000
Basin Yield (Ground Water + Surface Water)	397,000
Inflow to the Basin (Jordan River)	295,000
Imports to the basin	171,000
Total Available Supply	863,000
Groundwater Withdrawals	165,000
Agricultural Depletions	32,000
M&I Depletions	181,000
Other Depletions (Wet/Open Water Areas)	95,000
Flow to the Great Salt Lake*	501,000

* Flow to the Great Salt Lake = Total Available supply – Ground Water Recharge + Ground water withdrawals – Depletions

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Name (this is **not** required if you wish to submit your comments anonymously):

Jeff N.

Email (this is **not** required if you wish to submit your comments anonymously):

jandllawns@gmail.com

In what ways are you connected to Great Salt Lake?

I live here in West Haven and see a lot of water abuse inn landscapes. I also use a lot of salt that is mined from the lake.

Do you think the challenge statement in Section One (page 4) of the Work Plan accurately characterizes the challenge(s) we are facing?

- (●) Yes
- ( ) No
- ( ) Other:

What do you think is the most significant challenge we face in relation to Great Salt Lake?

Over population of the watch front.

Do you think the goals and objectives in Section One (pages 5 and 6) adequately address what must be accomplished by the Great Salt Lake Basin Integrated Plan?

- (●) Yes
- ( ) No
- ( ) Other:

Are there any specific recommendations that you feel are missing from Section Four (page 21) that you believe would help us better understand the water challenges in the Great Salt Lake basin? If so, what are they?

There needs to be a very limited supply of goods that exported from our water. If the water is used to mine minerals or grow hay then those items should not be allowed to leave the great salt lake basin area.

What do you think is most important in order for the Great Salt Lake Integrated Plan to be successful?

Support of the public

What do you feel success looks like in relation to the Great Salt Lake Integrated Plan?

Fair

Do you have any additional comments in relation to the Work Plan?

Keep installing water meters on every homes landscape watering.

Would you like to receive periodic email updates on the Great Salt Lake Integrated Plan?

- ○ Yes (if so, please be sure you have provided your email in question two)
- ◉ No

Please share additional documents or images that may be helpful.

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Name (this is **not** required if you wish to submit your comments anonymously):

JoAnn Hanson

Email (this is **not** required if you wish to submit your comments anonymously):

joann-hanson@hotmail.com

In what ways are you connected to Great Salt Lake?

Life long resident of Davis County

Do you think the challenge statement in Section One (page 4) of the Work Plan accurately characterizes the challenge(s) we are facing?

- (●) Yes
- ( ) No
- ( ) Other:

What do you think is the most significant challenge we face in relation to Great Salt Lake?

All of the above plus phragmite weeds

Do you think the goals and objectives in Section One (pages 5 and 6) adequately address what must be accomplished by the Great Salt Lake Basin Integrated Plan?

- ( ) Yes
- ( ) No
- (●) Other: All of the above plus phragmite weeds removal

Are there any specific recommendations that you feel are missing from Section Four (page 21) that you believe would help us better understand the water challenges in the Great Salt Lake basin? If so, what are they?

What do you think is most important in order for the Great Salt Lake Integrated Plan to be successful?

What do you feel success looks like in relation to the Great Salt Lake Integrated Plan?

Yes, we need to have all parties work together to save the Great Salt Lake.

Do you have any additional comments in relation to the Work Plan?

Phragmite weeds take a great deal of water to grow. If there are removed and killed, it will save water.

Would you like to receive periodic email updates on the Great Salt Lake Integrated Plan?

- (●) Yes (if so, please be sure you have provided your email in question two)
- ( ) No

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Name (this is **not** required if you wish to submit your comments anonymously):

Robert Wilson

Email (this is **not** required if you wish to submit your comments anonymously):

BOBDOGWILSON@HOTMAIL.COM

In what ways are you connected to Great Salt Lake?

I am Resident of Salt Lake Valley, who has recreated and studied near GSL for decades.

Do you think the challenge statement in Section One (page 4) of the Work Plan accurately characterizes the challenge(s) we are facing?

- (●) Yes
- ( ) No
- ( ) Other:

What do you think is the most significant challenge we face in relation to Great Salt Lake?

Reducing agricultural irrigation and making sure that conserved water makes it to GSL

Do you think the goals and objectives in Section One (pages 5 and 6) adequately address what must be accomplished by the Great Salt Lake Basin Integrated Plan?

- (●) Yes
- ( ) No
- ( ) Other:

Are there any specific recommendations that you feel are missing from Section Four (page 21) that you believe would help us better understand the water challenges in the Great Salt Lake basin? If so, what are they?

Incentives for water conservation similar to those offered by the Inflation Reduction Act that incentivize the reduction of carbon emissions.

What do you think is most important in order for the Great Salt Lake Integrated Plan to be successful?

Trust amongst the stakeholders. Trust requires accountability, and accountability will require metrics. We will need to be able to track water in the system in a way that allows us to measure that water conserved for the lake makes it to the lake.

What do you feel success looks like in relation to the Great Salt Lake Integrated Plan?

Sacrifice is proportional to % water consumed.

That the Great Salt Lake surface level is within a couple of feet of 4,200 ft and fills its historic natural basin and is not artificially constrained by dikes and barriers beyond what has already been constructed.

Do you have any additional comments in relation to the Work Plan?

Let's stay on task. This work will need to be done for as long as people live in the basin. We know enough about the limited water supply in our arid basin to know better than to use water how we have in the past. Engage the public with education, participation, and appreciation.

Would you like to receive periodic email updates on the Great Salt Lake Integrated Plan?

- (●) Yes (if so, please be sure you have provided your email in question two)
- ( ) No

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Name (this is **not** required if you wish to submit your comments anonymously):

Miranda Menzies

Email (this is **not** required if you wish to submit your comments anonymously):

menzies.miranda@gmail.com

In what ways are you connected to Great Salt Lake?

I live in the Basin; I am involved in water management in Ogden Valley, and I have been on the GSL a number of times in a rowing boat (out of marina by Saltair)

Do you think the challenge statement in Section One (page 4) of the Work Plan accurately characterizes the challenge(s) we are facing?

- ○ Yes
- ○ No
- ◉ Other: Mostly, but not completely.

What do you think is the most significant challenge we face in relation to Great Salt Lake?

Reducing evaporation from manmade landscapes including both urban and agriculture land uses.

Do you think the goals and objectives in Section One (pages 5 and 6) adequately address what must be accomplished by the Great Salt Lake Basin Integrated Plan?

- ○ Yes
- ○ No
- ◉ Other:
  Mostly - need to add that the water supply to GSL and users is SUSTAINABLE - I.E. WILL REMAIN RESILIENT FOR THE LONG TERM

Are there any specific recommendations that you feel are missing from Section Four (page 21) that you believe would help us better understand the water challenges in the Great Salt Lake basin? If so, what are they?

The coupled surface and groundwater model needs to separately consider the shallow ground water and the continuing declines in the deep ground water aquifers that provide supply. Right now those declines indicate that we have a serious problem, which is being minimized or overlooked.

What do you think is most important in order for the Great Salt Lake Integrated Plan to be successful?

Buy in from the Legislature & Governor .

What do you feel success looks like in relation to the Great Salt Lake Integrated Plan?

Stable GSL water level at an elevation that provides adequate water both users (via lake effect) and wildlife. This was the focus in the previous GSL management document 4200 feet is a good starting point. Similarly, declines in deep groundwater levels in Wasatch Front need to stop.

Do you have any additional comments in relation to the Work Plan?

Work on phragmites eradication in ALL ditches, canals and lakes - everywhere - so that this invasive plant doesn't keep spreading.

Would you like to receive periodic email updates on the Great Salt Lake Integrated Plan?

- (●) Yes (if so, please be sure you have provided your email in question two)
- ( ) No

Please share additional documents or images that may be helpful.

Comments EMM...

Comments on the Great Salt Lake (GSL) Basin Integrated Plan

E. Miranda Menzies

3807 N Elkridge Trail, Eden Utah 84310

Thank you for all the excellent work that went into this workplan document. I have read substantial portions of it, and from my experience as a retired environmental consultant and hydrogeologist I have a few comments. These comments are mine alone and are not opinions related to or representing any organization, or my position as Trustee of a water and sewer Special District (Wolf Creek, Eden Utah).

My four points in brief, then details below:

- The goal should be a SUSTAINABLE resilient water supply for the GSL and water users.
- We must cut evaporation, in particular by changing many manmade landscapes, including agriculture. Legislation will be needed.
- Groundwater levels in the deep water supply aquifers must also be stabilized, as well as the GSL water level.
- Hit the Phragmites hard!!

1. The goal is an excellent one – "a resilient water supply for the GSL and all water users in its watershed". I would urge you to add the word "sustainable" to the relevant goals and questions being asked.
   A water supply can be resilient, but still not be sustainable over the long term. There is a desperate need to make sure that the water supply systems that are modified and strengthened are "resilient and sustainable" over a long period of time.

2. To that end, I suggest you need to not miss the forest in looking at the trees. The Gap Analysis and selection of priority projects indicates that every issue is being looked at. Please keep in mind that the GSL was at a "sustainable" level – and high in 1983, during a period of relatively high rainfall.

   We now have a situation where the rising temperatures (1.5 – 2 deg F already above the early 20th century averages) have a high probability of significantly reducing the flows to the lake because of higher evapotranspiration from both natural and human-influenced landscapes. The higher evapotranspiration during hot summer's days in fact causes a visible diurnal variation on mountain stream flows with heavy surrounding vegetation drawing upon the stream channels with their roots.

   The only way water arrives in the Great Salt Lake basin is via precipitation. The only way it leaves is through evaporation from vegetation, lakes, streams etc. So only through actually reducing that evaporation can we actually change the available flow to GSL (or water users). Cutting the

lake in half, permanently, at the causeway is unfortunately probably the only way to get to a new stable system.

I am not suggesting cutting down forests, but I do think we have to work with biologists to understand what the new stable ecosystems at the higher temperatures WILL look like long term, so that we can accurately predict what flows there will be, not just what exists right now. Agricultural evaporation loss needs to be cut significantly, probably by changing crops or fallowing land, through water right purchase policies.

The conservation efforts through landscaping restrictions in water conservancy districts like Weber Basin and Jordan Conservancy are to be applauded – the amount of evaporation from manmade landscapes can only be reduced if we start with the new developments being built, minimizing the amount of evaporation from high water use vegetation including turf and high water shrubs such as willows.

It is probable that this will need to be supported by legislative action for landscape design, to create a level playing field, and get all the developers moving in the same direction. Either that, or there needs to be a complete reevaluation of what the "carrying capacity" of the Great Salt Lake Basin is, and reduction in development to meet it. Possibly both.

3. There are a couple of mentions of groundwater in the plan, in particular the construction of a coupled surface and groundwater model that can inform planning decisions.

   It appears that the groundwater system is going to need to be addressed in at least two different ways: 1) the shallow aquifers which are linked and discharge to the GSL, and 2) the deeper aquifers (e.g. Delta aquifer in Weber/Davis county) which are a major drinking water resource. These should both be part of the model.

   I believe it will be necessary to recognize the SERIOUS issues related to declining ground water levels in the deep aquifers that supply drinking water. These issues were apparent decades ago in the Utah DNR Cooperative Investigations Report No 52 Groundwater Conditions in Utah Spring 2011 see for example Figure 7 graphs 4 though 10 (Carole B Burden U.S. Geological Survey 2011.) The declines have continued, and were recognized in presentations in the Spring of 2023 by State Engineer Teresa Wilhelmsen and regional engineer Gary Brimley, to audiences at Roy High School and in Cache Valley. Ms Wilhelmsen's office is to be applauded for bringing light on this issue, and saying what has to be said – the groundwater levels cannot continue declining without risking adverse changes in groundwater quality due to lower pressures causing migration of brines from beneath the GSL. We cannot continue to "mine" groundwater for supply.

   The declines in piezometric level need to be stabilized and reversed to a manageable extent, so that the aquifers can continue to function as resilient and sustainable drinking water resources for the indefinite future. The State Engineer needs to be supported in this effort by the Utah DWRe.

4. For an easy “no regrets” effort please can we all get focused on reducing the amount of phragmites? This should include the following steps:
    a. A state directive, and accompanying funding to every county Weed Control board, and
    b. State funded grants continued and expanded to whatever non-profits are prepared to take this on. (e.g. Weber Conservation District)

    We need to work to eliminate this awful invasive weed. It is very difficult to eradicate, every occurrence seems to need at least two sprayings, probably by professionals. My understanding is that it has zero value for wildlife, compared to the native cattails, which hopefully can be encouraged to replace it. Let’s start with removing phragmites that is creeping ever closer to the Weber Basin reservoirs (or already arrived)

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Name (this is **not** required if you wish to submit your comments anonymously):

Email (this is **not** required if you wish to submit your comments anonymously):

gsl@postmechanical.com

In what ways are you connected to Great Salt Lake?

I live in Salt Lake City.

Do you think the challenge statement in Section One (page 4) of the Work Plan accurately characterizes the challenge(s) we are facing?

- ○ Yes
- ◉ No
- ○ Other:

What do you think is the most significant challenge we face in relation to Great Salt Lake?

Accepting the fact that we have to allow more water to flow into the lake than it loses to evaporation. Accepting the fact that lake is beyond the tipping point and will likely be dead by the time this process even gets to any recommended actions.

Do you think the goals and objectives in Section One (pages 5 and 6) adequately address what must be accomplished by the Great Salt Lake Basin Integrated Plan?

- ○ Yes
- ◉ No
- ○ Other:

Are there any specific recommendations that you feel are missing from Section Four (page 21) that you believe would help us better understand the water challenges in the Great Salt Lake basin? If so, what are they?

Buy up all agricultural water rights in the basin. Stop the bear river diversion.

What do you think is most important in order for the Great Salt Lake Integrated Plan to be successful?

Two years to get to a recommended action plan that will be ignored by state government. I don't know if success is possible but it doesn't look like this.

What do you feel success looks like in relation to the Great Salt Lake Integrated Plan?

Real action from state government

Do you have any additional comments in relation to the Work Plan?

Would you like to receive periodic email updates on the Great Salt Lake Integrated Plan?

- (●) Yes (if so, please be sure you have provided your email in question two)
- ( ) No

Please share additional documents or images that may be helpful.

Great Salt Lake Basin Integrated Plan Draft Work Plan

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Name (this is **not** required if you wish to submit your comments anonymously):

Emily Ewart

Email (this is **not** required if you wish to submit your comments anonymously):

eewart@utah.gov

In what ways are you connected to Great Salt Lake?

I am the Division Planner for Utah DNR FFSL

Do you think the challenge statement in Section One (page 4) of the Work Plan accurately characterizes the challenge(s) we are facing?

- (●) Yes
- ( ) No
- ( ) Other:

What do you think is the most significant challenge we face in relation to Great Salt Lake?

Do you think the goals and objectives in Section One (pages 5 and 6) adequately address what must be accomplished by the Great Salt Lake Basin Integrated Plan?

- (●) Yes
- ( ) No
- ( ) Other:

Are there any specific recommendations that you feel are missing from Section Four (page 21) that you believe would help us better understand the water challenges in the Great Salt Lake basin? If so, what are they?

What do you think is most important in order for the Great Salt Lake Integrated Plan to be successful?

What do you feel success looks like in relation to the Great Salt Lake Integrated Plan?

Do you have any additional comments in relation to the Work Plan?

Please update on page 13 to read: GSL Comprehensive Management Plan FFSL intends to begin updating its Final Great Salt Lake Comprehensive Management Plan and Record of Decision in 2024. This plan is intended to identify potential issues and strategies to manage GSL resources at different lake levels. This important effort, which will help determine whether developing safe operating water levels for GSL is feasible, will begin early 2024 and likely conclude in 2026.

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Name (this is **not** required if you wish to submit your comments anonymously):

Utah Department of Agriculture and Food

Email (this is **not** required if you wish to submit your comments anonymously):

jdbowcutt@utah.gov

In what ways are you connected to Great Salt Lake?

We are a state agency and have been involved in the process from the start. We just saw a couple things as we reviewed it internally that we could change that we want to express.

Do you think the challenge statement in Section One (page 4) of the Work Plan accurately characterizes the challenge(s) we are facing?

- (●) Yes
- ( ) No
- ( ) Other:

What do you think is the most significant challenge we face in relation to Great Salt Lake?

Balancing out the water needs of various user's and the environment.

Do you think the goals and objectives in Section One (pages 5 and 6) adequately address what must be accomplished by the Great Salt Lake Basin Integrated Plan?

- (●) Yes
- ( ) No
- ( ) Other:

Are there any specific recommendations that you feel are missing from Section Four (page 21) that you believe would help us better understand the water challenges in the Great Salt Lake basin? If so, what are they?

Often times we talk about studies that need to be done. Recently, there has been much discussion of seasonal or split season leasing of agricultural water. We feel as though this needs to be researched much more than it has. If this is a possible action that is going to take place, we feel like research needs to be done on various scenarios, and what this may possibly look like. We also feel as though research needs to be done to understand what kind of impact this will have on the environment such as air quality, wildlife habitat, air temperature, invasive species, and water quality. Often times people are so focused on getting water and what practices are the best mechanism to produced saved water that they forget to look at the cost that is associated with potentially reducing the acres in agricultural land.

What do you think is most important in order for the Great Salt Lake Integrated Plan to be successful?

Continued collaboration between all agencies and user groups

What do you feel success looks like in relation to the Great Salt Lake Integrated Plan?

We understand that all the water users will need to bend a little to make strides in getting more water to the lake. We just need to help everyone be understanding of the needs of each of those user groups and determine how we can all bend a little, but not cause any one user group to break.

Do you have any additional comments in relation to the Work Plan?

In Figure 2.1 it lists the "Conservation Division" as a partner. We feel as though this should be "The Utah Department of Agriculture and Food", not the "The Conservation Division".

Would you like to receive periodic email updates on the Great Salt Lake Integrated Plan?

- (●) Yes (if so, please be sure you have provided your email in question two)
- ( ) No

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Name (this is **not** required if you wish to submit your comments anonymously):

David Deisley

Email (this is **not** required if you wish to submit your comments anonymously):

dldeisley@gmail.com

In what ways are you connected to Great Salt Lake?

Recreational use, birding.

Do you think the challenge statement in Section One (page 4) of the Work Plan accurately characterizes the challenge(s) we are facing?

- ○ Yes
- ○ No
- ◉ Other:

  I believe the challenge focuses too narrowly on water supply. GSL is an integrated ecosystem that requires water and land to function. The challenge statement should acknowledge the importance of protecting GSL shorelands from development to securing the health of GSL.

What do you think is the most significant challenge we face in relation to Great Salt Lake?

Protecting GSL and its shorelands (wetlands, playas, uplands) from development.

Do you think the goals and objectives in Section One (pages 5 and 6) adequately address what must be accomplished by the Great Salt Lake Basin Integrated Plan?

- ○ Yes
- ○ No
- ◉ Other: See my comment regarding protection of GSL shorelands.

Are there any specific recommendations that you feel are missing from Section Four (page 21) that you believe would help us better understand the water challenges in the Great Salt Lake basin? If so, what are they?

I recommend that the water studies be integrated with an understanding of the importance of GSL shorelands to the health of the ecosystem.

What do you think is most important in order for the Great Salt Lake Integrated Plan to be successful?

Transparency with the public and solid scientific bases for all recommendations.

What do you feel success looks like in relation to the Great Salt Lake Integrated Plan?

Solid scientific program that measures today's reality and provides a system for monitoring and assesing future trends and the effect of implementing recommended actions.

Do you have any additional comments in relation to the Work Plan?

I recommend greater investment in public outreach and opportunity for public education of and input to the process. Figure 3-4 identifies only institutions, not the public generally. All recommended actions are likely to require each member of the public to adjust current water use behaviors. Ensuring public engagement will be essential to achieving beneficial results from recommended actions.

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- ( ) No

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Name (this is **not** required if you wish to submit your comments anonymously):

Alma Naylor

Email (this is **not** required if you wish to submit your comments anonymously):

Alma.l.naylor@gmail.com

In what ways are you connected to Great Salt Lake?

Most of my recreation is hunting, fishing, canoeing and hiking within the drainage of the GSL in Southeast Idaho and Northern Utah. I often climb a peak for a view of the North Arm, and I love to canoe on the Bear and Malad rivers. I live in the ancient drainage of Lake Bonneville near Red Rock Pass. I love to visit the shore of GSL and care deeply for the region's wildlife.

Do you think the challenge statement in Section One (page 4) of the Work Plan accurately characterizes the challenge(s) we are facing?

- (●) Yes
- ( ) No
- ( ) Other:

What do you think is the most significant challenge we face in relation to Great Salt Lake?

Overcoming the apathy that the various user groups have for the plight of other user groups.

Do you think the goals and objectives in Section One (pages 5 and 6) adequately address what must be accomplished by the Great Salt Lake Basin Integrated Plan?

- ○ Yes
- ◉ No
- ○ Other: _____

Are there any specific recommendations that you feel are missing from Section Four (page 21) that you believe would help us better understand the water challenges in the Great Salt Lake basin? If so, what are they?

I see streamflows mentioned but nothing about the missing beavers that could save the failing streamflows. Recovering the dying population of beavers should be mentioned at least in section 4.

What do you think is most important in order for the Great Salt Lake Integrated Plan to be successful?

I think that spring snowmelt and runoff from major rain events must be slowed before it reaches the rivers. The best way to do this is to let the beavers do it for us! What is now the state of Utah lost unimaginable numbers of beavers during the 19th century. Millions are still gone from areas they have been unable to return to because of continued trapping and desertification.

What do you feel success looks like in relation to the Great Salt Lake Integrated Plan?

All suitable, existing beaver habitat on public land populated, and continued efforts to improve marginal beaver habitat. Obviously to include replacement of encroaching conifers with suitable tree species used by beavers. This in conjunction with habitat improvement for native fish and riparian birds, especially spawning and nesting habitat.

Exclusion of livestock from all riparian areas. Sustainable grazing practices implemented. Irrigation improved to eliminate runoff.

Water saving strategies utilized by homeowners. Lawn area minimized. Irrigation of lawns and ornamental annual plants prohibited during drought. All irrigation strategies to take into account recent rainfall, or to irrigate based on soil moisture instead of convenient timing.

Improvement and expansion of freshwater and estuary wetlands around the GSL. GSL levels allowed to fluctuate naturally within set parameters to minimize toxic dust, maintain wildlife habitat in the surrounding wetlands, and prevent flooding.

Do you have any additional comments in relation to the Work Plan?

Success for this plan hinges on the reintroduction of beavers. Much of the cost associated with streamflow monitoring and other costs can be minimized by utilizing volunteers for visual monitoring of streamflows and plenty of other tasks.

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- (●) Yes (if so, please be sure you have provided your email in question two)
- ( ) No

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Name (this is **not** required if you wish to submit your comments anonymously):

Meredith Murdock

Email (this is **not** required if you wish to submit your comments anonymously):

meredith11murdock@gmail.com

In what ways are you connected to Great Salt Lake?

I live in Utah County and have family in Salt Lake County

Do you think the challenge statement in Section One (page 4) of the Work Plan accurately characterizes the challenge(s) we are facing?

- ○ Yes
- ◉ No
- ○ Other:

What do you think is the most significant challenge we face in relation to Great Salt Lake?

Concrete actions and decisions! So much of the dialogue surrounding the lake has to do with planning. There has been enough planning and not nearly

Do you think the goals and objectives in Section One (pages 5 and 6) adequately address what must be accomplished by the Great Salt Lake Basin Integrated Plan?

- ○ Yes
- ◉ No
- ○ Other:

Are there any specific recommendations that you feel are missing from Section Four (page 21) that you believe would help us better understand the water challenges in the Great Salt Lake basin? If so, what are they?

No

What do you think is most important in order for the Great Salt Lake Integrated Plan to be successful?

Action!

What do you feel success looks like in relation to the Great Salt Lake Integrated Plan?

Success looks like action!

Do you have any additional comments in relation to the Work Plan?

Overall, I think the more important thing that should be covered in the work plan is more detailed actions for the proposals you have. In particular, section 3 talks about all the collaborators. I would like to know when those collaborators and stakeholders are going to meet, what is constituted as the majority, when these decisions are going to be made, if those meetings are going to be made available for the public as well, etc.

Would you like to receive periodic email updates on the Great Salt Lake Integrated Plan?

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- ( ) No

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Name (this is **not** required if you wish to submit your comments anonymously):

Todd Bingham, President Utah Manufacturers Association

Email (this is **not** required if you wish to submit your comments anonymously):

todd@manufacturingutah.com

In what ways are you connected to Great Salt Lake?

Manufacturing Industry, fomer member Great Salt Lake Advisory Council (two terms)

Do you think the challenge statement in Section One (page 4) of the Work Plan accurately characterizes the challenge(s) we are facing?

- ○ Yes
- ○ No
- ○ Other:

What do you think is the most significant challenge we face in relation to Great Salt Lake?

Balancing the vast intersts around and on the lake

Do you think the goals and objectives in Section One (pages 5 and 6) adequately address what must be accomplished by the Great Salt Lake Basin Integrated Plan?

- ○ Yes
- ○ No
- ○ Other:

Are there any specific recommendations that you feel are missing from Section Four (page 21) that you believe would help us better understand the water challenges in the Great Salt Lake basin? If so, what are they?

What do you think is most important in order for the Great Salt Lake Integrated Plan to be successful?

What do you feel success looks like in relation to the Great Salt Lake Integrated Plan?

Do you have any additional comments in relation to the Work Plan?

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- ( ) No

Please share additional documents or images that may be helpful.

GSL BIP UMA Co...

Comments submitted on the Great Salt Lake Basin Integrated Plan Draft Work Plan on behalf of the Utah Manufacturers Association

The Utah Manufacturers Association (UMA) has a rich history of supporting manufacturing and Industry in Utah and is proud that the State is one of the best in the country in countless polls and surveys in economic development and growth. To that end, UMA is pleased that political leadership in Utah recognizes the importance of water to support continued and thoughtful sustainable growth. The UMA further applauds the State's effort to develop a GSL Basin Integrated Plan (BIP). UMA has reviewed the BIP and believes the State is off to a solid start and looks forward to next steps in its development. UMA believes an underpinning of Utah's success has been strong collaboration between private and public stakeholders, including political, regulatory, academic, community and private industry leaders. UMA notes that in its review of the draft GSL BIP, manufacturing and industry are hardly recognized or identified as stakeholders in the development of sustainable plans. UMA finds this perplexing in light of the strength of knowledge, innovation and expertise that is available to be leveraged from the manufacturing industry, a key stakeholder which stands ready to continue to be active and engaged in the State's future growth. The BIP instead herds all private interests in a 'Water User' category, a group seemingly without a voice, and beholden to the edicts and modeling that come from academics, think tanks and regulatory agencies. This hasn't been the model historically in Utah, and Utah's growth and success to date is due to the inclusion/partnership/collaboration of private industry and manufacturing in the identification of opportunities and development of solutions to challenges [together].

The UMA thanks the State of Utah for the opportunity to provide comments and urges further and strengthened engagement between the State and UMA in the development of this Plan.

Regards,

Todd R. Bingham,
President/CEO
Utah Manufacturers Association
todd@manufacturingutah.com
801-891-6887 (m)

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Name (this is **not** required if you wish to submit your comments anonymously):

Blake Bingham (on behalf of the State Engineer)

Email (this is **not** required if you wish to submit your comments anonymously):

blakebingham@utah.gov

In what ways are you connected to Great Salt Lake?

Do you think the challenge statement in Section One (page 4) of the Work Plan accurately characterizes the challenge(s) we are facing?

- ○ Yes
- ○ No
- ○ Other:

What do you think is the most significant challenge we face in relation to Great Salt Lake?

See attached

Do you think the goals and objectives in Section One (pages 5 and 6) adequately address what must be accomplished by the Great Salt Lake Basin Integrated Plan?

- ○ Yes
- ○ No
- ○ Other:

Are there any specific recommendations that you feel are missing from Section Four (page 21) that you believe would help us better understand the water challenges in the Great Salt Lake basin? If so, what are they?

See attached

What do you think is most important in order for the Great Salt Lake Integrated Plan to be successful?

See attached

What do you feel success looks like in relation to the Great Salt Lake Integrated Plan?

See attached

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See attached

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- ○ No

Please share additional documents or images that may be helpful.

GSLBIP Work Pla...

SPENCER J. COX
Governor
DEIDRE M. HENDERSON
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES
Division of Water Rights

JOEL FERRY
Executive Director

TERESA WILHELMSEN
State Engineer/Division Director

January 8, 2024

Candice Hasenyager, P.E.
Director, Division of Water Resources
1594 West North Temple
Salt Lake City, UT 84116

RE: Great Salt Lake Basin Integrated Plan Draft Work Plan Review

Director Hasenyager,

Please find attached comments from the Division of Water Rights' review of the Great Salt Lake Integrated Basin Work Plan. We acknowledge the Division of Water Resources' commitment to addressing the complex water management challenges in the Great Salt Lake Basin and look forward to continued partnership in this critical endeavor.

Aside from the detailed feedback provided in the attached documents, we want to highlight two major concerns. First, it's unfortunate that the Division of Water Rights was not among the stakeholders included in the Situational Assessment (see Appendix B - Situational Assessment Report). As the agency that has statutory authority for the general administrative supervision of the waters of the state (Utah Code § 73-2-1), omitting the Division of Water Rights from the Situational Assessment seems problematic. Second, given the potential implications of any changes in water law, we strongly believe that the State Engineer should be a part of all discussions relating to such proposals. However, the Division of Water Rights was not consulted in the preparation of the Water Policy Inventory and Assessment (see Appendix E - Water Policy Inventory & Assessment) wherein several changes to water law were proposed. Including the Division of Water Rights would help to ensure that any proposed changes are feasible, effective, and considerate of various water users' interests.

We trust that these concerns will be taken into consideration moving forward. The Division of Water Rights remains committed to collaborative efforts aimed at sustainable water management and stands ready to provide any necessary support or expertise to enhance the Work Plan.

Sincerely,

Teresa Wilhelmsen

Teresa Wilhelmsen, P.E.
State Engineer / Division Director

NAME	AFFILIATION	DOCUMENT CHAPTER	PAGE	PARAGRAPH HEADING	COMMENT
Jim Reese	DWRi	1	5	The Goal to Achieve	The goal statement for the GSLBIP appears to overstep the requirements of HB429, which requires an assesment of the GSL. By using the words "ensuring a resilient water supply" the goal statement seems to indicate that the GSLBIP will offer the solution or solutions for the GSL rather than make an assessment. A better goal question would be "How do we *assess* the water supply...?" It seems like the appropriate approach would be to assess the situation first, as called for by HB429. From the assessment one can then determine whether or not the water supply is resilient, and if not, what actions might be taken. Much of the anecdotal passages in Section 1 are written as if the assesment has already happened!
Jim Reese	DWRi	1	7	Expected Outcome	Again, it appears the GSLBIP is intended to find solutions rather than do an assessment. The timetable for the assesment required for HB429 is appropriate if only doing an assesment. Expecting to also find the solutions within that timeframe is not appropriate. Seeking solutions will be an ongoing process as new concerns are identified. Ten years ago there was little concern of GSL water supply. Ten years from now the concerns may be very different than now.
Blake Bingham	DWRi	2	12	Table 2-2	GSL Inflow Monitoring Details: Although $5 million was appropriated to DWRi, the funding was not isolated to the gap analysis nor explicitly tied to the GSL basin. The Legislature appropriated the funding for water rights measurement and data enhancements throughout the state.
Blake Bingham	DWRi	3	15	Foster learning by taking no regrets actions	The paragraph references policy options in Appendices D and E as "no regrets" actions; however, some of the policy options within those appendices (e.g., Changes to Water Law) have not been fully vetted. Referring to them as "no regrets" actions is incredibly premature. Some of the suggested changes to water law would likely result in consequences that could easily be regretted but haven't yet been identified.
Jim Reese	DWRi	3	15	Facilitate inclusive and balanced deliberations	This is an idealistic concept, but not realistic. All solutions should be considered, even those that will create winners and losers. Otherwise, we will always be seaking a solution that cannot be found.
Jim Reese	DWRi	3	20	Success as a Metric callout	It seems like there is a preconceived notion that success means everyone sacrifices a little. Again, idealistic, but not realistic.
Jim Reese	DWRi	3	20	Indicators of long-term success: -Water supply status	This seems contrary to the doctrine of prior appropriation. The idea itself promoted here will bring the need for legal action.
Jim Reese	DWRi	4	28,31	Figure 4-8, Table 4-1	It is not clear to me why "Update of Safe Yield Estimates for Aquifers" was selected from aquifers, nor how the cost estimate was derived. See additional comment below.
Blake Bingham	DWRi	Appendix B	11	Section 3: Assessment Strategy and Process	Unfortunately, no staff from DWRi were included in the Situational Assessment interviews. Consequently, the SA is missing agency input and includes some erroneous assertions (detailed below).
Blake Bingham	DWRi	Appendix B	17	Section 4: Comprehensive Summary: Data	The SA asserts, "Data is not accessible to describe how much water is pumped out of Utah Lake." This is not accurate. DWRi administers, tracks, and reports diversions from Utah Lake. This information is available on DWRi's distribution page for Utah Lake. However, DWRi recognizes the need for greater accessibility and transparency for relevant water data and is undergoing efforts to address this concern.
Blake Bingham	DWRi	Appendix B	18	Section 4: Comprehensive Summary: Illegal Water Use and Enforcement	Recognizing that this statement is a "perception" rather than a statement of fact, it is important to note that the vast majority of surface water that is tributary to GSL is actively measured, administered, and enforced. There are, of course, many smaller diversions that are not actively monitored. There are over 60,000 water rights in the GSL basin. Consequently, the resources that would be required to actively monitor each one would nearly impossible.
Blake Bingham	DWRi	Appendix B	18	Section 4: Comprehensive Summary: Infrastructure Modernization	The SA asserts,"...there is very limited metering and monitoring of agricultural use, and almost no knowledge of stream flows at diversions." Most agricultural water use within the GSL basin is delivered through Distribution Systems that are administered by the State Engineer. The diversions associated with these systems are actively measured and monitored. The diversion data is available on DWRi's website under the respective Distribution System's page. Again, DWRi recognizes the need for greater accessibility and transparency of this data and is undergoing efforts to address this concern.
Blake Bingham	DWRi	Appendix B	20	Section 4: Comprehensive Summary: Overallocation, Paper Water, and Enforcement	Recognizing that this statement is a "perception" rather than a statement of fact, it is important to note that the vast majority of surface water that is tributary to GSL is actively measured, administered, and enforced.

NAME	AFFILIATION	DOCUMENT CHAPTER	PAGE	PARAGRAPH HEADING	COMMENT
Blake Bingham	DWRi	Appendix B	20	Section 4: Comprehensive Summary: Prior Appropriation Doctrine	The SA asserts, "...the prior appropriation doctrine states that water rights are determined by priority of beneficial use." This is incorrect. The prior appropriation doctrine is a principle of water law that governs how water rights are administered based on the date of their respective appropriation. Consequently, the priority of a water right (i.e., its seniority) is based on its date of appropriation, not its beneficial use.
Blake Bingham	DWRi	Appendix B	21	Section 4: Comprehensive Summary: Recommendations for Immediate Actions	The SA asserts, "Evaluate adjudication procedures with a lens of how water gets to the lake." It's unclear whether this statement is referring to informal adjudicative procedures associated with water right appropriations before the State Engineer or general water rights adjudications that are initiated by the State Engineer and proceed before the courts; however, in either case this assertion is far from what DWRi would consider a "Recommendation for Immediate Action." Both types of adjudications have specific statutory frameworks that have been crafted and refined for 100+ years. DWRi cautions against hasty conclusions regarding the necessity to modify these statutory mechanisms.
Blake Bingham	DWRi	Appendix B	23	Section 4: Comprehensive Summary: Water Rights	The SA asserts, "...a need to reassess the way that water rights are apportioned and adjudicated in Utah and the GSL basin in particular." Again, it's unclear whether this statement is referring to informal adjudicative procedures associated with water right appropriations before the State Engineer or general water rights adjudications that are initiated by the State Engineer and proceed before the courts; however, in either case, these processes have specific statutory frameworks that have been crafted and refined for 100+ years. DWRi cautions against hasty conclusions regarding the necessity to modify these statutory mechanisms.
Blake Bingham	DWRi	Appendix D	3	Section 6: Lease, Buy, Shepherd	The appendix recommends the initiation of "an expedited change application process." It is unclear what timeframe would satisfy the requirements of an "expedited" process or what elements of the current process should be omitted to achieve it. Generally, a large portion of the change application process is dedicated to due process (i.e., advertisement, protest period, hearings, etc.) or analysis to ensure that existing rights are not impaired as a result of the change application. Consequently, DWRi cautions against hasty conclusions regarding the necessity or perceived benefit of modifying this statutory process.
Blake Bingham	DWRi	Appendix E	5	Section C: Forfeiture Tools - Getting "Bad" Water Rights Off the Books	The appendix asserts, "Water rights vulnerable to forfeiture, but not decreed forfeit, do not bestow the right to use actual wet water." This is incorrect. Until a water right is decreed forfeit by a District Court, it fully retains its validity to divert water. However, if a change application is filed on a water right that hasn't been used for a period of seven years, it might be subject to the rebuttable presumption of quantity impairment--potentially preventing the State Engineer from approving the change application.
Blake Bingham	DWRi	Appendix E	6	Section C: Forfeiture Tools - Getting "Bad" Water Rights Off the Books	The appendix suggests that the next steps include the development of a water rights forfeiture referral program. Although other western states (e.g., Colorado) have adopted a similar rolling forfeiture program, it's unclear whether such a referral program is desirable or necessary in Utah. Forfeiture is a highly controversial action and any program recommending that the State should take a more active role in pursuing it should be thoroughly vetted by a wide range of stakeholders.
Blake Bingham	DWRi	Appendix E	7	Section D: Water Prioritization	The appendix asserts that drought should be considered as part of a "temporary water shortage emergency". However, drought was explicitly removed from the definition out of concerns that allowing municipalities to plan on satisfying their junior rights at the expense of senior right holders during a drought might create a perverse incentive for municipalities to avoid undertaking appropriate drought contingency planning.
Jim Reese	DWRi	Appendix J		Update of Safe Yield Estimates for Aquifers	Before identifiying an agency as the lead agency for a project, that agency should be consulted first. DWRi in fact has already summarized the data releated to safe yield and pumping. Safe yield estimates are well known. Reported aquifer level declines do not necessarily mean pumping has exceeded safe yield - declines will occur until a sufficient water level gradient is created to capture natural discharge. A groundwater model does not necessarily provide a better determination of safe yield. It depends what the the groundwater model was intended to model. It would be impractical for all of the groundwater models within the GSL basin to be updated, especially for just $200,000 and within just a few months.

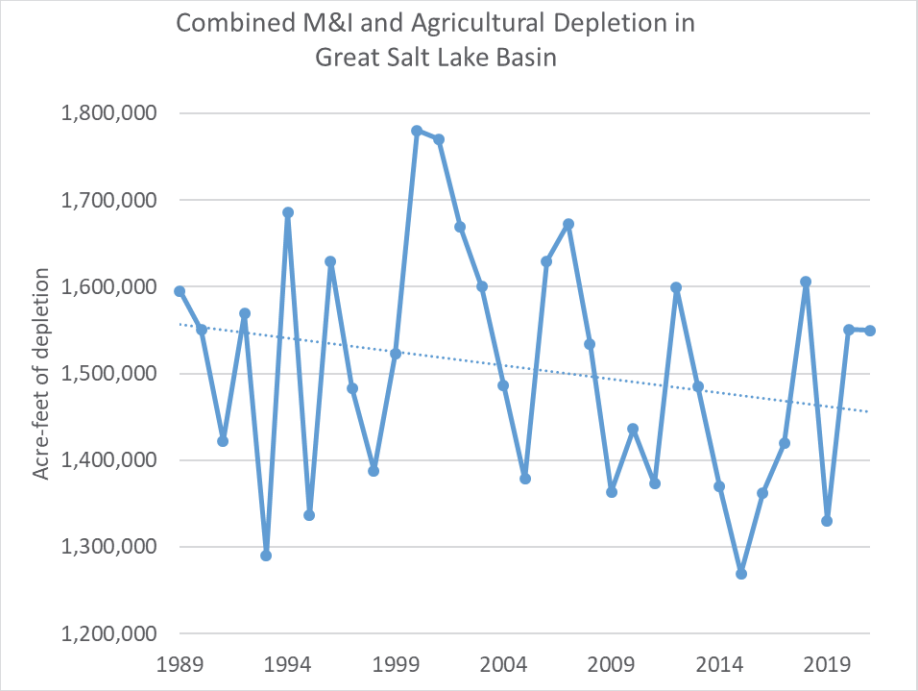
NAME	AFFILIATION	DOCUMENT CHAPTER	PAGE	PARAGRAPH HEADING	COMMENT
Jim Reese	DWRi	Appendix J		Quantification of Evaporative Losses from Great Salt Lake	The state should consider a statewide plan for establishing EC stations for informing remote sensed ET models with the goal of adopting a statewide standard model for remote sensed ET. The Upper Colorado River Commission has already selected EE metric as it's standard. It would be helpful if the state could adopt EE metric as well for a statewide model. The network of existing and future EC stations could be operated for sufficient time so that EE metric could be calibrated for locations statewide. It would be helpful if the state adopted a single standard across agencies for regulation and planning. The standard woule be used for both lake evaporation, and crop and native vegetation ET.

Great Salt Lake Basin Integrated Plan Draft Work Plan Review Comments
Jared Manning, P.E., Division of Water Rights

GSL Basin Hydrology

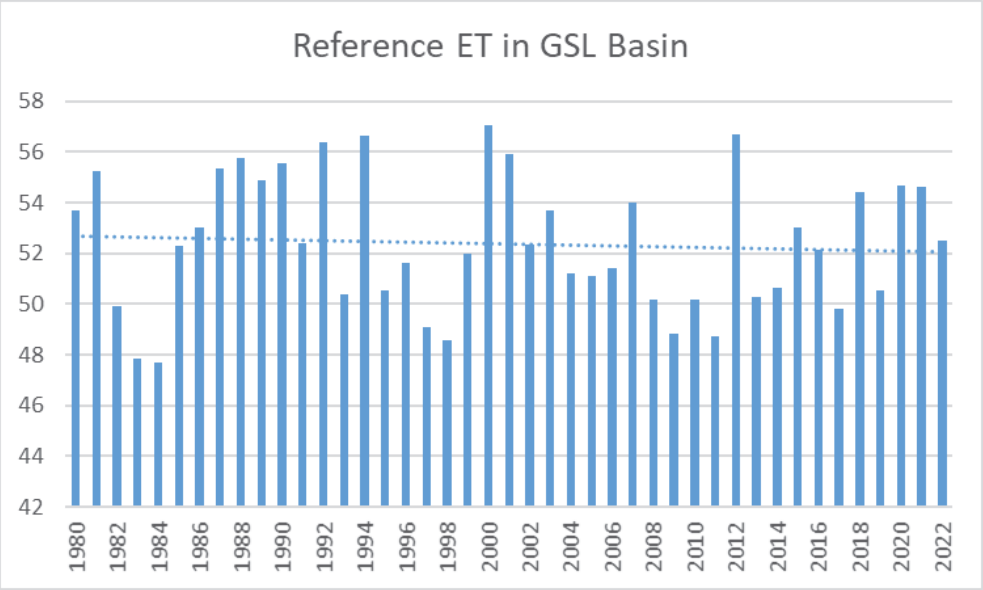
The draft work plan makes two major underlying claims about GSL Basin hydrology that are not supported by the data. These are: 1) water use is increasing in the GSL Basin, and 2) climate change has contributed to decreased GSL levels (see page 4, second paragraph, for example). These claims have the potential to send us in the wrong direction and distract from critical issues that need further study.

It has long been known that it takes less water to grow people than it does to grow crops. Depletion numbers published by Water Resources show a decrease in depletions over the last three-plus decades as agricultural land has been developed.[1]

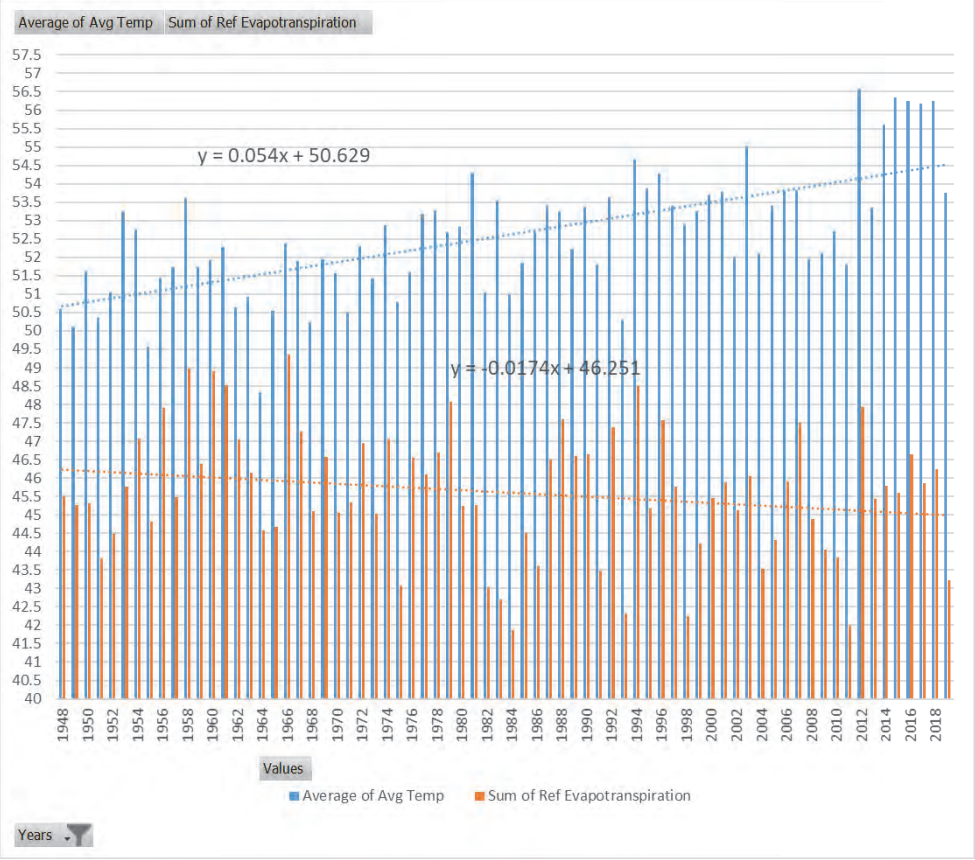


Although it may seem logical that evapotranspiration has increased along with rising temperatures, the data do not support this. At the same time temperatures have been rising, increased cloudiness has caused a decrease in solar radiation, and total wind has also decreased. The net result does not point to a rise in ET, but instead suggests that ET may be decreasing. The following graph shows average ET throughout the GSL Basin as calculated by GridET.

[1] https://dwre-utahdnr.opendata.arcgis.com/pages/water-budget-data



The next graph shows temperature and Reference ET as reported at the Salt Lake International Airport.



Both of these issues need more analysis and would be good study items for the work plan.

Goal of the GSLBIP

The stated goal is to “Ensure a resilient water supply for Great Salt Lake and all water uses, including people and the environment, throughout the watershed.” In reality, we have very little control over the water supply per se. Our control mostly extends to the demands humans place on the water supply. Perhaps this goal needs to be turned on its head. An alternate goal could be along the lines of Utah living within our means to balance the various demands and environmental values associated with water.

Water Budget Issues

Need for an Accurate Water Budget

A solid water budget is the foundation for understanding the water resources of the GSL Basin. At its simplest, the GSL Basin budget is a single value representing the lake’s actual inflow plus the net change in inflow caused by human activities. To calculate the water budget we need good data regarding actual lake inflow/outflow as well as good data and information regarding human water-related activities.

The water budget volume corresponds to the following important steady state lake metrics: 1) elevation, 2) volume, 3) surface area, and 4) salinity. Any human impact quantified by volume corresponds to a change in each of these metrics. With accurate quantifications of lake inflow/outflow and the impact of various human activities we can compare them using these common metrics, which allows us to better understand tradeoffs.

Current quantifications of lake inflow/outflow and human impacts have significant uncertainties and errors that necessarily bias any analysis. While the draft work plan acknowledges the need to develop a good water budget, it does not put forth a plan to analyze the suitability of current water budget methodologies or to propose projects that adequately address known issues. As such, the proposed work plan misses a major opportunity to improve our scientific understanding of GSL Basin hydrology.

Known Water Budget Issues

The current water budget methodology assumes there is a one-to-one impact of groundwater depletion on surface water availability. This assumption causes the impact of well pumping on the GSL to be overestimated. Groundwater pumping lowers groundwater tables which removes water from aquifer storage and reduces phreatophyte evapotranspiration. These impacts could be about 400,000 acre-feet per year, which would be a major inaccuracy in current estimates of human impacts to the lake.

Estimates for M&I depletions in the basin need to consider the net effect of impervious surfaces on the water budget. While natural vegetation consumes a large amount of direct precipitation, comparatively little water evaporates directly from the surfaces of roads, parking lots, and rooftops. Much of the precipitation hitting these surfaces runs off and ends up in the natural

hydrologic system rather than being consumed as under natural conditions. This water needs to be quantified and accounted for so we can better understand the impacts of urbanization on the basin water budget.

A lot of progress has been made in recent years in accurately mapping irrigated acreage. This work is the foundation for estimating consumptive use from irrigation. However, current water budget methods estimate potential depletion instead of actual depletion, meaning the impact to the GSL is being overestimated.

Sub-irrigation needs to be properly accounted for in order to understand the true impact of agricultural use. Some consumptive use from sub-irrigated crops is depletion that would have occurred naturally from native vegetation. Other areas that are sub-irrigated likely benefit from excess applied irrigation water. Depletion from sub-irrigated crops in both categories needs to be quantified.

The consumptive use from wetland areas is not well understood and the current water budget does not adequately address them. In addition, human activity has both added and removed wetlands. The net effects from adding and removing wetlands need to be understood in order to better quantify human impacts to the lake. In addition, existing wetland water budget models need to be ground-truthed with enhanced measurement of inflows, outflows, and evapotranspiration.

There are current and historical gaps in measurements of inflow to the GSL. Methods have been developed to estimate historical ungaged inflow, but these can be improved. Additional measurement can also help eliminate current gaps.

GSLBIP Approach to Water Budgets

The draft GSLBIP work plan proposes engaging watershed councils to help them develop their own regional river basin water budgets. Developing water budgets is a technical endeavor requiring the expertise of hydrologists and engineers using modern technical methodologies. Although local knowledge will certainly be important for developing these budgets, scientific and engineering experts need to do the primary work to ensure standardization, appropriate scientific rigor, and use of best technology and practices. Mere technical review as proposed likely cannot provide sufficient guidance throughout the duration of the study process to ensure this important work is done correctly.

None of the water budget issues identified above made the list of proposed projects (summarized in the draft work plan in Table 4.1). Since the basin water budget is so fundamental to understanding trade offs within the Great Salt Lake Basin, if these issues are not adequately addressed, study results from other parts of this work plan may not provide the value expected.

Proposal for Addressing the Water Budget

The significant uncertainties in the current water budget approach to the Great Salt Lake Basin should be central to this work plan. To summarize, here are six specific items that could be

studied to help produce a more accurate water budget: 1) quantifying reduction in ET from groundwater use, 2) quantifying runoff from urban surfaces, 3) quantifying actual (vs potential) irrigation depletion 4) quantifying sub-irrigation impacts, 5) quantifying net human impacts on wetland depletions, and 6) producing better measurements or estimates of lake inflow. Each of these could be addressed by projects within the GSLBIP.

Since there are limited resources available, other projects in the proposed work plan likely need to be eliminated or scaled down. Here are my suggestions in that regard.

The *Update of Safe Yield Estimates from Aquifers* Project should be scaled down and modified. We have safe yield estimates that may all be adequate for current management purposes. What's needed is a summary of existing safe yield estimates along with information about how they were produced. This would include information about who did the studies, when the studies were performed, and whether there are groundwater models available. This information should be paired with estimates of current withdrawals and withdrawal trends to help determine if there are areas that need to be studied further.

The *Bioenergetics Study* Project appears to be outside the scope of the integrated plan. It also appears to be premature because actual water consumption in wetlands is not yet well understood. This proposed project could be replaced with a wetlands water balance study as proposed earlier.

The *Options and Costs for Great Salt Lake Dust Control* Project also appears to be premature. A recent study shows that the major sources of regional dust along the Wasatch Front from 2004 to 2010 were Dugway Proving Grounds in the West Desert, the Tule and Sevier dry lake beds, and the Milford Flat burned area, with no dust plumes identified as originating north of I-80.[2] Another recent study found that the arsenic in Wasatch Front dust likely comes from local industries or historical land use practices.[3] Thus the exposed lakebed of the GSL does not appear to be a major contributor to arsenic or dust along the Wasatch Front. However, since GSL lake levels are below those of the 2004-2010 study period referenced above, perhaps a similar study could be conducted to determine whether additional exposed GSL lakebed has produced dust plumes in recent years. We may also need additional study to better understand the surface crust properties, including erosion potential and a risk assessment.

The *Analysis to Identify Minimum Functional Flows for Streams* Project appears to be premature. This is not a GSL issue per se and should be given a lower priority as compared to issues directly affecting the GSL such as the ones previously identified.

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[2] Geomorphic and Land Cover Identification of Dust Sources in the Eastern Great Basin of Utah, U.S.A.; Hahnberger, Maura and Nicoll, Kathleen; Geomorphology 204 (2014) 657-672.

[3] Industrial Particulate Pollution and Historical Land Use Contribute Metals of Concern to Dust Deposited in Neighborhoods Along the Wasatch Front, UT, USA; Putman et al; GeoHealth Vol 6, Issue 11; October 6, 2022.

GSL Modeling

Various models have been used over several decades to model GSL responses to hydrologic conditions. Models are critical for understanding how changes in water use practices and hydrology affect the lake. Current modeling code needs to be transparent and a public-facing interface for running the model should be developed. In addition, a steady-state model should be added to the suite of tools for analyzing effects on the lake. This is standard practice in groundwater modeling, which has many similarities. A steady state model is valuable because it provides an easy way to evaluate different human actions and climatic conditions using a few standard hydrologic metrics.

Great Salt Lake Basin Integrated Plan Draft Work Plan

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The objectives of the Work Plan are to:

1. **Lay out** the approach for completing the integrated plan
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5. **Define** remaining questions
6. **Identify and prioritize** necessary studies, schedules and cost

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Name (this is **not** required if you wish to submit your comments anonymously):

D. Kip Solomon

Email (this is **not** required if you wish to submit your comments anonymously):

kip.solomon@utah.edu

In what ways are you connected to Great Salt Lake?

University researcher, hydrogeologist

Do you think the challenge statement in Section One (page 4) of the Work Plan accurately characterizes the challenge(s) we are facing?

- (●) Yes
- ( ) No
- ( ) Other:

What do you think is the most significant challenge we face in relation to Great Salt Lake?

Quantifying all aspects of the water budget

Do you think the goals and objectives in Section One (pages 5 and 6) adequately address what must be accomplished by the Great Salt Lake Basin Integrated Plan?

- (●) Yes
- ( ) No
- ( ) Other:

Are there any specific recommendations that you feel are missing from Section Four (page 21) that you believe would help us better understand the water challenges in the Great Salt Lake basin? If so, what are they?

Recent field measurements have revealed large amounts (potentially trillions of gallons) of pressurized freshwater beneath Farmington Bay. Quantifying the discharge of this water into GSL and its role on the ecology of GSL and surrounding wetlands is a fundamental research need.

The GSL is surrounded by mountains that received large to modest amounts of precipitation. Some of this precipitation recharges groundwater that flows towards and discharges either directly into GSL or indirectly into streams that flow into GSL. However, the role of groundwater in the GSL water budget and in the ecology of GSL and surrounding wetlands is poorly understood. An ongoing project funded by Forestry Fire and State Lands (FFSL) to the University of Utah, Utah Geological Survey, and United States Geological Survey has revealed unexpected fresh water beneath Farmington Bay. Electrical resistivity surveys and direct sampling of pore waters show salt water at the land surface that rapidly (and surprisingly) transitions to fresh water at depths of 6 m (20 ft). This freshwater is under pressure and analyses of dissolved noble gases in the shallow saltwater show that the saltwater was derived from freshwater that originally recharged in the surrounding mountains (i.e. noble gas thermometry shows it was recharge at high elevations where the mean annual temperature is cold).

GSL has been at its modern level for about 13,000 years and if freshwater were NOT flowing beneath Farmington Bay, the salty Lake and Bay water would have penetrated (via diffusion) to much greater depths. In other words, the existence of freshwater at depths of only 6 m implies active groundwater flow beneath the Bay. Groundwater can only flow if it can discharge, so these observations imply significant, but unknown, locations of groundwater discharge. Moreover, tritium (a radioactive isotope of hydrogen with a half-life of 12.3 years that is present in precipitation) measurements of GSL water are about 30% lower than the annual average value in precipitation. This further implies significant amounts of older groundwater (in which the tritium has decayed) is discharging into GSL and reducing it tritium inventory.

Quantifying this groundwater discharge and its role in the ecology of GSL and surrounding wetlands is a critical research need. If even a 10 m thick lens of fresh water exists beneath GSL, its volume would be more than 3 trillion gallons, or approximately the present volume of GSL. We have evidence of fresh water beneath Antelope Island at a depth of more than 100 m, so the volume of freshwater beneath GSL could be much larger than the lake itself.

What do you think is most important in order for the Great Salt Lake Integrated Plan to be successful?

See previous response

What do you feel success looks like in relation to the Great Salt Lake Integrated Plan?

An understanding and quantification of all aspects of the GSL water budget.

Do you have any additional comments in relation to the Work Plan?

Would you like to receive periodic email updates on the Great Salt Lake Integrated Plan?

- (●) Yes (if so, please be sure you have provided your email in question two)
- ( ) No

Please share additional documents or images that may be helpful.

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Name (this is **not** required if you wish to submit your comments anonymously):

Joan M. Gregory

Email (this is **not** required if you wish to submit your comments anonymously):

joanmzg@gmail.com

In what ways are you connected to Great Salt Lake?

I am a resident of SLC, UT. A healthy GSL means a healthy environment for me, my family, neighbors, friends and colleagues.

Do you think the challenge statement in Section One (page 4) of the Work Plan accurately characterizes the challenge(s) we are facing?

- (●) Yes
- ( ) No
- ( ) Other:

What do you think is the most significant challenge we face in relation to Great Salt Lake?

Taking too long to start implementing change and action to save and protect GSL while we analyze, assess, evaluate and plan. I am all for analyzing, evaluating, assessing, and planning. BUT THIS is an URGENT CRISIS we are in. As you work through this process, I think it will be important to take ACTION along the way, implement the BEST OPTIONS we have now and continue the evaluation/assessment process, evaluate what we do, stop doing it if it is harmful. Our plan should include ACTION along the way. If we wait until the end of the planning process, we may not have a GSL left.

Do you think the goals and objectives in Section One (pages 5 and 6) adequately address what must be accomplished by the Great Salt Lake Basin Integrated Plan?

- ○ Yes
- ○ No
- ◉ Other:

YES ... but we need to speed the process up (that means funding and staffing, because we can't sacrifice quality) and we have to take ACTIONs that won't be perfect. I know this may sound contradictory. It likely is. Yet some ACTIONS shall need to be taken without KNOWING EVERYTHING!! We have waited too long to have a plan that will take longer to prepare than the ACTION it is planning, because by then ACTION may not be possible!

Are there any specific recommendations that you feel are missing from Section Four (page 21) that you believe would help us better understand the water challenges in the Great Salt Lake basin? If so, what are they?

BEST ACTIONS AVAILABLE ... FIRST.

What do you think is most important in order for the Great Salt Lake Integrated Plan to be successful?

BEST ACTIONS AVAILABLE ... FIRST. Keep moving through the planning process while evaluating the best actions available. Perhaps a healthcare model - assess the patient's condition, implement EMERGENCY measures if needed, stabilize the patient, develop a plan, start implementing the plan, constant reassessment and changing the plan as needed as the patient's condition progresses.

What do you feel success looks like in relation to the Great Salt Lake Integrated Plan?

We not only save Great Salt Lake now, but we protect Great Salt Lake for the future. I think this will require ALL OF US. Changes in water use behavior, policies and regulations by residents, businesses, community-based organizations, government. Changes in our culture and our understanding that WATER IS LIFE. ACTing as if we live in a desert because we do! Requiring that our policies and regulations and plans reflect that. No longer seeing GROWTH and DEVELOPMENT as positive.

Do you have any additional comments in relation to the Work Plan?

Get started. Don't let it stop you from implementing GREAT IDEAS THAT HAVE A GOOD CHANCE OF MAKING A DIFFERENCE --- NOW!!

Would you like to receive periodic email updates on the Great Salt Lake Integrated Plan?

- (●) Yes (if so, please be sure you have provided your email in question two)
- ( ) No

Please share additional documents or images that may be helpful.

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Name (this is **not** required if you wish to submit your comments anonymously):

Tyler Lenning

Email (this is **not** required if you wish to submit your comments anonymously):

tjlenning@gmail.com

In what ways are you connected to Great Salt Lake?

We live in the watershed.

Do you think the challenge statement in Section One (page 4) of the Work Plan accurately characterizes the challenge(s) we are facing?

- ○ Yes
- ◉ No
- ○ Other:

What do you think is the most significant challenge we face in relation to Great Salt Lake?

Cultural inertia--we feel entitled to as much water as we can take.

Do you think the goals and objectives in Section One (pages 5 and 6) adequately address what must be accomplished by the Great Salt Lake Basin Integrated Plan?

- ◉ Yes
- ○ No
- ○ Other:

Are there any specific recommendations that you feel are missing from Section Four (page 21) that you believe would help us better understand the water challenges in the Great Salt Lake basin? If so, what are they?

What do you think is most important in order for the Great Salt Lake Integrated Plan to be successful?

Cogeneration of knowledge to increase likelihood of action.

What do you feel success looks like in relation to the Great Salt Lake Integrated Plan?

Consensus on water consumption numbers and effectiveness of various interventions.

Do you have any additional comments in relation to the Work Plan?

See attached

Would you like to receive periodic email updates on the Great Salt Lake Integrated Plan?

- (●) Yes (if so, please be sure you have provided your email in question two)
- ( ) No

Please share additional documents or images that may be helpful.

Basin Integrated …

Tyler Lenning, Emma Clawson, Whitney Kingsolver, Audrey Rathke, Isabel Haymore, Celeste Doxey, Allison Phillips, Alyssa Kang, Abbie Crookston, Meredith Murdock, Audrey Lofthouse, Chris Rose, Alex Olson, Bruce Yasuo Holmes, Katie Tano, Lou Giordano, Ella Reid, Jane Allen

COMMENTS ON INTRODUCTION

- Urgency: There seems to be a laid-back theme, where there is not enough urgency. How can we make sure this will happen within a very short time frame? Perhaps even less than 3-5 years, which is how long we have before the GSL is not restorable. The risks of not saving the lake seem too mild, it needs to offer clear consequences for everyone involved. Add some of the short-term goals from Appendix D into introduction to demonstrate immediately actionable items.
- Main points/clear goals: Clarifying the main goals of this plan would improve perception among legislators and community members. The document should be data driven in its goals with a clear list of actionable steps.
- Collaboration: Within the collaboration section in the introduction, it would be beneficial to see more clarification on the individuals involved in this project. Does the project include local communities, ecosystem habitats, agricultural farms, or current legislature? Are there any options for cross-state action? Living in a closed system watershed and in the desert, there needs to be all of the Great Basin states involved in this process.

COMMENTS ON SECTION 2:

- During brief review, we found that the organization of the listed partners and activities was helpful, but could be organized better to convey the criticalness, chronological order, and cohesiveness of these partnerships. We found that as an audience, it was difficult to identify the importance and prevalence of each partnership and their role regarding the lake. We feel that emphasizing the importance and involvement of each group in a clear concise way could help readers see the bigger picture.
- There should be improved accountability and reporting of these integrated activities between partners and the legislature for each partner to uphold their portion of the solution. We must ensure that each player is doing their part and that the allotted funds are leading to the results we hope to see.
- These are some questions to prompt changes from these weaker points we discovered in this section of the plan:
    - **Is there some way that reporting impact (water to the lake) can be emphasized, measured, and presented in an easily accessible place for everyone to clearly understand for each individual partner?**
    - **Is there another partner that can focus on collecting data and creating a plan/outline of the data for partners and public to build from?**

COMMENTS ON SECTION 3:

- I thought figure 3-4 was very informative and helpful information

- I would be interested to know the specific stakeholders that will a part of this plan, when are meetings going to be held? How much of a majority is needed to make decisions?
- The success metrics page is helpful- it shows how we need to focus on the short-term successes too since they all lead to the greater overall, long-term success of healing the GSL.
- While the cross interest section alludes that all the entires have a say and work together many interest have state thy need it done sooner and the government has made this longer than he lake as time. It begs the question of what does the government have to gain and a fair things are: land use for windmills, selling the land at a very high price to private companies. While the their interests would like a change now since many businesses depend on the lake. As you would expect due to the Utah constitution that the "private property shall not be taken or damaged for public use without just compensation" (Utah Constitution, Article I). With time there could be a case made of how the government has cause a delay for reward and a lawsuit could occur.

COMMENTS ON SECTION 4:

- In Section 4: A Roadmap to Action which states that "informed decisions [are] to be made by 2026." (p.2) - we need decisions now
- "Proposed work will advance selected options" - these options should already be chosen and prepared instead of 'to be considered at a future date'
- Although we appreciate the consideration of community involvement and the contribution of multiple projects, we need immediate action to implement these projects not just plan on doing them someday.
- We know what's wrong, why are we doing more research into what might happen?
- This may be addressed in another section, but is there a decision-making committee in charge of this plan? If so, how many members are a part of the committee and who are they? This would help show the credibility of this plan.
- It's nice how thorough this plan is but it should be simplified (at least with how it is presented in this document)
- The length and wordiness make it relatively inaccessible to the public – what are we supposed to get out of this section other than 'the plan is to make a plan'
- More focus on what we can do now, supplement with long-term studies but focus on immediate influence
- Needs more clarity about the cost breakdown in the last four pages: the names they use to define sections with attached costs change.
- Need to define the financially responsible parties in the cost breakdown instead of just "others"

COMMENTS ON SECTION 5:

- Monies are available? (Money is available)
- Steps should be outlined and made clear with direction to how and when the steps will be implemented.
- **As a stand-alone section, it is unclear what general ideas of the plan are and there are no concrete steps laid out. While it is understood that the plan is often read as a whole, the**

reader should still be able to understand the main ideas of the plan and any next steps through this section and that is lacking.

- This section alludes to community and cultural involvement and engagement but there are no steps to make that happen. They should provide specific recommendations for how the community can be involved.
- **The Next Steps does not seem like the correct spot for this information. Maybe it could go into a background or community section where emotional rapport is established. It seems like the next steps section should have more quantitative information than what is given here. Overall, this is important information and can be used to build connections but this doesn't seem like the right section for it. This means that there should be a clear next steps section added to the plan as this one is added to another section.**

COMMENTS ON SECTION 6:

    - Challenge satement is a good starting point, but lacks some specificity.
- B: Situational Assessment
    - Situational Assessment Report
    - It has a lot of information which is good, it isn't as clear what the most important things to consider are.
- C: Communications Plan
    - What are the most important issues to inform the public about? This issue is complex and a lot of the public is not going to care about every detail, so which ones are the most important to share?
- D: Short Term Opportunities
    - "One of the biggest obstacles to effective water management in Utah is the lack of water supply and demand (specifically depletion) data at the resolution needed to make informed water management decisions" This sentence should be made more concise, because as is, it is confusing.
    - In section 4, could expand on how we are going to move these goals forward
- E: Policy Review
    - E-1: Policy Assessment
    - E-2: Policy Matrices
- F: Technical Sufficiency Review Plan
    - Good section on how the technical teams for review will be built
    - Would it make sense to include any agriculture in section 4? The timing aspect of the table is good.
- G: Gap Analysis Report
- H: Model Scoping Plan
    - A little more background would be important for the readers to understand how the GSLBIP is moving forward.
- I: Making Decisions Scope of Work
    - Title is confusing – why not, "Work Plan for the Great Salt Lake Basin Integrated Plan"
- J: Project Fact Sheets

Great Salt Lake Basin Integrated Plan Draft Work Plan

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The objectives of the Work Plan are to:

1. **Lay out** the approach for completing the integrated plan
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6. **Identify and prioritize** necessary studies, schedules and cost

The **draft** Work Plan is open for review now through **January 8, 2024**. Please utilize this form to provide your thoughts and feedback. Every comment will be reviewed and considered. However, not all comments are guaranteed to be incorporated.

Your name and email is appreciated, in case we wish to reach out to you with questions or clarification regarding your comments, but it is not necessary if you wish to remain anonymous. If you have any questions related to the Great Salt Lake Integrated Plan or its Work Plan, please email GSLBasinPlanning@utah.gov.

Name (this is **not** required if you wish to submit your comments anonymously):

David O'Leary

Email (this is **not** required if you wish to submit your comments anonymously):

doleary@usgs.gov

In what ways are you connected to Great Salt Lake?

Cooperating Federal Agency (USGS) conducting monitoring and interpretive research.

Do you think the challenge statement in Section One (page 4) of the Work Plan accurately characterizes the challenge(s) we are facing?

- (●) Yes
- ( ) No
- ( ) Other:

What do you think is the most significant challenge we face in relation to Great Salt Lake?

Maintaining a resilient water supply in the face of a changing climate.

Do you think the goals and objectives in Section One (pages 5 and 6) adequately address what must be accomplished by the Great Salt Lake Basin Integrated Plan?

- (●) Yes
- ( ) No
- ( ) Other:

Are there any specific recommendations that you feel are missing from Section Four (page 21) that you believe would help us better understand the water challenges in the Great Salt Lake basin? If so, what are they?

N/A

What do you think is most important in order for the Great Salt Lake Integrated Plan to be successful?

What do you feel success looks like in relation to the Great Salt Lake Integrated Plan?

Science-supported actions.

Do you have any additional comments in relation to the Work Plan?

Comments have been made as part of the attached edited pdf.

Would you like to receive periodic email updates on the Great Salt Lake Integrated Plan?

- (●) Yes (if so, please be sure you have provided your email in question two)
- ( ) No

Please share additional documents or images that may be helpful.

GSLBIP-Work-Pla...

Summary of Comments on GSLBIP Work Plan DRAFT 2023-11-15

Page: 1

Author: doleary Subject: Highlight Date: 1/8/2024 10:34:57 PM

Comments provided by David O'Leary, USGS Utah Water Science Center.

The compilation of this document is a massive undertaking and this draft version of the BIP is commendable. Well done!

Please see comments below.

Page: 3

Author: doleary Subject: Highlight Date: 1/8/2024 10:35:18 PM
consider expanding to include natural consumption/evapotranspiration.

Author: doleary Subject: Highlight Date: 1/8/2024 9:54:49 PM
suggest using a term other than "river basin"; perhaps simply "basins" or "watershed" or "hydrologic basin"

"river basin" seems to exclude (likely unintentionally) the groundwater component of each basin and is not a good descriptor for all processes, especially in the West Desert.

global edit if accepted.

Page: 4

Author: doleary Subject: Highlight Date: 1/8/2024 9:53:12 PM

"...GSL is an ***integrator of hydrological processes and*** reflects the change***s*** its watershed has experienced..."

Author: doleary Subject: Highlight Date: 1/8/2024 9:00:35 PM

Consider including something related to increasing temperatures enhancing evaporative processes.

e.g., https://utahrivers.org/climate-change

Page: 11

Author: doleary Subject: Highlight Date: 1/8/2024 10:10:04 PM
Two items for or consideration for inclusion in Table 2-2.

Plan: Lake stage and streamflow gages
Description: The USGS, in cooperation with the State of Utah, maintains several real-time lake stage gages on GSL as well as numerous real-time streamflow gages at GSL inflows as well as throughout the GSL basin. Monitoring is conducted in accordance with nationally consistent, prescribed standards providing a continuous, well-documented, well-archived, unbiased, and broad-based source of reliable and consistent water data. The USGS has been collecting water-surface-elevation data from Great Salt Lake since 1875 and continuously since October 1902. By combining USGS data with other data sources, a water-surface elevation record dating back to 1847 has been established for GSL.
Details: Real-time data are publicly available through the USGS National Water Dashboard (https://dashboard.waterdata.usgs.gov/ap)p/nwd/en/)

Plan: GSL Hydromapper
Description: The GSL Hydromapper is a web-based platform to provide the public with easy access to GSL information. The Hydromapper was developed in partnership with many stakeholders from industry, non-profits, research, and other sectors and is maintained collaboratively by the State of Utah DNR and USGS.
Details: This public tool for accessing and visualizing GSL information is available at: https://webapps.usgs.gov/gsl/

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Name (this is **not** required if you wish to submit your comments anonymously):

Utah Farm Bureau Federation

Email (this is **not** required if you wish to submit your comments anonymously):

terry.camp@fbfs.com

In what ways are you connected to Great Salt Lake?

The Utah Farm Bureau Federation is the largest general agriculture organization in the state with over 35,000 members. We represent the interests of hundreds of farms and ranches in the Great Salt Lake Basin.

Do you think the challenge statement in Section One (page 4) of the Work Plan accurately characterizes the challenge(s) we are facing?

- ○ Yes
- ○ No
- ◉ Other: Please see our attached comments

What do you think is the most significant challenge we face in relation to Great Salt Lake?

Do you think the goals and objectives in Section One (pages 5 and 6) adequately address what must be accomplished by the Great Salt Lake Basin Integrated Plan?

- ○ Yes
- ○ No
- ◉ Other: Please see our attached comments

Are there any specific recommendations that you feel are missing from Section Four (page 21) that you believe would help us better understand the water challenges in the Great Salt Lake basin? If so, what are they?

Please see our attached comments

What do you think is most important in order for the Great Salt Lake Integrated Plan to be successful?

Please see our attached comments

What do you feel success looks like in relation to the Great Salt Lake Integrated Plan?

Do you have any additional comments in relation to the Work Plan?

Please see our attached comments

Would you like to receive periodic email updates on the Great Salt Lake Integrated Plan?

- (●) Yes (if so, please be sure you have provided your email in question two)
- ( ) No

Please share additional documents or images that may be helpful.

UFBF Comments...

UTAH FARM BUREAU FEDERATION
9865 South State Street • Sandy, Utah 84070-3205 • Phone: (801) 233-3040 • www.utahfarmbureau.org
"Inspire All Utah Families to Connect, Succeed, and Grow Through the Miracle of Agriculture."

January 8, 2024

Utah Farm Bureau Federation Comments to Draft Work Plan for the Great Salt Lake Basin Integrated Plan

Planning Is Essential

Dwight D Eisenhower is quoted as saying, "Battle plans are useless. Planning is essential." Utah Farm Bureau believes creation of a Great Salt Lake Basin Integrated Plan is essential and that the water needs Basin can only be met through careful planning. Farm Bureau wishes to fully support efforts to create the development and implementation of good plans. Utah Farm Bureau offers these comments with the intent to support and improve this remarkable and essential effort to establish a plan to improve conditions in the Great Salt Lake Basin. To that end, on behalf of our 35,000 members throughout the state, we submit these specific comments.

Work Plan Strengths

The Draft Work Plan shows great promise, particularly in the following respects:

- Emphasis on collaboration and partnerships
- Integration of past research and analysis
- Careful structure to the plan
- Involvement of existing resources, such as use of basin councils as local advisory councils and multiple agency partnerships
- Commitment to resolving Great Salt Lake Basin issues as a community: "one water, one community"
- Recognition of the union between human need and natural ecosystems
- Efforts to develop metrics to measure effectiveness
- Reliance on strengths of existing agencies
- The discussion on pages 17 and 18 is especially clear and helpful

Recommendations for Improvement

Along with the broadly stated strengths exhibited by the draft work plan, Utah Farm Bureau offers the specific suggested changes to the Executive Summary:

- Any planning process needs to start with a well-stated goal. We suggest that the goal statement first exhibited in the executive summary rests on the assumption that there will be sufficient water for all needs. We hope this is true, but suggest rewriting the goal statement along these lines:

"To create a unified effort among agencies and all other stakeholders to assure wise, optimal use of Great Salt Lake Basin water resources to sustain human populations and basin ecosystems."

- We are concerned the opening paragraph under the caption "The Need and Challenge" needs to be much stronger. We felt that could be accomplished by drawing more fully on content of the larger document and by a bolder call to action. To these ends, we offer these three paragraphs to replace the initial one in the draft work plan:

  "All rivers in the Great Salt Lake Basin flow to Great Salt Lake, the lowest point in the basin. There is no outlet from the Lake other than evaporation. Great Salt Lake is thus a terminal, saline lake—the largest in the Western Hemisphere. Great Salt Lake has developed its own unique, valuable, and irreplaceable ecosystem. Continued human population and economic growth place increased demands on Great Salt Lake water supplies, even as drought and climate change diminish these supplies. Further, Basin water supplies vary from year to year due to the more or less decadal cycles of wetter and drier water years. The declining lake water level, increased salinity, and other perils to Great Salt Lake and its ecosystem emphasize that the limited and variable water supplies relied on by humans and other organisms dwelling in the Great Salt Lake ecosystem must be managed with the health of the lake as a high priority.

  "These circumstances compel the need to better manage the water supply used within the Great Salt Lake Basin now and for generations to come. This complex and difficult undertaking will severely challenge our limits and require extraordinary vision and collaborative action. To meet this challenge, we must answer questions not yet asked, deploy massive inputs, use knowledge we have not yet gained, make decisions we do not want to make, and apply means not yet invented. The continued existence of our human society and the Great Salt Lake Basin ecosystem depend on our ability to do so.

  "We propose creation of the Great Salt Lake Basin Integrated Plan (GSLBIP) as a way to harvest the best knowledge that stakeholder participation can provide, then reduce it to a comprehensive framework for understanding, research, invention, collaboration, policy development, decisions, and action to meet this unprecedented existential challenge. We must do this for ourselves, for those who follow, and for the sake of every living creature within the Great Salt Lake Basin ecosystem."

  These paragraphs as rewritten intend to provide illustrations of broader concerns identified in review of the draft work plan, so discussed more fully below.

- A third item of interest on the executive summary page is the graphic labeled as Figure ES-3. It purports to show "Five Tracks of the Roadmap for the Work Plan." Nowhere in the graphic are there five of anything and nowhere in the document could we find a description of those five tracks.

- Similar lack of clarity in the work plan suggests these broad recommendations:

1. We suggest redrafting the document, or at least thorough editing for clarity and to make it more user friendly. To illustrate this, if you handed the draft work plan to a new group, with instructions to use it to prepare the final work plan, would this document provide sufficient direction?

2. The work plan does not sufficiently address engagement of external stakeholders and their expertise in the development of the integrated plan. The draft work plan is especially silent on engagement of academic and research institutions. These participants could significantly extend agency expertise. Farm Bureau offers to be part of such engagement.

3. The work plan needs to address whether agencies have sufficient staff and other resources needed to complete activities contemplated in the integrated plan, and if not, a plan for the organization, recruitment, systems development, and training to reach the increased capacity.

4. The work plan needs to set metrics for the effectiveness of outreach programs, especially outreach and engagement programs that bring stakeholders of various groups together to develop cooperative resource management programs. This includes bringing sufficient representation of agriculture into such efforts because of agriculture's large stake in water asset ownership and management.

5. Strong leadership will be needed at every phase of developing the work plan, creating the integrated plan, and implementing key elements of the integrated plan. There are few organized leadership training and development programs within the water community, except within individual water organizations. The work plan does not address leadership development except as a byproduct of other activities. Farm Bureau has engaged in leadership training programs and offers its experience for the benefit of the water community.

6. The work plan should provide for robust protection of water rights and the development of integrated, voluntary solutions to water needs.

7. The work plan should address the need for local food production as an essential part of the future for Utah and our nation and that food production requires carefully managed and available water supplies.

Conclusion

Please continue these essential efforts to plan the water resource future of the Great Salt Lake Basin. Utah Farm Bureau supports these efforts with the objectives stated above and requests the opportunity for continued engagement.

Respectfully submitted,

Valjay Rigby
President
Utah Farm Bureau Federation

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Name (this is **not** required if you wish to submit your comments anonymously):

Soren Simonsen

Email (this is **not** required if you wish to submit your comments anonymously):

sorensimonsen@utah.gov

In what ways are you connected to Great Salt Lake?

I work with public agencies/organizations, the Jordan River Commission and Jordan River Watershed Council, which are involved direction with water, wildlife, recreation and other matters related to the Jordan River, a major tributary to GSL. I have also have been a frequent recreation and education participant with education facilities, parks and natural lands in and around the GSL with family and friends, and in my roles as a professional planner, educator and community engagement facilitator.

Do you think the challenge statement in Section One (page 4) of the Work Plan accurately characterizes the challenge(s) we are facing?

- ○ Yes
- ○ No
- ◉ Other: The challenge is accurate, but incomplete (see notes below)

Clear selection

What do you think is the most significant challenge we face in relation to Great Salt Lake?

The GSL ecological systems are complex. The focus of the challenge as it is presented is primarily a focus on water resources, but there is an equally compelling land challenge. The impacts from suburban development that are increasingly encroaching on the wetland and upland areas around GSL, especially in Tooele, Salt Lake, Davis, Weber and Box Elder counties, may be as detrimental to sensitive ecological systems as the issues related to water

Do you think the goals and objectives in Section One (pages 5 and 6) adequately address what must be accomplished by the Great Salt Lake Basin Integrated Plan?

- ○ Yes
- ○ No
- ◉ Other: These are good goals and objectives, but as noted previously, are incc

Clear selection

Are there any specific recommendations that you feel are missing from Section Four (page 21) that you believe would help us better understand the water challenges in the Great Salt Lake basin? If so, what are they?

As noted previously, the challenges are not only water related, but also land related, and these are integral to each other.

What do you think is most important in order for the Great Salt Lake Integrated Plan to be successful?

Collaboration and community engagement.

What do you feel success looks like in relation to the Great Salt Lake Integrated Plan?

Broad communication and participation.

Do you have any additional comments in relation to the Work Plan?

No.

Would you like to receive periodic email updates on the Great Salt Lake Integrated Plan?

- (●) Yes (if so, please be sure you have provided your email in question two)
- ( ) No

Clear selection

Please share additional documents or images that may be helpful.

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