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# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

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## GROUNDWATER MANAGEMENT POLICY FOR MALAD AND BEAR RIVER DRAINAGES IN WATER RIGHT AREA 29

### Introduction

The purpose of this policy is to set forth guidelines for groundwater appropriations and change applications in the Malad and Bear River drainages within water right area 29 (Shown in Figure 1). In adopting this policy the State Engineer's primary objective is to protect prior water rights while putting to beneficial use the greatest amount of available water.

The State Engineer contracted with the United States Geologic Survey to conduct a groundwater study<sup>1</sup> within the management area. The study assessed groundwater budget components and estimated the effects of additional groundwater withdrawals in the form of capture maps. The Utah Geological Survey also recently completed a study<sup>2</sup> of the lithologic units within the valley-fill and produced a conceptual model of the groundwater system. This information has been and will be used to assist the State Engineer in making decisions within the area.

Results from both studies reaffirm the hydrologic connection between groundwater and surface water in the area. Seepage to the Bear River, Malad River, and springs is 74 percent of the total groundwater discharge in the area, diffuse seepage and evapotranspiration comprises 20 percent, and well withdrawals make up 6 percent (SIR 2017-5011, table 1). Regarding the Malad River, flows measured just upstream of the policy area at Woodruff, Idaho averaged 51,000 acre-feet per year for the period 1965–1980, and USGS estimates river gains from groundwater discharge provides an additional 21,000 acre-feet per year between Woodruff and the confluence with the Bear River (SIR 2017-5011, table 5). The available information indicates there is water available on an annual basis from the surface and groundwater system in excess of current beneficial use.

### Policy

After considering at length the total situation of the Malad and Bear River hydrologic system, the State Engineer has formulated a policy which seeks to reasonably and wisely manage the water

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<sup>1</sup> Stolp, B.J., Brooks, L.E., and Solder, J.E., 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: U.S. Geological Survey Scientific Investigations Report 2017–5011, 113 p., 6 appendixes, <https://doi.org/10.3133/sir20175011>.

<sup>2</sup> Hurlow, H., 2016, Hydrogeology of the Malad–Lower Bear River Basin, North-Central Utah and South-Central Idaho: Utah Geological Survey Special Study 157, 49 p., 3 plates, [http://ugspub.nr.utah.gov/publications/special\\_studies/ss-157.pdf](http://ugspub.nr.utah.gov/publications/special_studies/ss-157.pdf).



resources of the Bear River Valley. The policy strives to balance the protection of existing water rights in a reasonable manner, with the objective of encouraging the greatest amount of available water be put to beneficial use. The State Engineer will use the following guidelines in reviewing applications and managing the groundwater resources of the Malad and Bear River Groundwater Management Area.

- 1) The area is open to appropriation of groundwater. Applications to appropriate will be considered on their own individual merits subject to the statutory criteria set forth in section 73-3-8, Utah Code Annotated.
- 2) The State Engineer will allow an additional 10,000 acre-feet/year of potential groundwater withdrawals. As this water is fully developed and used, the effect of such development on the hydrologic system will be evaluated to determine if additional withdrawals can be allowed. The State Engineer will continue to monitor groundwater withdrawals, water levels in selected wells and streamflow.
- 3) Local water administration practices and localized interference concerns which exist within the Bear River Valley will supplement this policy and will remain in effect and are not overridden. Areas of particular concern include Plymouth and Deweyville.
- 4) The effective date of this policy is \_\_\_\_\_.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 2018.

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