



United States Department of the Interior



BUREAU OF LAND MANAGEMENT
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In Reply Refer To:
7250 (UT-933)

Kent L. Jones, P.E.
State Engineer, Utah Division of Water Rights
P.O. Box 146300
Salt Lake City, UT 84114-6300

Dear Mr. Jones:

Thank you and the other representatives of the Utah Division of Water Rights (Division) for holding the public meeting in Eskdale, Utah, on September 26, 2019 to discuss the Division's current appropriation policy for Snake Valley (Area 18) and possible changes to the policy. The purpose of this letter is to follow-up with written comments on what the Bureau of Land Management (BLM) Utah believes would be practical and necessary changes to the existing policy. We support state and federal partnerships that are necessary to the successful management and protection of water-dependent resources in Utah and, in particular, BLM's surface water and ground water rights in Snake Valley.

BLM Utah reasons for supporting a change in the current appropriation policy for Area 18 are as follows:

- The ground water diversions in central Snake Valley, between Garrison and Partoun, appear to exceed the safe yield of the localized ground water system. As a result, we believe that this situation places the local agricultural economies at risk by endangering investments in water developments on the private lands used for irrigation purposes and the BLM-managed lands used for livestock grazing.
- Three critical sources of water in Snake Valley relied on by the BLM have already lost artesian flows. The critical water sources are: (1) Needlepoint Spring (Water Right No. 18-571), which lost its artesian flow in 2001; (2) West Buckskin Well (Water Right No. 18-555), which lost its artesian flow in 2015; and (3) Kane Spring (Water Right No. 18-406), which lost its artesian flow in 2018. At other critical water sources for BLM water rights in Snake Valley, surface water flows have declined nearly to zero. We believe that such loss of flow at these sources undermines both the BLM's duty and ability to manage the public lands for multiple uses, and the local economies dependent on these water sources for livestock grazing and other uses.

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- The current appropriation policy appears to be hindering accomplishment of the goals of the existing sensitive species conservation agreements between BLM and the Utah Department of Natural Resources. The agreements are for important sensitive species such as Least Chub, Columbia Spotted Frog, and Great Basin Springsnails in Snake Valley. The current policy appears to encourage ground water depletions that will likely reduce flows at certain water sources that are critical to the conservation of the species' habitats.

Enclosure A to this letter sets forth, in detail, the factors that we believe support changes being made to the Division's Snake Valley Appropriation Policy. Under the current policy the State Engineer may approve individual applications to appropriate up to 544 acre-feet of water per year for the irrigation of 136 acres, which is equivalent to the acreage irrigated with a center pivot. In the last ten years and under the current policy the State Engineer has approved a number of applications to appropriate water (to obtain new water rights) and change applications on existing rights that we believe are contributing to the decline of flows at water sources in Snake Valley where BLM and private parties hold water rights.

Enclosure B to this letter sets forth our recommendations for what we believe would be practical and necessary changes to the current policy. In short, these recommended changes would allow the State Engineer, in reviewing water right applications in Snake Valley, to consider localized hydrologic conditions, especially in concentrated withdrawal zones such as the area around Eskdale, Baker, and Garrison, as well as the area around Gandy and Partoun. Certain studies show that the overall recharge to Snake Valley may be as high as 132,000 acre-feet annually. However, not all of this recharge can be recovered by wells in the concentrated withdrawal zones, where several agricultural operations are presently located. It appears that in some of these withdrawal zones, restrictions on new appropriations are necessary to maintain ground water levels and prevent the mining of ground water. Enclosure C is a map of potential new subareas.

We appreciate the opportunity to work with the Division in promoting long-term sustainability of surface water and ground water sources in Snake Valley and the resources and uses that depend on them.

Sincerely,



Edwin L. Roberson
State Director

Enclosures (3)

cc: James Karkut, Solicitor, Office of the Solicitor
Roy Smith, Water Rights Specialist, Colorado State Office
Kevin Oliver, District Manager, West Desert District
Mike Gates, Field Office Manager, Fillmore Field Office
Kerry Schwartz, Natural Resource Specialist, Utah State Office

Enclosure A: Factors for Modifying the Snake Valley Appropriation Policy

1. Hydrologic Data and Analysis from Central Snake Valley (vicinity of Eskdale, Garrison, and Baker) confirms that ground water levels are steadily dropping, not stabilizing, and unlikely to stabilize.

Ground water monitoring and ground water modeling completed by State and Federal entities has confirmed that ground water levels are declining in Central Snake Valley. Specifically, these activities show that the current rates of ground water use in Central Snake Valley do not appear to be sustainable and appear to constitute ground water mining. For example, a 2016 study by the Utah Geological Survey (UGS) indicates that ground water levels have declined from 0.2 to 0.6 feet annually in central Snake Valley from 1989 to the present. (*Hurlow, H.A and Inkenbrandt, P.C. Analysis of Ground water-Level Records from Snake Valley, Western Millard County, Utah, page 220*). The study also revealed that the declining ground water levels in Central Snake Valley are not stabilizing and downward trends continue (*Page 220*); these ground water declines cannot be attributed to changes in annual or decadal precipitation; and aquifer recharge from years with high precipitation only slightly and temporarily decreased the rate of ground water decline at many measured sites. From this UGS study, it can be seen that diversions from the localized flow system in central Snake Valley appear to be exceeding the recharge to localized flow systems.

Ground water modeling by the United States Geological Survey (USGS) based on ground water pumping in connection with water right applications that have already been approved by the Utah State Engineer confirms that ground water declines will continue in Central Snake Valley, (*Potential Effects of Existing and Proposed Ground water Withdrawals on Water Levels and Natural Ground water Discharge on Snake Valley and Surrounding Areas, Utah and Nevada. USGS Open File Report 2017-1026*). For example, the modeling showed that after 50 years of pumping under currently approved water rights, ground water levels at BLM's Kane Spring (Water Right No. 18-406) and BLM's Eskdale Well (Water Right No. 18-304) are expected to decline by three feet. The modeling also shows that ground water levels are not likely to stabilize and reach steady-state conditions even after 100 years of pumping, a further indication that current ground water pumping is exceeding safe yield in localized flow systems, which greatly concerns the BLM.

The USGS ground water modeling also shows that cones of depression associated with the current ground water pumping zones around Garrison and Eskdale are likely to merge over the long term, forming a very large, contiguous area of ground water drawdown in Central Snake Valley (USGS Open File Report 2017-1026, Figure 6.) The effect of this large drawdown area will likely be that historic ground water flow paths from South Snake Valley to North Snake Valley will be disrupted. Flow from surface water sources in the Gandy-Partoun area that rely on this recharge from the southern part of the localized flow system are also likely to be disrupted, with resulting adverse effects on water uses and aquatic species that rely on these water sources.

Finally, the BLM's monitoring of ground water sources over the past several years found that flows from critical springs and wells have declined dramatically or ceased entirely, especially in areas around Garrison, Baker, and Eskdale. (*BLM Presentation at Water Right Hearing on*

Change Application a41605 (Water Right No. 18-87), November 15, 2016). A good example of this involves Needlepoint Spring (Water Right No. 18-571) south of Garrison, which stopped flowing in 2001 after flowing continuously for more than 70 years.

2. Hydrologic Data and Analysis from North Central Snake Valley (vicinity of Gandy and Trout Creek) indicates that certain water sources supporting sensitive aquatic species are at high risk.

Ground water monitoring data from the Utah Geological Survey Ground water Data Portal (<https://apps.geology.utah.gov/gwdp>) shows that ground water levels have been fairly stable over time in the vicinity of Gandy, and Partoun. This data indicates that ground water levels can vary substantially within individual years in response to ground water diversions and irrigation practices. This data could lead some to erroneously conclude that substantial amounts of ground water could be developed in North Central Snake Valley without substantial impacts to existing surface water sources or species dependent upon spring discharge.

However, the USGS ground water modeling indicates that there is a very high risk of substantial ground water level declines in this localized flow system (*Potential Effects of Existing and Proposed Ground water Withdrawals on Water Levels and Natural Ground water Discharge on Snake Valley and Surrounding Areas, Utah and Nevada. USGS Open File Report 2017-1026.*) These declines are likely to have a direct impact on springs that provide habitat for least chub and Columbia spotted frog, which are both BLM and State of Utah sensitive species. The least chub is also the subject of a conservation agreement signed by BLM and the State of Utah in November 2005, while the Columbia spotted frog is the subject of a similar conservation agreement signed in August 2006. In addition, the ground water declines are likely to have a direct impact on springsnail species, which are also covered by a conservation agreement signed in December 2017. For example, the modeling shows that after 50 years of ground water pumping in connection with water rights that have already been approved, ground water levels at Miller Spring are expected to decline by two feet and ground water levels at Leland Harris Spring are expected to decline by three feet (*USGS, pages 12 and 13.*) Spring flow is very sensitive to changes in ground water levels, and if ground water levels decline sufficiently, flow from the spring orifice and the presence of surface water can cease entirely.

The same USGS modeling effort concluded that more than 85% of the potential discharge at Miller Spring has already been captured by well diversions (*USGS, Figure 27, Page 85*). It also concluded that just one additional well pumping 400 acre-feet annually in the vicinity of Partoun would reduce discharge from Miller Spring to close to zero (*USGS, Figure 27, Page 85*). From the perspective of sensitive aquatic species management, it is very alarming to realize that flows from such a critical spring can be so highly sensitive to ground water pumping at a single well.

BLM's Snake Valley Spring North and Snake Valley Spring South (Water Rights Nos. 18-701 and 18-702) are part of the spring complex at Miller Spring and Leland Harris Spring. Over the years, BLM has observed declines in wetted area and wetland-dependent vegetation at this location of highly diffuse spring discharge. The USGS ground water modeling confirmed these observations, and concluded that existing well diversions have already captured at least 50% of the spring discharge at Snake Valley Spring South and at least 70% of spring discharge at Snake

Valley Spring North (USGS, pages 95 and 97). The USGS modeling also concluded that if the current levels of ground water pumping under currently approved water rights were to continue over the next 50 years, there will likely be a 44% decline in spring discharge at this spring complex, when compared to 2010 discharge rates (USGS, Table 10).

3. The current appropriation policy appears to be hindering the goals of the conservation agreements that BLM Utah and the DNR have entered into to protect the least chub, Columbia spotted frog, and Great Basin Springsnails in Snake Valley.

By allowing new ground water development that will likely reduce or eliminate flows at some of the critical water sources relied on by the least chub, Columbia spotted frog, and Great Basin Springsnails, the current appropriation policy appears to be hindering the goals of the conservation agreements that BLM Utah and the DNR have entered into to protect these species. To be clear, the type of changes in sensitive aquatic species populations that would prevent achieving the goals of the conservation agreements have not yet been observed, but the currently observed and predicted reductions in flows could nonetheless have negative and unpredictable effects on populations at specific water sources. The BLM recognizes that each water source relied upon by the respective sensitive aquatic species is differently connected to habitat, and that reductions in flow may not lead directly to population impacts at all water sources. However, BLM believes that the risks from reduced flows is significant enough to warrant a re-evaluation of the current appropriation policy.

A troubling example of the risks of continuing ground water development involves the spring complex that includes Bishop Springs, Twin Springs, and Foote Reservoir Spring. The presently active ground water monitoring network run by the Utah Geological Survey in Snake Valley (<https://apps.geology.utah.gov/gwdp>) indicates that ground water levels in monitoring well PW06MX and Twin Springs MX, two monitoring wells located close to this spring complex, are declining. The level in PW06MX has declined by six feet since 1990 and the level in Twin Springs MX has declined 1 foot since 2006.

In addition, Utah Geological Survey monitoring data from 2016 shows that discharge from Foote Reservoir Spring has declined by 0.5 cubic feet per second (cfs), which would represent a decline of approximately 362 acre-feet per year. This is a substantial percentage of the baseline flow of 3.0 cfs observed from 2013 to 2015. The USGS modeling in 2017 underscored a similar risk. The USGS modeling concluded that a well pumping 400 acre-feet annually in the vicinity of Gandy would capture from 11 to 30 percent of the discharge from Foote Reservoir Spring and would capture a similar percentage from Twin Springs. (USGS, Figures A1-7 and A1-9). Again, it is alarming that ground water pumping in connection with a single center pivot operation could so dramatically affect springs that are critical to sensitive aquatic species and to conservation agreements signed by BLM and the State of Utah.

As mentioned previously, the 2017 USGS modeling data underscores similar risks for the spring complex that incorporates Miller Spring, Leland Harris Spring, Snake Valley North Spring, and Snake Valley South Spring.

Some relatively recent decisions approving applications for new water rights in Snake Valley include language suggesting that drawdowns predicted by the modeling may not be that serious. For example, the May 3, 2017 approval of Application to Appropriate A80170 (Water Right No. 18-756) (approving 320.56 acre-feet per year for the irrigation of 80 acres and the stock watering of 20 head of livestock) provides in part:

BLM's protest and accompanying information recognizes that the source of water for its spring water rights is an underground aquifer. BLM submitted modeling simulations, results of which predict the long term lowering of the ground water level due to the anticipated development of water under this application.

...
Regarding the ground water drawdowns predicted in the modeling provided by the BLM, the State Engineer is of the opinion that these factors are small enough and gradual enough to afford the users of existing rights on springs and surface water sources sufficient time to react and divert the water they are entitled to in a manner that remediates the situation. (Italics and underline added.)

That language seems to suggest that lost flow from a spring can simply be replaced by a well. However, that is not the case when some of the beneficial use of water occurs at the spring. To the extent that the current appropriation policy facilitates approvals of new ground water pumping that reduces flow at critical springs and surface water sources, it is inconsistent with the fact that sensitive aquatic species are dependent upon the mosaic of habitats associated with diffuse spring discharge. Further, we are not aware of any studies showing that such habitats can be sustained by artificial means after their spring and surface water sources have been diminished or lost.

4. The current appropriation policy does not provide for the consideration of localized hydrologic conditions when the State Engineer reviews pending water right applications.

Under the current appropriation policy, the State Engineer may approve new applications involving the withdrawal of up to 544 acre-feet per year of ground water for the irrigation of 136 acres (which is equivalent to the acreage irrigated with a typical center pivot), 5.6 acre-feet for the watering of 200 head of livestock, and 0.45 acre-feet for one equivalent domestic unit.

The current appropriation policy for Snake Valley does not provide for the taking into account of localized hydrologic conditions in the review of water right applications. An example of this can be found in the State Engineer's May 3, 2017 decision approving Application to Appropriate No. 80170 (Water Right No. 18-756) (approving 320.56 acre-feet per year for the irrigation of 80 acres and the stock watering of 20 head of livestock). Among other things, the decision provides:

The State Engineer has taken into account past studies on the safe yield of Snake Valley aquifer. It appears the appropriation sought hereunder will not cause total withdrawal to exceed safe yield of the resource. As such, the State Engineer is of the opinion there is unappropriated water in the Snake Valley aquifer.

A fundamental element underlying an appropriation policy is the State Engineer's assessment of the safe yield of the area in question and the question of whether additional water remains available for new appropriations without impairment of existing water rights. BLM understands that safe yield is defined as the amount of ground water that can be withdrawn from a basin over time without exceeding the long-term recharge of the basin or unreasonably affecting the basin's physical and chemical integrity. BLM also understands that safe yield must account for ground water flow between basins and between localized flow systems.

However, the preceding language from the decision approving Application to Appropriate No. 80170 (Water Right No. 18-756) shows that decisions on whether to approve new ground water appropriations in the Snake Valley, a very large and complex ground water flow system, are based upon relatively simple math that cannot account for the complexity of the flow system. In other words, the amount of a proposed new appropriation is weighed against what the Division believes is the total recharge to the entire Snake Valley aquifer system and the total amount of ground water withdrawals authorized to-date. This approach cannot take into account the fact that Snake Valley covers 3,685 square miles, and is comprised of multiple flow systems, including localized flow systems around Baker/Garrison/Eskdale and a flow system around Gandy. (*Utah Geological Survey, 2014, Hydrogeologic Studies and Ground water Monitoring in Snake Valley, Chapter 8.*) Thus, it is not physically possible for wells in the central part of Snake Valley to tap into all of the ground water that is recharged in the north and south ends of the Valley. Because the current appropriation policy does not recognize this hydrologic reality, it allows for the authorization of new appropriations that may exceed the volume of ground water available in the localized flow systems. This approach appears to have already resulted in steady declines in ground water levels that do not stabilize, as documented by the 2016 UGS monitoring report and by additional data collected by the UGS ground water monitoring network since 2016.

5. By not providing for the consideration of localized hydrologic conditions in the State Engineer's review of water right applications, the current appropriation policy runs counter to basic aquifer management principles, especially those used to maintain the safe yield of an aquifer.

As mentioned above, a fundamental element underlying an appropriation policy is the Division's assessment of the safe yield of the area in question and whether additional water remains available for new appropriations without impairment of existing water rights. And, recent decisions involving applications for new ground water appropriations in Snake Valley show that the Division is aware that approving these new appropriations may ultimately authorize diversions that exceed the safe yield of the aquifer system. However, given the current appropriation policy, the only management option available to him appears to be the implementation of regulated reductions if pumping exceeds safe yield. For example, the May 3, 2017 decision approving Application to Appropriate No. 80170 (Water Right No. 18-756), provides in part:

It appears the appropriation sought hereunder will not cause total withdrawal to exceed safe yield of the resource. As such, the State Engineer is of the opinion there is unappropriated water in the Snake Valley aquifer; however, the applicant should be

aware that if regulated reductions are implemented in Snake Valley by priority date, the late priority of this application may require cessation of use.

In the same decision, the State Engineer indicated that he is monitoring how implementation of his decisions may impact sensitive aquatic species in certain locations. For example, he stated:

UDWR expressed concern that further water depletions in the area pose a significant threat to aquatic wildlife that are the subject of conservation agreements. The two species of particular concern to UDWR are the Least Chub and the Columbia Spotted Frog. Both species have established populations in the Miller Springs Complex and the Leland Harris Springs Complex (four mile south of the proposed POD/POU).

[T]he State Engineer is sufficiently aware of the sensitive species issue (least chub and Columbia spotted frog) in Snake Valley. It is the State Engineer's opinion that through cautious development of the ground water resources and monitoring the impacts of developments, the resource can be used in such a manner that environmental concerns can be addressed in due time.

However, the above-expressed reliance on future regulated reductions in pumping and monitoring as an adequate response to ground water withdrawals exceeding safe yield runs counter to basic hydrologic principles, under which declines in aquifer levels cannot be quickly stopped or reversed. Once pumping is authorized that exceeds the localized safe yield, aquifer levels cannot be stabilized or recover unless a very large percentage of the current pumping is halted over many years. As an example, the BLM has already lost artesian flows at two critical water sources in Snake Valley, namely Needlepoint Spring (Water Right No. 18-571) and West Buckskin Well (Water Right No. 18-555). USGS modeling concluded that the complete cessation of pumping in the vicinity of Needlepoint Spring for 20 years would be required to restore surface water discharge at the Spring. (*Memo from Keith Halford, USGS Nevada Water Sciences Center, to BLM Utah, dated May 11, 2015.*) A long recovery time is required because the currently authorized pumping has reduced ground water levels at the Spring by more than six feet, and thousands of acre feet of recharge over years would be required to restore such ground water levels. (*Keith Halford Memo*)

If monitoring were to indicate that ground water pumping has exceeded the safe yield in localized portions of the Snake Valley aquifer system, the regulated reductions in pumping envisioned in the above-referenced decision would likely be extremely difficult to implement and, thus, unlikely to achieve desired aquifer conditions. This is because halting large volumes of pumping to achieve stabilization of aquifer conditions would not be economically feasible for those private water users who have invested substantial sums in their well operations, and would be very controversial.

For these reasons, it is highly likely that the legal and administrative processes necessary to reduce ground water pumping in attempting to recover aquifer levels would be extremely unpalatable to the affected water users and, even if eventually effective, would take a very long time. In addition, during the long period of time needed to implement regulated reductions in such ground water pumping, sensitive aquatic species dependent upon flows from specific

springs, such as the Least Chub and Columbia Spotted Frog, could easily be extirpated. BLM is very concerned that if the disastrous hydrologic situation that occurred at Needlepoint Spring were to occur at other springs that also support sensitive aquatic species, the viability of the DNR/BLM conservation agreements for those species would be threatened.

6. The current appropriation policy does not promote public interest.

Local water users in Snake Valley appear to be very concerned about declining water levels in the Valley. In the last few years, the attendance and participation by local water users in water right hearings held in Snake Valley has been substantial and spirited. At those hearings, the local water users have consistently expressed concern that ground water levels are not stabilizing, flows at critical springs are going down, declining ground water levels are substantially increasing pumping costs, and these levels may eventually drop to the point where current well casings can no longer successfully access ground water. Overall, this underscores that the current appropriation policy, by allowing water right authorizations that cause these conditions, does not promote the public interest.

In addition, the loss of surface water sources on both private and public land resulting from excessive ground water pumping would substantially disrupt the ranching economy in Snake Valley. The loss of reliable water sources on BLM-managed lands, which has already happened in certain locations, creates significantly higher costs for BLM grazing permittees, who are forced to haul water long distances or invest in expensive new water infrastructure, including wells, pipelines, generators, and power lines. In addition, the loss of critical water sources may result in large areas of forage becoming unavailable for use by grazing permittees because of the lack of feasible water supplies for livestock.

While it may be possible for grazing permittees to haul water long distances to offset the loss of surface water sources, wildlife do not have this option. The loss of water sources has the potential to significantly affect both the population and distribution of wildlife including antelope, deer, and elk, and affect local hunting economies. In addition, the loss of water sources in Snake Valley has already affected the population and distribution of wild horse herds, which can create significant disruptions for agricultural and grazing operations if wild horses start to enter private lands in attempting to find water and forage.

Enclosure B: Recommended Modifications to Snake Valley Appropriation Policy

The BLM recommends that the following language be considered for inclusion in a modified appropriation policy for Snake Valley. This proposed language would replace portions of the current language under the "Management" and "Sources" headings. The BLM is not proposing any changes to the appropriation policy language that currently appears under the "General," "References," or "Modeling" headings.

The BLM makes these policy recommendations based upon currently approved water rights. If the Division is considering approval of large volume pending water right applications, such as those filed in 2005 by the State of Utah School and Institutional Trust Lands Administration, then adjustments to these policy suggestions may be needed to maintain sustainable aquifer conditions. Likewise, as additional monitoring and modeling data becomes available, adjustments to these policy suggestions may be appropriate.

Under the "Management" heading:

Snake Valley is comprised of multiple, localized ground water flow and surface water flow systems. The goals of this policy are to: (1) Utilize localized hydrologic data to make decisions regarding water right applications and water rights administration; (2) Conjunctively manage surface water rights and ground water rights to avoid impairment of senior water rights; (3) Avoid over-appropriation of the water resource; and (4) Ensure that the safe yield is not exceeded. No Proposed Determination of Water Rights books have been published for this area, nor are there any state-administered distribution systems.

Under the "Sources" heading:

Surface Water - Surface waters are open to appropriation if unappropriated sources with adequate supply and quality can be found. Most known surface water sources of useable size have been appropriated.

Ground Water - Some of the localized ground water systems in Snake Valley have substantial amounts of ground water available for appropriation, while others have very limited amounts of ground water available for appropriation. In addition, changes to existing ground water rights may have the potential to significantly alter water availability for existing surface water rights and existing ground water rights. Accordingly, when considering an application, the State Engineer will carefully review data concerning localized ground water systems to ensure that the application satisfies the applicable statutory criteria and meets the objectives of this policy. Data reviewed will include: current ground water levels and long-term trends, recharge to the localized ground water system over time, short-term and long-term pumping data, approved but not yet developed applications, interaction among localized ground water systems and surface water features such as springs and streams, and ground water modeling.

For purposes of this policy, Snake Valley is divided into three subareas for ground water appropriations. Please see the attached map for the locations of the proposed subareas. The first

subarea consists of all portions of Snake Valley that are not within the proposed Garrison-Eskdale Subarea or within the proposed Gandy-Partoun Subarea.

Subarea 1 – All Portions of Snake Valley Not Contained With Subarea 2 or Subarea 3

Ground Water - Applicants may be allowed to appropriate a limited amount of water up to the full amount of water needed for: the irrigation of 136 acres (which is the acreage irrigated by a full pivot with end gun, 544 acre feet); year-round domestic requirements of 1.0 equivalent domestic unit (0.45 acre foot); and the stock watering of 200 head of livestock (in cattle or horses or equivalent species, 5.6 acre feet.)

However, in an effort to protect water resources from over-development, and to provide for an orderly and carefully monitored development of such resources while carefully reviewing each application for speculation or monopoly in the Snake Valley area, applicants, their successors, or related entities will be limited to one application to appropriate water, which upon approval must be placed to beneficial use and certificated before any subsequent application can be approved. Resultantly, in order to protect the integrity of the priority system, subsequent applications will be rejected as opposed to being held pending certification of a prior application. Each new application will be evaluated based on its own merits and when seemingly un-related entities seek new appropriations neighboring already approved unperfected appropriations where monopolization of the resource is possible, approval will be granted at the discretion of the State Engineer.

Applicants bear the burden of proving that proposed ground water appropriations or changes to existing water rights will not impair the numerous ground water rights and surface water rights in Subarea 1, including surface water rights on springs. Applicants also bear the burden of proving that their application is in the public interest, and will not impair the State of Utah's ability to meet its habitat objectives for management of ground water-dependent wildlife species. The State Engineer will reject applications that do not meet these burdens.

Subarea 2 - Garrison-Eskdale Subarea of Snake Valley

Ground Water - The State Engineer will decide whether to approve or disapprove Applications to Appropriate filed prior to the adoption of this policy based on the policy that was in effect at the time the relevant application was filed. Applications to Appropriate filed after the adoption date of this policy which are not in accordance with the new policy provisions will be rejected. Subarea 2 is closed to new ground water appropriations (*see note below for rationale*), except for applications to appropriate water for year-round domestic requirements of 1.0 equivalent domestic unit (0.45 acre foot) and/or the stock watering of 200 head of livestock (in cattle or horses or equivalent species, 5.6 acre feet.)

Applicants bear the burden of proving that proposed ground water appropriations or changes to existing water rights will not impair the numerous ground water rights and surface water rights in Subarea 2, including surface water rights on springs. Applicants also bear the burden of proving that their application is in the public interest, and will not impair the State of Utah's ability to

meet its habitat objectives for management of ground water-dependent wildlife species. The State Engineer will reject applications that do not meet these burdens.

The following criteria will be applied to change applications:

- Change applications to change surface water rights to ground water rights, or to add points of diversion for ground water to surface water rights, will not be considered.
- For other types of change applications, applicants are reminded that the State Engineer will closely review the potential for the proposed change to impair other water rights. The State Engineer will also closely review applications for potential detriment to the public interest.
- Change applications will be carefully reviewed to ensure that no enlargement of underlying water rights occurs.
- If an application seeks to drill wells deeper than the originally permitted well, the application will be carefully reviewed to ensure that the proposed well deepening will not have the effect of impairing existing water rights, or enable diversions that exceed the original water right.
- Each decision approving a change applications will, as a condition of the approval, require the water right holder to install totalizing flow meters at all approved points of diversion, so that the Division can obtain, upon request, pumping records to ensure that diversions under the approved change application do not exceed those authorized under the change and/or original water right.

Each request for an extension of time to submit proof of beneficial use of an approved change application will be critically reviewed to ensure that the applicant is pursuing development of the subject water right with due diligence.

(Note: The rationale for closing this subarea to new appropriations is that ground water monitoring indicates that ground water levels are consistently declining and not stabilizing.)

Subarea 3 - Gandy-Partoun Subarea of Snake Valley

Ground Water - The State Engineer will decide whether to approve or disapprove Applications to Appropriate filed prior to the adoption of this policy based upon the policy that was in effect at the time the application was filed. Applications to Appropriate filed after the adoption date of this policy which are not in accordance with the new policy provisions will be rejected.

Subarea 3 is limited to a total of 2,200 acre-feet in new ground water appropriations (*see note below for rationale*) after the adoption of this policy. Applicants are allowed to apply for a limited amount of water up to the full amount of water needed for: the irrigation of 136 acres (which is the acreage irrigated by a full pivot with end gun, 544 acre feet); year-round domestic requirements of 1.0 equivalent domestic unit (0.45 acre foot); and the stock watering of 200 head of livestock (in cattle or horses or equivalent species, 5.6 acre feet.) Once the 2,200 acre-foot limit is reached, applicants will be limited to applying for water rights for domestic use and livestock watering only.

Applicants bear the burden of proving that proposed ground water appropriations or changes to existing water rights will not impair the numerous ground water rights and surface water rights in Subarea 3, including surface water rights on springs. Applicants also bear the burden of proving that their application is in the public interest, and will not impair the State of Utah's ability to meet its habitat objectives for management of ground water-dependent wildlife species. The State Engineer will reject applications that do not meet these burdens.

The following criteria will be applied to change applications:

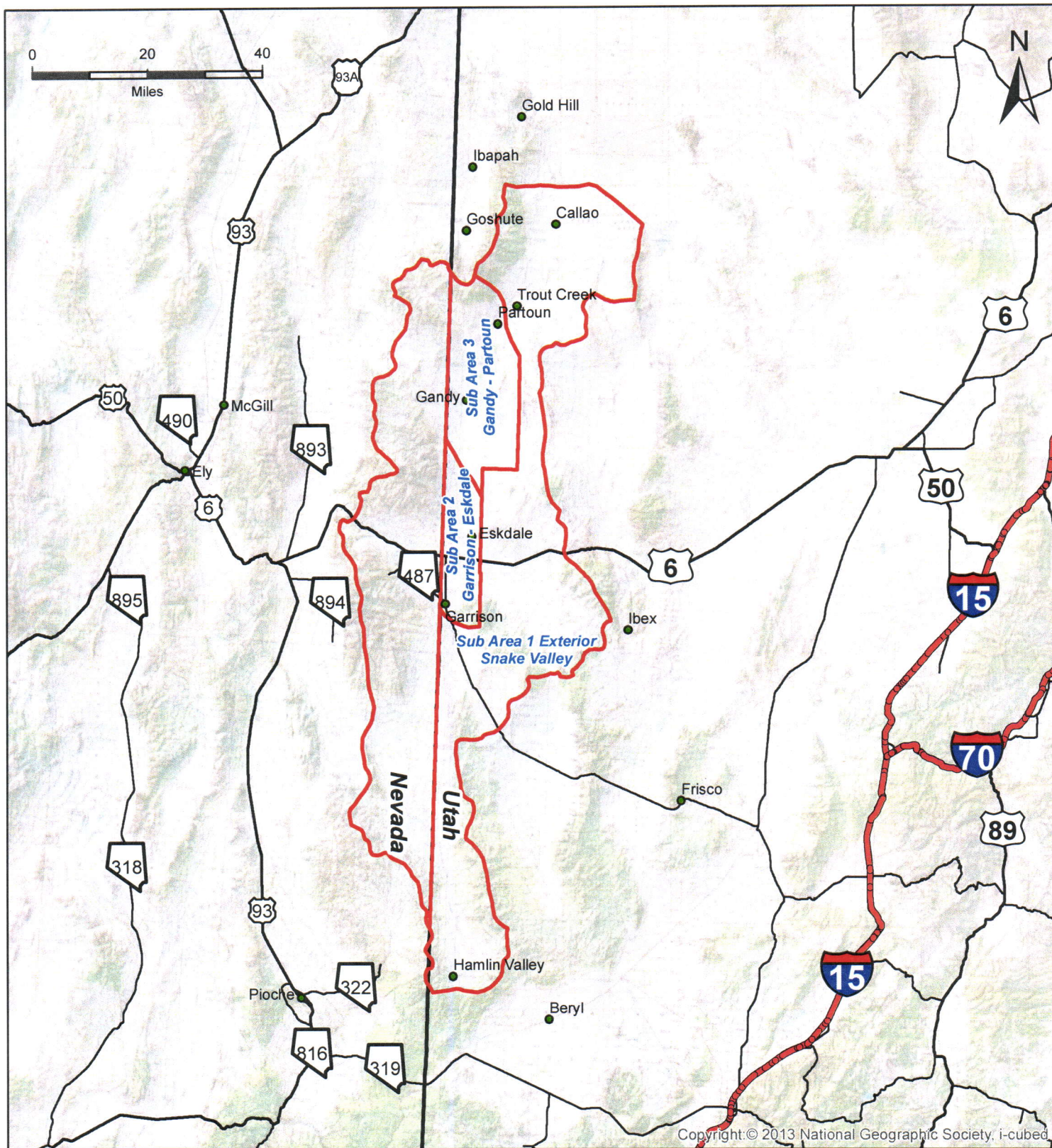
- Change applications to change surface water rights to ground water rights, or to add points of diversion for ground water to surface water rights, will not be considered.
- For other types of change applications, applicants are reminded that the State Engineer will closely review the potential for the proposed change to impair other water rights. The State Engineer will also closely review applications for potential detriment to the public interest.
- Change applications will be carefully reviewed to ensure that no enlargement of underlying water rights occurs.
- If the application seeks to drill wells deeper than the originally permitted well, the application will be carefully reviewed to ensure that the proposed well deepening will not have the effect of impairing existing water rights, or enable diversions that exceed the original water right. Each decision approving a change application will, as a condition of the approval, require the water right holder to install totalizing flow meters at all approved points of diversion, so that the Division can obtain, upon request, pumping records to ensure that diversions under the approved change application do not exceed those authorized under the original water right.

Each request for an extension of time to submit proof of beneficial use of an approved change application will be critically reviewed to ensure that the applicant is pursuing development of the subject water right with due diligence.

(Note: The rationale for limiting Subarea 3 to 2,200 acre-feet in new appropriations is that although ground water monitoring indicates that ground water levels are fairly stable at the present time, the modeling indicates that currently approved appropriations will result in substantial ground water drawdowns over the next 50 years in some locations. In other locations, it is possible that ground water could be developed without impairment to ground water rights and surface water rights. The 2,200 acre-feet limitation will allow for the development of four center pivots on the limited private lands in Subarea 3, provided that the applicant can meet its burden of proving that its proposed ground water appropriations will not impair other water rights in this Subarea, be in the public interest, and will not impair the State of Utah's ability to meet its habitat objectives for management of ground water-dependent wildlife species.)

Snake Valley Appropriation Policy - Potential New Subareas

Note: Subarea boundaries are based upon: 1. Concentrated groundwater pumping areas. 2. Localized groundwater flow systems, as indicated by geologic constraints and potentiometric surfaces identified in U.S.G.S. Scientific Investigations Map 3193. 3. Topographic divides. 4. State Boundaries



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