



United States Department of the Interior



FISH AND WILDLIFE SERVICE Mountain-Prairie Region

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RE: Response to Groundwater Management Policy for Malad and Bear River Drainages in Water Right Area 29

Dear Mr. Jones,

Thank you for allowing us to comment on the proposed changes to the policy for groundwater management in the Bear and Malad River drainages in Box Elder County. The U.S. Fish and Wildlife Service (Service) appreciates the State Engineer's (State) efforts in determining if groundwater development can occur in the area while maintaining the protection of senior water rights.

The Service recognizes the USGS findings that groundwater development overall has not had a major impact on groundwater levels over time. However, it is still the position of the Service that there is no excess or surplus water available in the Bear River Basin during the irrigation season because of the intimate connection of surface water and groundwater within the basin. In almost all years, the summer availability of water in the Bear River watershed is not sufficient to meet the Service's needs at the Bear River Migratory Bird Refuge (Refuge). For this reason, the Service has concerns about continued groundwater development in Box Elder County that will lead to out-of-priority appropriations harming senior surface water users.

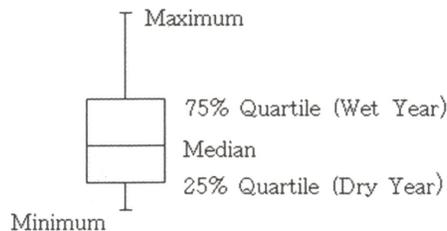
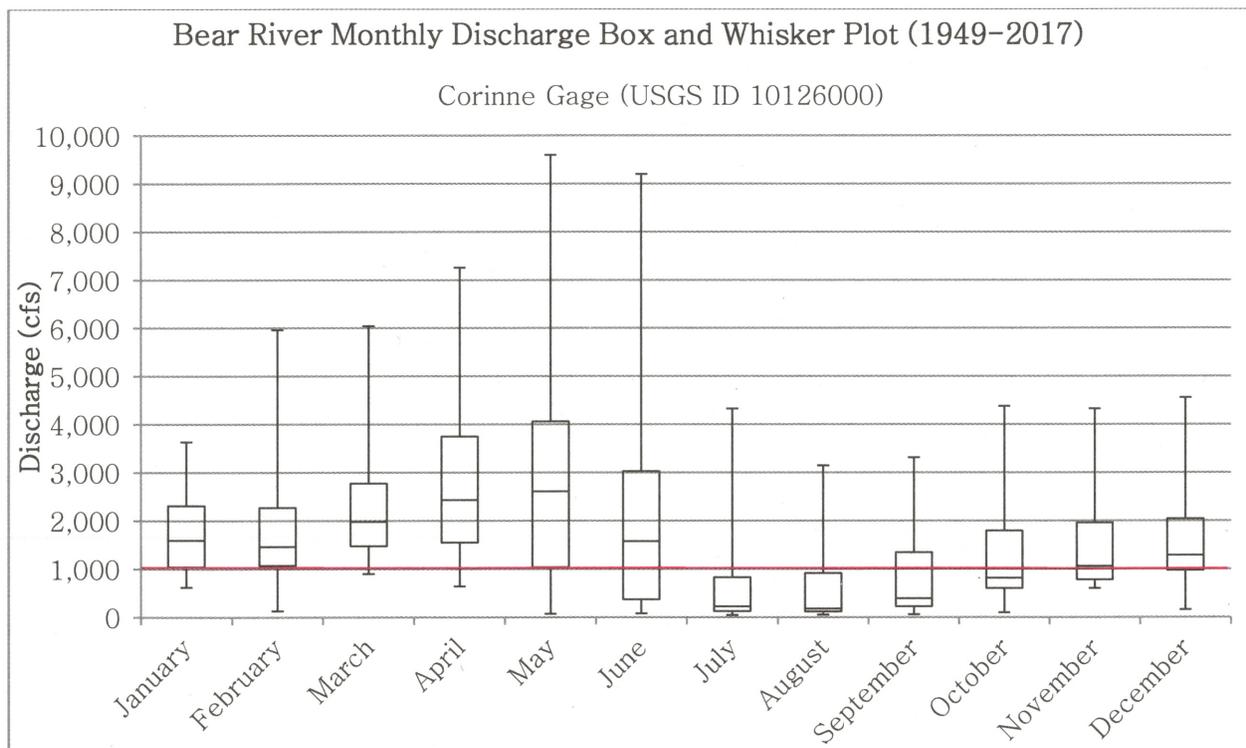
The Service's concerns are related more toward the timing of groundwater withdrawals instead of just the annual quantity and availability. The Refuge holds diversion rights from the Bear River for approximately 1,189 cfs (the primary source being 1,000 cfs under water right 29-1014) and there are several months where these diversions cannot be made due to unavailable water in the Bear River. From the enclosed Box & Whisker plot of the 1949-2017 Bear River monthly discharges from the USGS Corinne Gage (ID 10126000), the median flows at the gage are below the Refuge's senior rights during the months of July through October. The Bear River

flows during the summer months of July and August are especially low when even the 75% quartiles are below 1,000 cfs. The Service believes that water is not physically or legally available in the summer months for additional surface or groundwater diversions, and will continue to object to applications that would reduce the available quantity of water in these months. There are other senior users besides the Refuge who will also be harmed by junior groundwater appropriations upstream of the Refuge that have not been included in our comments, but should also be considered.

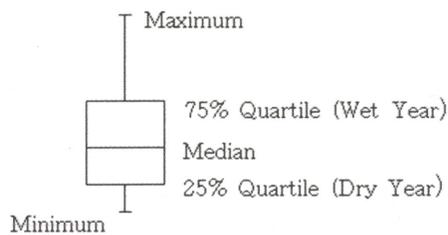
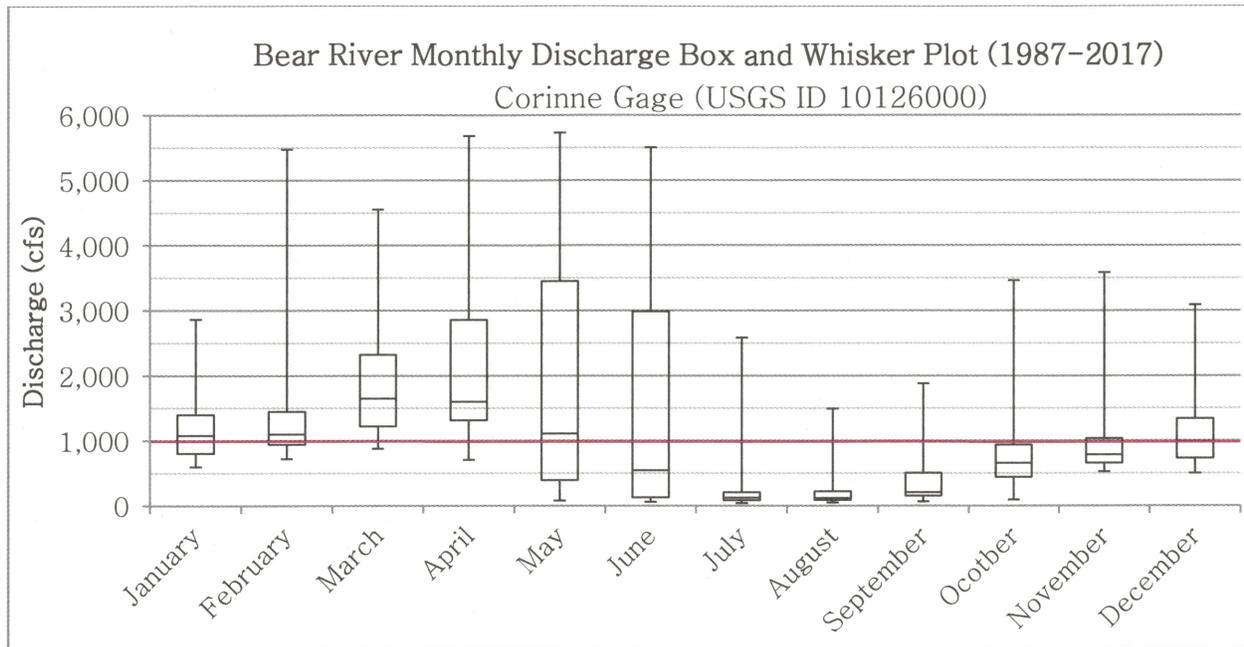
The Service believes that the statement in the introduction in the policy in the third paragraph is misleading and should be modified because it does not consider the timing of when water is available for diversion. The sentence states:

“The available information indicates there is water available on an annual basis from the surface and groundwater system in excess of current beneficial use.”

This statement should read that: *“The available information indicates there is water available in some months from the surface and groundwater system in excess of current beneficial use.”* Without consideration of the timing of when water is available and the timing of demands, over-appropriation is almost assuredly to occur.



The following Box & Whisker plot of the Bear River monthly discharges from the last 30 years (1987-2017) show an even lower flows during the summer months. The median flows for most months of the year are below the Refuge's full water rights.



The study completed by the USGS (2017) shows in the capture maps on page 70 (Figure 37), that new groundwater appropriations will reduce the flow to either the Malad River, the Bear River, or springs. The Malad River and many springs in the study area are tributaries to the Bear River and out of priority appropriations from all of these sources will injure senior surface water users downstream. The Service is concerned that the 10,000 acre-ft/year increase in groundwater withdrawal will negatively impact Bear River flows during the summer months when the Refuge needs water and is in priority. The Service would like to avoid the situation of placing a call on the river for several months.

The Service has the following questions regarding the proposed policy changes:

- Will the State Engineer consider monthly availability of the requested volume, rather than looking at the 10,000 acre-ft/year on an annual basis? Most irrigation diversions solely occur during the summer months when water is not available and are outside the timing of when water is available.
- How will the State Engineer use the USGS (2017) study (e.g. Capture Maps) to assist in making appropriation decisions within the study area?
- The Service requests the State to explain based on the information in the USGS (2017) study, how senior appropriators will be made whole from approved junior groundwater appropriations that take water out of priority.
- What process does the State propose to mitigate out-of-priority depletions to senior water users?
- If a call were to be placed on the Bear River, would the State administer junior groundwater appropriations?

The Service has been involved in several legal proceedings in other states where groundwater has been over-appropriated and the Service's senior water rights are now impaired. The Service believes this new policy will set the Bear River Migratory Bird Refuge on that same path of impairment in the future from groundwater pumping. The Service suggests that the policy contain some discussion of the State Engineer's position concerning the protection of senior surface water users, the timing of depletions and withdrawals, and mitigation for injured senior users.

We sincerely appreciate the opportunity to review and comment on the proposed groundwater management policy changes for the Bear and Malad Rivers in Box Elder County. If you have any questions concerning this letter, please call Brian Caruso at (303) 236-4490.

Sincerely,



Brian S. Caruso, Ph.D., P.E.
Chief, Water Resources Division

References:

United States Geological Survey (USGS). 2017. Hydrology and Numerical Simulation of Groundwater Flow and Streamflow Depletion by Well Withdrawals in the Malad-Lower Bear River Area, Box Elder County, Utah. Scientific Investigations Report 2017-5011