



Bear River Water Conservancy District
102 West Forest Street
Brigham City, UT 84302
435-723-7034

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REGARDING WATER RIGHT AREA 29 PROPOSED POLICY UPDATE

March 22, 2023

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To Whom It May Concern,

We, the Board of Trustees of the Bear River Water Conservancy District (BRWCD) by and through our General Manager do hereby submit public comment regarding the proposed policy update to Water Right Area 29 (Bear River Basin in Box Elder County).

CARL W. MACKLEY, P. E.
GENERAL MANAGER

AREA 29 POLICY PRIOR TO NOVEMBER 3, 2022

From the slides presented at the February 6, 2023 Public Meeting, it is apparent that there are multiple policy considerations that occur with Area 29. In general, areas above fully appropriated springs and streams are closed to new appropriations. The Bothwell area, Mantua Valley, and Box Elder County from Brigham City south to the Weber County Line were already closed to new appropriations and/or have special considerations. The main-stem Bear River has been open to appropriations during periods of high water in excess of existing water rights, as demonstrated by the Bear River Development Act. The Malad River, which is tributary to the Bear River in Box Elder County, appears to be fully appropriated. Groundwater has been available for appropriations of up to 10,000 additional acre-feet of water since April 30, 2018. There are areas of local concern.

MISSION AND PURPOSE OF BRWCD

BRWCD was created in 1988 by court decree under the guidelines of the Utah Water Conservancy Act. Our mission is to conserve and protect water and water rights, develop and provide water for municipal, industrial and agricultural use and to use these resources to best serve the residents of Box Elder County. We feel an obligation to the residents of Box Elder County to protect their collective interests and fulfill our purposes by participating in this public process. We appreciate the opportunity to do so.

BRWCD UNDERSTANDING OF POLICY PROPOSAL

It is our understanding that this policy update proposes to close all of Area 29 to new appropriations of surface or groundwater unless an acceptable mitigation plan is submitted and approved with the application to appropriate. This appears to include small domestic applications as of the date that this policy gets approved and larger applications as of the date of the Governor’s Proclamation 2022-01. In short, the proposal is to permanently close a terminal basin to new appropriations of water. In our opinion water in Area 29 is still available to appropriate under certain circumstances.



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STATE ENGINEER REASONING AND JUSTIFICATION

It is notable that the State Engineer's slideshow presentation of the proposed Area 29 Policy Update did not provide justification or reasoning for the proposed policy, which was noted by the Regional Engineer to be a "big change" for the area. The proposed policy was presented to the public on February 6, 2023 and the subsequent steps of "receive and evaluate public comment", "refine proposed policy if needed" and "adoption of policy" were stated. No study or updated hydrologic data was presented to justify the proposal. Following the brief presentation, the floor was opened for public comment. When asked for justification of the proposal, the State Engineer gave the following reasons:

- Hydrology and impacts of withdrawals.
- Significant quantity of "pending approved applications" in basin and their potential impact resulting in a need to develop those applications and see what the impacts are on existing rights. There was mention made of a five to ten-year impact window.
- Desire by the State Engineer to not over-appropriate the resource, i.e. to close appropriations before there are more paper water rights approved than there is reasonably wet water to satisfy. This has occurred in other basins in the state, and it becomes difficult to regulate.
- Response to local water suppliers and water companies in Box Elder County which are opposed to multiple single-family domestic applications being approved for subdivisions.

AREA 29 APPROPRIATORS, USES & WATER RIGHTS

There are significant existing surface water rights on the Bear River and tributary Malad River within Box Elder County. The US Fish and Wildlife Service Migratory Bird Refuge can divert 1000 cubic feet per second (cfs) or 425,771 acre-feet per year^A from the Bear River. The Bear River Club Company can divert 146.666 cfs or over 65,000 acre-feet per year^A combined from the Bear and Malad Rivers. Bear River Canal Company annually diverts approximately 250,000 acre-feet^B of water from the Bear River, including storage water from Bear Lake. For the purpose of submitting comments here, BRWCD estimates that private wells use about 3650 acre-feet per year^C in Area 29. Public Water Suppliers in Area 29 use about 21,350 acre-feet per year^D, primarily from groundwater wells or springs. Pineview Water Systems imports about 6500 acre-feet per year^E through the Brigham-Ogden Canal. There is an unknown but significant additional quantity of surface water from springs and streams that provide water for irrigation, livestock watering, wildlife and commercial uses. The Bothwell Pocket has over 1870 acres^F irrigated from groundwater wells. Applying the duty of 4 acre-feet per acre, results in approximately 7480 acre-feet of groundwater per year. Adding these assumed numbers together results in over 746,000 acre-feet of surface water rights, approximately 32,500 acre-feet of groundwater rights and over 778,000 acre-feet of water rights total in Area 29. Thus, groundwater use may be only about 4% or less of the total water used in Area 29. Again, these numbers are being used here for discussion purposes only.



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- A. Based on Water Users Claims for the given rights.
- B. Distribution System Report data by Lower Bear River Commissioner (2017 – 2022).
- C. Sheer estimate of 1000 private wells using an average of 3.65 acre-feet per year of water.
- D. Reported Water Use Data on State Engineer's Website (2018 – 2021).
- E. Assumes 32.5% delivery of 2016 – 2022 mean flow in Ogden-Brigham Canal (DVRTVIEW River Commissioner Records Viewer).
- F. Approximate mapped acreage of pivots by BRWCD using UDWRi Map Viewer March, 2023.

In addition, the State Engineer has mentioned that there are various applications to appropriate on their records which have not had decisions made on them and which together constitute a significant unknown as far as the collective impact to appropriations and the hydrologic system. BRWCD is aware of several of these applications. Some of them are rather large. For our part, BRWCD has four unapproved applications for groundwater totaling 2500 acre-feet. BRWCD believes that it is appropriate at this time for the State Engineer to make decisions on these applications, as possible, or at least implementing along with the proposed policy, an effort to move these applications along in the decision-making process. Again, for our part, it seems appropriate to ask the State Engineer to make decisions on our unapproved applications as part of this effort. If a significant dent can be put into these unapproved applications, then policy and regulation will be more certain in Area 29 and certain of the State Engineer's concerns will be addressed.

AVAILABLE HYDROLOGIC DATA

A fairly significant amount of hydrologic data appears to be available within Area 29, including but not limited to the following sources:

- References included on the Utah Division of Water Rights (DWRi) Area 29 Policy Website (<https://waterrights.utah.gov/wrinfo/policy/wrareas/area29.asp>)
- Bear River Commission Website which compiles data from various sources (<http://www.bearriverbasin.org/>)
- Public Water Supplier Water Use Data (https://waterrights.utah.gov/asp_apps/generalWaterUse/WaterUseList.asp)
- Lower Bear River Distribution System Information (https://waterrights.utah.gov/distinfo/distribution_systems.asp)
- Consumptive Use Table for Corinne/Area 29 Box Elder County (1961 – 1990) (<https://maps.waterrights.utah.gov/Consumptive/i1731.htm>)
- PRISM Climate Data (1991 – 2020) (<https://prism.oregonstate.edu/>)

Many of the above references appear to be either used by, acceptable to, or belong to the DWRi and can be reasonably assumed to be used by DWRi in management and decision-making processes. Together, these resources represent a valuable but incomplete package of hydrologic data. Certain pieces seem necessary which, if made available, would serve to improve the available hydrologic data, including the following:

- A network of precipitation and other climate data for Area 29.
- A network of groundwater monitoring wells that is publicly available.
- A network of spring flow data that is publicly available.
- Updated consumptive use data for the most recent 30-year period of record.



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- In general, recognized and acceptable climate data for Area 29.

Better information makes for better decisions. One of BRWCD's hopes is that multiple basin partners could collaborate with us to plan for and cost-share to create a network of additional measuring and monitoring locations to more appropriately represent the ongoing hydrologic conditions in the basin, in anticipation of the proposed policy becoming adopted in the near future.

APPROPRIATIONS VS REGULATION/DISTRIBUTION

As discussed above, we were able to see from the State Engineer's comments at the Feb. 6th Public Meeting that one of her primary concerns is the process of appropriations turning into approved applications that involve; to one degree or another, regulation and/or distribution. It follows that a move to close an open basin to appropriations becomes a move towards regulation of existing rights. It appears that if there is still water available to appropriate in the basin, as was the condition prior to November 3, 2022, then that available water would, in effect become a buffer that will allow existing rights to be regulated, but not have to be distributed by priority, except under dire circumstances. This appears especially true with groundwater, where priority distribution would require a distribution system and practices that have not been implemented to date. BRWCD is not desirous to have a groundwater distribution system in the valley to the extent possible.

SURFACE WATER CONSIDERATIONS

As illustrated above, there appears to be a significant quantity of surface water rights in the Bear River Basin in Box Elder County. Specific rights mentioned above have early priority dates in general, particularly when compared to groundwater rights. These surface rights are used for irrigation and/or federal, state and commercial waterfowl propagation and hunting habitat. A significant quantity of Bear River Canal Company water, and all of the Pineview water is imported into Area 29 from upstream storage. Water rights for the USFWS Bird Refuge and Bear River Club Company are dependent upon natural flow to meet their beneficial uses. Annually, or nearly annually, there are periods of high runoff when flows in the Bear River at the Corinne USGS gauge exceed water rights downstream from that gauge. This unconsumed water makes its way to the Great Salt Lake, where it will reside until it is depleted there by evaporation. The Great Salt Lake is a terminal lake with no outlet.

The State Engineer and her representatives have made few, if any comments regarding shepherding or directing water towards the Great Salt Lake (GSL) in association with this proposed policy update. However, Proclamation 2022-01 (proclamation) was issued specifically to address this issue. It states "*the State Engineer has recommended that the right of the public to appropriate surplus or unappropriated waters in the Great Salt Lake Basin be suspended*". It is the understanding of BRWCD that the only GSL Sub-basin open for appropriations for some time has been the Bear River Sub-basin. While the proclamation may target the entire GSL Basin, the proposed policy targets only the Bear River Basin. The proclamation was obviously created to address an immediate concern while the proposed appropriations policy update is intended to address long-term concerns.



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The proclamation also states that *“the state has invested significant resources to investigate and determine the extent of the available supply and any surplus or unappropriated water in the Great Salt Lake Basin”*. While this statement is undoubtedly true, the literature and studies that BRWCD is familiar with seem to indicate that water is available for appropriation in the Bear River Basin. As stated earlier, the State Engineer has not demonstrated that this is no longer the case. BRWCD feels that a study is warranted that will provide the State Engineer with the tools that are needed for all stakeholders in the Bear River Basin to be able to manage the water resources according to varying supply and availability circumstances.

We feel like groundwater potential is very limited based on a limited storage capacity. From all indications to date, this capacity has not been declining in the valley floor. However, springs along the foot of various mountain ranges, including the Wellsville Range have been declining in their production the last few years. This year’s plentiful snowpack has already brought marked improvement to various springs. More recharge is needed.

Proclamation 2022-01 further states *“No later than November 1, 2023, the State Engineer shall evaluate the circumstances leading to the State Engineer’s recommendation and this proclamation and shall submit a report to the Governor, the Legislative Management Committee, the Natural Resources, Agriculture, and Environment Interim Committee, and the Legislative Water Development Commission indicating the State Engineer’s opinion as to whether the proclamation should remain in effect and stating the reasons for that opinion.”* BRWCD is concerned that if the State Engineer closes the remaining open water right areas (23, 25 and 29) to appropriations, then this statement no longer applies and there will be no accounting of the insight into the State Engineer’s decision. There may also not be adequate tools or basin-wide understanding in place to manage the Bear River Basin for extreme flow conditions such as a declining GSL as well as for a surplus there or the ability to store available surplus water upstream from GSL for later use.

BRWCD believes that there is currently insufficient reliable information regarding the Great Salt Lake (GSL) that would allow the State Engineer, the Governor, the Legislature, or any other state agency to be sufficiently informed to make long-term or permanent policy decisions regarding management of the GSL. As evidence of this, the Utah Division of Water Resources (DWRe), a sister agency to the Division of Water Rights, is working with the US Bureau of Reclamation and other partners (including BRWCD) to fund a basin study for the GSL. The DWRe’s mission is to *“Plan, Conserve, Develop and Protect Utah’s Water Resources.”* This Basin Study proposes to develop a working model for the GSL that can be used to analyze various scenarios and provide reasonable forecast responses to varying model conditions, which would provide a consensus management tool for the GSL. It seems reasonable for DWRe to wait for their sister, DWRe to create this management tool prior to considering permanent appropriations policy for the Bear River Basin.



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From an appropriations standpoint, BRWCD feels that management of the GSL is a new aspect of managing the Bear River Basin that has not primarily been exercised before by DWRI. There are still a lot of unanswered questions. BRWCD would like to continue the discussion with the State Engineer and Regional Engineer regarding additional tools, studies and plans to manage the Bear River Basin. We believe that with proper funding, tools could be created, and studies could be accomplished within a reasonable timeframe, such as two years. This would result in better long-term management of the basin and these additional assets would be desirable in conjunction with updating the appropriations policies of Area 29 and 25.

GROUNDWATER CONSIDERATIONS

This is a significant and somewhat sensitive topic within Area 29. There are probably more “areas of concern” based on numbers of protests and where they come from than ever before. Not all of the protests are on applications to appropriate either. There have been several protests on change applications. However, existing studies and data show that there is still water available for appropriation here. The better-quality water that is found along the recharge/discharge boundaries is the most desirable water for public water suppliers to pursue. Water of lesser quality could be found and developed in many different locations for outdoor use.

BRWCD is supportive of the State Engineer’s reasons for wanting to close Area 29 to groundwater appropriations. However, we do not believe that this policy is necessarily in the best interest of the residents of Box Elder County. Groundwater is harder to visualize, track, monitor and measure than surface water. There is arguably not a market of private water rights in Area 29 to acquire and file change applications on. The obvious source of water to acquire for purposes of filing a change application is going to be shares in Bear River Canal Company (BRCC). More commentary on that will be given below. However, due to rules and regulations within the company itself, it seems more likely that BRCC shares would be used as the basis for mitigation than for filing actual change applications.

NEED FOR HOLISTIC BASIN APPROACH

It appears that the State Engineer is trying to conform the policy of the Bear River Basin to other sub-basin policies within the Great Salt Lake. If so, it would be well for those with interests in the Bear River Basin to compare and contrast it with the other GSL sub-basins. It is also noted that the State Engineer is seeking to update the appropriations policy of Area 25 (Bear River Basin in Cache County). BRWCD believes that it is important that the State Engineer considers the entire Bear River system from headwaters to the GSL. BRWCD is closely following the proceedings of the appropriations policy update to Area 25 and we wonder if policies for Area 23 in particular will be adjusted in the near future. We believe that if operations of the Bear River and its tributaries, including groundwater are going to change significantly, then an updated study of the entire basin is warranted.

BEAR RIVER DEVELOPMENT AND INTERSTATE AGREEMENTS

The Bear River Basin has been studied for decades. In 1991, the Utah Legislature passed the Bear River Development Act (act) to provide future water supply for Northern Utah. The act authorizes and



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directs DWRe to “develop the surface waters of the Bear River and its tributaries through the planning and construction of reservoirs and associated facilities”. DWRe completed a Feasibility Study in 2019 and they and others have been preserving corridors for large-diameter pipelines since that time. Allocations for the developed project are divided among BRWCD, Cache Water District, Weber Basin Water Conservancy District and Jordan Valley Water Conservancy District. Several of us have been counting on this water being available in the future to meet our needs. Closing the basin to appropriations if the water is truly available needlessly kills this project or any other project to store available water upstream from the GSL. Appropriations policy for the Bear River Basin should reasonably allow for surface waters to be captured and stored as available.

Similarly, Utah is part of the Bear River Compact (1958) and its amendment (1997), along with the States of Idaho and Wyoming. The Compact and Amended Compact allow additional conditional storage to be developed within the Bear River Basin above Bear Lake. This applies to all three states. If Utah creates an appropriations policy which does not allow for additional storage anywhere in the Bear River Basin, that does not guarantee that the States of Idaho and Wyoming will follow suit and likely only encourages an extra benefit to those states, without making that water available downstream. Whether this is really a concern or not, it underscores again, the need to have a flexible surface water appropriations and regulation policy that can adapt to varying hydrologic conditions based on having good data available. A less flexible policy would be desirable if there weren't the technologies to measure, monitor and communicate.

BEAR LAKE CONSIDERATIONS

Bear Lake is an important component of the Bear River Basin, as well as Area 29 Policy considerations. Bear Lake plays a role in the 1995 Settlement Agreement, the 2000 Operations Agreement, and provides a major storage contribution to BRCC shares. The understanding of BRWCD is that Bear Lake storage water can only be used for irrigation. BRCC shares seem destined to always play a major role in the operations of the Bear River. It seems likely that an appropriations policy change will contribute to an increase in individuals wanting to use BRCC shares for mitigation and/or the filing of a change application. If Bear Lake storage cannot be used to support those change applications then the updated policy will be very problematic.

GREAT SALT LAKE CONSIDERATIONS

We have seen that the Great Salt Lake, its health, levels and collective importance is the driving force for policy, legislation, and practice within the entire GSL basin at this time. We have also seen that successive drought years have taken a toll on the lake to the level that state level government is seeking to make significant changes in policy, law and practice to attempt to reverse the shrinking of the GSL. This raises significant questions and concerns regarding where the water will come from and what costs will be necessary to get sufficient water to the lake. Who will be making those decisions and who will determine when GSL levels are adequate and when they are inadequate? Unless and until these questions can be satisfactorily addressed, permanent appropriation policy change, without being tied to long-term basin planning will not solve the GSL problem. The problem here is that we haven't



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defined the GSL problem. It's hard to solve a problem that hasn't been defined. It is our hope that the DWRe GSL Basin Study can help to define this problem. Once that or another appropriate study has been completed, there can be more complete management of the Bear River Basin.

BEAR RIVER CANAL COMPANY CONSIDERATIONS

As has been hinted at previously, BRCC shares have historically been used as mitigation currency within Area 29, a practice that will likely be exacerbated in the future. If applications to appropriate groundwater could be approved in the valley without needing to provide mitigation, then shares in BRCC or some other right would not be needed. As that appears not to be the case for various reasons, we can assume that BRCC shares will be targeted increasingly in the future to make up the difference between a proposed or approved application and existing supply. BRWCD is not currently a shareholder in Bear River Canal Company, however a representative of BRCC is a member of the BRWCD Board of Trustees and BRCC holds significant water rights within Area 29. BRCC will represent their own interests and concerns regarding this matter.

MITIGATION

As we have seen in both the Area 29 Policy Public Meeting and the Area 25 Policy Public Meeting, basin stakeholders want to receive guidance from the State Engineer's Office on how to mitigate in order to get an application approved. Understandably, this is a difficult question for the State Engineer's office to address because all applications are different and mitigation may be different based on the type of application filed for and the potential for interference.

It appears that a past practice for applications to appropriate has been to offer individual mitigation or compensation to protestants of water right applications, such that the protestant withdraws their protest, allowing the application to be approved more readily. This is different than creating a mitigation plan that is written and submitted to the State Engineer's Office. If BRWCD or other water suppliers can become proficient at creating mitigation plans that are acceptable to the State Engineer, then water suppliers will be able to perpetuate water markets to supply future water needs.

SMALL DOMESTIC APPLICATIONS

BRWCD believes that there will always be a place and need for small domestic applications in the unincorporated areas of the county where it won't be in a subdivision of multiple residential parcels and/or where water from a public water supplier cannot reasonably be made available. BRWCD would like to look for ways to streamline a process for these individual small applications for water, assuming that the State Engineer updates the groundwater policy as proposed.

BRWCD POSITION AND REQUESTS



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- BRWCD believes that it is reasonable for the State Engineer to close Area 29 to new appropriations of groundwater as currently proposed, provided that the same policy is extended to the remainder of the Bear River Basin.
- BRWCD believes that more hydrologic data gathering is needed for the Bear River Basin, particularly for groundwater, precipitation and evapotranspiration.
- BRWCD believes that critical studies, including studies within Areas 29 and 25, the GSL Basin Study, and others are needed to continue to holistically manage the Bear River Basin and the GSL Basin.
- BRWCD and others are counting on the ability to be able to continue to store surface waters in new and existing reservoirs within the Bear River Basin upstream from the GSL. We request that a reasonable policy and/or model be created to determine the circumstances under which surface water can be stored upstream from the GSL and that the Bear River Basin remain open to appropriations of surface water subject to those conditions.
- Regulation of the GSL with respect to water rights distribution and policy remains unclear. Definition to this issue is desired. This will likely evolve over time.
- BRWCD is supportive of DWRI taking an aggressive stance to make decisions on the unapproved applications in Area 29, in order for the basin to be managed more purposefully

BRWCD appreciates the job and efforts that the DWRI and its employees provide to manage the water resources of Area 29, Bear River Basin, and the entire State of Utah. We hope that the considerations outlined herein are helpful to multiple basin stakeholders to promote additional comity and best management of the limited water resources available. Thank you for your consideration!

Sincerely,

David Forsgren, Chairman

Dennis J. Bott, Vice-Chairman

Charles Holmgren, Financial Chairman

Jay Capener, Board Member

Mark Larsen, Board Member

Richard Day, Board Member

Joseph Summers, Board Member

Lyle Holmgren, Board Member



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