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M-E-M-O-R-A-N-D-U-M

To: Kyle Roerink, Executive Director, Great Basin Water Network
From: Iris Thornton
Date: November 5, 2025
Re: **White Pine Pumped Storage Project – Assessment of Hydrologic and Legal Deficiencies and Impacts to City of Ely Water Rights and Resources**

INTRODUCTION

This memorandum provides background and analysis to assist the Great Basin Water Network ("GBWN") in evaluating the validity of White Pine Waterpower LLC's ("WPW's")[1] proposed White Pine Pumped Storage Hydropower Project ("Proposed Project") and its associated water rights under Nevada law. It focuses on potential impacts to water resources in Steptoe Valley, including the City of Ely's ground, surface, and spring water rights located within and adjacent to the predicted area of drawdown. The memorandum also examines key deficiencies in the Project's supporting hydrologic analyses and in the State Engineer's approval of the Project's water rights change applications. This analysis relies in part on hydrologic work conducted by Andy Zdon of Roux, Inc., who was retained by GBWN to evaluate the validity of WPW's hydrologic modeling and to perform an independent assessment of the Project's effects on local water resources and water rights, including those owned by the City of Ely. The memo prepared by Roux is attached hereto as Attachment A.

Opposition to the Proposed Project is likely to require a multi-pronged approach under both state and federal law. A separate confidential attorney-client memorandum accompanying this document provides recommendations and strategies for pursuing challenges under state water law. Those recommendations are not included here, as they contain sensitive attorney-client materials not appropriate for public disclosure, but may be shared with the City of Ely's legal counsel or in closed session as permitted by law. Both memoranda are limited to state water law issues. Consideration of strategies for opposing the Project in the Federal Energy Regulatory Commission ("FERC") licensing process or in connection with Nevada Division of Environmental Protection or local permitting is beyond the scope of this memorandum and may be addressed in a separate analysis.

WHITE PINE PUMPED STORAGE PROJECT OVERVIEW

The White Pine Pumped Storage Hydropower Project is proposed by WPW as a 1,000-megawatt, closed-loop pumped storage hydropower facility located in Steptoe Valley approximately eight miles northeast of the City of Ely. The Proposed Project's reliance on

[1] White Pine Waterpower, LLC is a subsidiary of rPlus Hydro, LLC, based in Salt Lake City.

groundwater for both its initial reservoir fill and long-term operation is unprecedented for a pumped storage facility in the driest region of the United States. This reliance creates significant risks to existing water rights, including the City of Ely's municipal supply, and to the long-term hydrologic balance of Steptoe Valley.

WPW proposes to construct two reservoirs, an upper reservoir high in the Duck Creek Range and a lower reservoir in Steptoe Valley, connected by underground tunnels, pipes, generators, and turbines. The system would store up to 8,000 megawatt-hours of energy per day by cycling approximately 4,000 acre-feet of water between the two reservoirs. The Project would occupy roughly 1,143 acres, primarily on BLM-administered land, with portions crossing private parcels. Four production wells, each roughly 800 feet deep, are proposed for the lower reservoir wellfield, with one 2,600-foot well near the upper reservoir for construction and maintenance needs.[2] Initial reservoir filling would require approximately 5,000 acre-feet of groundwater over a 12-18 month period. Thereafter, ongoing replacement pumping would average about 560 acre-feet per year, and could reach as much as 720 acre-feet per year, to compensate for evaporation, leakage, and seepage losses.[3]

Water for the Project would be supplied under groundwater rights owned by White Pine County and leased, and potentially sold, to WPW pursuant to the *White Pine County & White Pine Waterpower, Water Use and Option to Purchase Agreement* signed in 2021.[4] The Nevada State Engineer approved White Pine County's application Nos. 91444 and 91445 to change the point of diversion and place of use for Project water rights in 2022, and made the future development of a monitoring plan a permit requirement, which plan must be submitted to the State Engineer prior to any pumping. To date, no hydrogeologic study or monitoring, management, and mitigation ("3M Plan") has been completed or submitted to the State Engineer as required. While the Proposed Project would rely on these existing rights, which hold a priority date of June 16, 1978, the rights have never actually been pumped, and so project pumping would represent a new stress on the system. The State Engineer's approval provides that proof of beneficial use must be submitted to the State Engineer by September 22, 2027.

STEPTOE VALLEY GROUNDWATER RESOURCES AND WATER AVAILABILITY

Publicly-available data indicate that there is insufficient water available in Steptoe Valley to support the Proposed Project. Decades ago, the Nevada State Engineer set the basin's perennial yield[5] at 70,000 acre-feet per annum ("afa"),[6] yet total committed rights exceed 146,000 afa, rendering the basin severely over-appropriated. Although actual groundwater withdrawals average 45,000–50,000 afa, well below the published perennial yield, groundwater levels in Steptoe Valley are already in moderate decline.[7] The persistence of declining water levels at

[2] White Pine Waterpower FERC Final License Application ("FLA"), at Exhibit A, §2.5 (Feb. 2023).
[3] *See id.* at Exhibit B, at §§ 4.2, 4.3.
[4] Because evaluation of the validity of, compliance with, and execution of this agreement is considered legally sensitive, both that evaluation and related recommendations are addressed in the confidential attorney-client memorandum accompanying this memorandum.
[5] The Nevada State Engineer defines perennial yield as the "maximum amount of groundwater that can be withdrawn each year over the long term without depleting the groundwater reservoir." https://water.nv.gov/uploads/bulletin-board-docs/Basin_Status_Maps_2023.pdf.
[6] There is wide variation in estimated perennial yield numbers for Steptoe Valley.
[7] Nevada Division of Water Resources, Basin Status Assessment Map Series (Nov. 2023), *available at* https://water.nv.gov/uploads/bulletin-board-docs/Basin_Status_Maps_2023.pdf; USGS Monitoring Data, Well

current pumping rates, below the published perennial yield, suggests that the State Engineer's 70,000-afa estimate likely overstates the perennial yield, or available water in the Basin, and that the perennial yield should be re-evaluated. In addition, numerous senior, unexercised rights in the Project's vicinity, many with priority dates predating those associated with the White Pine Pumped Storage Project, could be pumped at any time. These rights must be considered when evaluating whether sufficient water is available to serve the Project.

While a fair amount of reconnaissance work has been done to characterize the surface and groundwater resources in Steptoe Valley, WPW has not performed its own project-specific water resources study, nor has it provided any meaningful information with regard to potential Project-related impacts to water resources in Steptoe Valley and hydrologically connected downgradient basins. While WPW has indicated its intent to conduct test pumping for aquifer characterization, that testing has not yet been performed. WPW also concedes that there is significant uncertainty related to the Basin's recharge.[8] As a result, there remains considerable uncertainty as to whether sufficient groundwater is available to support the Project without depleting existing water supplies or impairing other water rights in Steptoe Valley and connected basins.

PREDICTED IMPACTS TO CITY OF ELY WATER RIGHTS AND RESOURCES

To independently evaluate WPW's hydrologic modeling and the Project's potential effects on local water resources, GBWN retained Andy Zdon of Roux, Inc. to perform a technical analysis. Roux's scope of work included assessing the adequacy of WPW's groundwater model and independently evaluating water availability and potential impacts to existing water rights in Steptoe Valley, including those held by the City of Ely.

Roux used the Great Basin Carbonate and Alluvial Aquifer System ("GBCAAS") groundwater model to run multiple simulations associated with the Project. The GBCAAS Model is a three-dimensional, numerical groundwater flow model developed by the U.S. Geological Survey ("USGS") and represents the best available science for the evaluation of water availability and Project impacts. Roux's model runs predict groundwater declines from the Project's initial reservoir fill exceeding 100 feet at the proposed wellfield, 20 feet over an area of roughly 840 acres surrounding the wells, and two to eight feet across tens of thousands of acres, including the vicinity of McGill Well and several City-owned springs.[9] Using a two-foot drawdown contour, Roux determined that many of the City of Ely's surface, ground, and spring water rights fall within or immediately adjacent to the Project's predicted cone of depression after the initial reservoir fill.[10] Water rights just outside that contour would still experience measurable drawdown, albeit less than two feet. This fact is significant, as even relatively small declines could substantially impact well performance and reduce or even eliminate spring discharge.

393310114475001, https://waterdata.usgs.gov/monitoring-location/393310114475001/#parameterCode=72019&period=P7D&showMedian=true; A. Zdon, Roux, Inc., Memorandum ,Groundwater impacts of the proposed White Pine Pumped Storage Project, Steptoe Valley, Nevada, at 2-4 (July 8, 2024) (hereinafter "Roux").

[8] FLA, Exhibit E, § 3.4.1.6.

[9] Roux, at 11.

[10] *See* Roux, Table 1 & Figure 14 (Table 1 depicts predicted drawdown at springs, some of which are owned by the City of Ely; Figure 14 provides a mapped depiction of the modeled drawdown area encompassing and adjacent to the City's water rights).

Table 1 -
Steptoe Valley Springs
Nevada, U.S.

Spring/Well Name	Latitude	Longitude	Elevation (ft)	Water Right Permit #[1]	Water Right Certificate #[1]	Water Right Permit/Certificate Owner	Drawdown (ft) Full Pumping 3000 gpm - 18 months	Drawdown Maintenance Pumping (ft) - 98.5 years after end of full pumping
Fish Pond Springs (FPS)	39.18625	-114.80861	6492	--	--	--	<2	<2
Unnamed N of FPS	39.18085	-114.80905	6505	--	--	--	<2	<2
Schellenberger Spring (Sch. Sp.)	39.19134	-114.81859	6480	--	--	--	<2	<2
Unnamed NE of Sch. Sp.	39.19399	-114.81832	6473	--	--	--	<2	<2
Unnamed Spring	39.23029	-114.82557	6394	--	--	--	<2	<2
Murry Ck. Spgs.	39.26148	-114.87011	6354	338	1085c	ELY MUNICIPAL WATER DEPARTMENT	<2	<2
Luckawanna Spgs.	39.28319	-114.86616	6291	20812 & 20813	6261c & 6288c	ELY MUNICIPAL WATER DEPARTMENT	4	<2
Steptoe Spring	39.27517	-114.75927	7924	--	--	--	<2	<2
Ragsdale Spring	39.30239	-114.93669	6697	--	--	--	<2	<2
Hercules Gap Spgs.	39.35049	-114.89551	6261	15011	V02273 & '6168c	ELY MUNICIPAL WATER DEPT. & ROMEO, ALBERT	2	2
McGill Spring (Duck Ck. Mts.)	39.34392	-114.73903	7963	4992	0904c	JOHN UHALDE & CO.	<2	<2
Axehandle Spring	39.35781	-114.74426	7750	4994	0906c	JOHN UHALDE & CO.	<2	<2
McGill Well (MW)	39.37695	-114.80878	6113	--	57183	MCGILL-RUTH CONSOLIDATED SEWER & WATER G.I.D.	<2	<2
Spg. NE of MW	39.38290	-114.80100	6111	--	--	--	<2	<2
Goat Spring	39.37511	-114.87494	6701	11502	3400c	PESCIO BROTHERS LLC	2	<2
Rattlesnake Spg.	39.39389	-114.88209	8023	11964	3780c	PESCIO BROTHERS LLC	<2	<2
Sheep Spg.	39.40950	-114.85367	6733	18836	5854c	PESCIO BROTHERS LLC	<2	<2
Lusetti Spg.	39.40485	-114.88392	8474	6059	0837c	THELORA SPENDLOVE FAMILY TRUST	<2	<2
Heusser Springs	39.41378	-114.82703	6085	--	--	--	<2	<2
Mcgill Springs	39.41252	-114.77967	6132	42106 & 45563	12177c & 13471c	KENNECOTT NEVADA COPPER COMPANY	2	<2

Notes:

Latitude and longitude shown in WGS84

ft = feet

< = less than

-- = not available

1 = Water right permit and certificate information collected from the State of Nevada Division of Water Resources (https://water.nv.gov/waterrights.aspx)

Table 1 (A. Zdon, Roux, Inc., Memorandum ,Groundwater impacts of the proposed White Pine Pumped Storage Project, Steptoe Valley, Nevada (July 8, 2024)) (prepared for Great Basin Water Network).

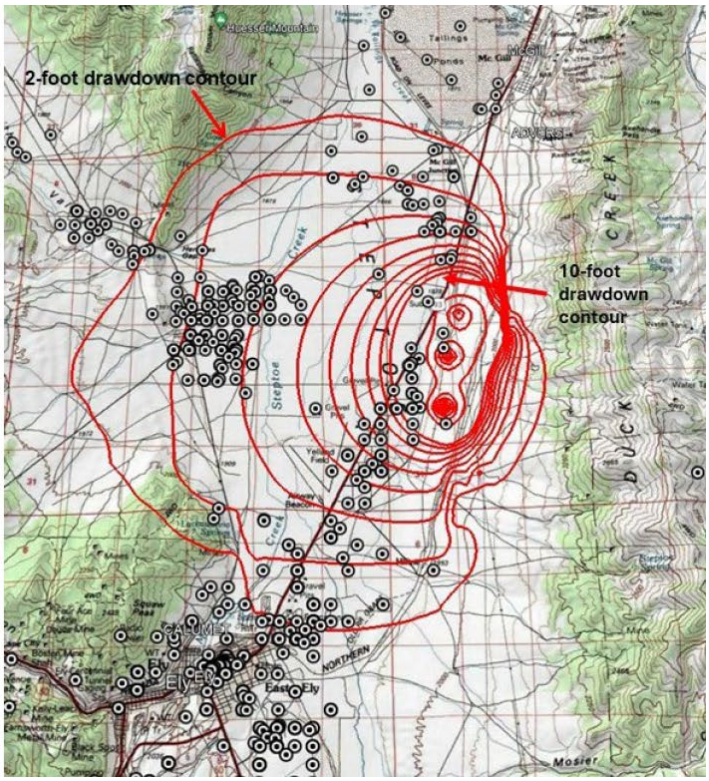

Figure 14 (A. Zdon, Roux, Inc., Memorandum ,Groundwater impacts of the proposed White Pine Pumped Storage Project, Steptoe Valley, Nevada (July 8, 2024)).

WPW HYDROLOGIC MODELING DEFICIENCIES

As discussed above, in addition to conducting its own modeling to predict Project impacts, Roux was also asked to evaluate the adequacy of WPW's hydrologic modeling. Roux's results contrast sharply with WPW's conceptual-level analysis in support of the Proposed Project, revealing fundamental analytical deficiencies and significant underestimation of impacts by WPW. Roux also identified numerous areas of uncertainty in WPW's modeled results, necessitating conservative decisionmaking. These fundamental shortcomings, combined with the severity of Roux's predicted impacts, raise substantial concerns regarding the Project's compliance with Nevada water law, including statutory requirements under NRS § 533.370(2) governing water availability, non-conflict with existing rights and protectable interests in domestic wells, and consistency with the public interest.

WPW's conceptual-level hydrologic modeling is fundamentally flawed and inadequate for evaluating either water availability or predicted impacts. WPW limited its effort to a conceptual model rather than developing a fully parameterized numerical model capable of realistically simulating basin conditions. Although WPW's consultants suggest a limited drawdown area, their analysis understates the Project's true hydrologic effects. Key assumptions underlying WPW modeling identified by Roux led to systematic underprediction of drawdown, an error compounded by the use of a 10-foot contour that artificially narrows the affected area and omits smaller but hydrologically significant declines extending into zones supporting the City of Ely's ground, surface, and spring water rights. This approach conceals likely interference with springs and wells by disregarding relatively shallow yet consequential drawdowns.[11] Moreover, WPW modeling has failed to evaluate the hydrologic effects of dewatering associated with tunnel construction beneath the Duck Creek Range, which Roux estimates could drain approximately 100 gallons per minute of unpermitted groundwater during construction. Taken together, these deficiencies render WPW's hydrologic analysis unreliable and incomplete. By contrast, Roux's sub-model, developed within the USGS GBCAAS framework, produces a more realistic and scientifically defensible projection of impacts.

NEVADA STATE ENGINEER WATER RIGHTS PERMITTING DEFICIENCIES AND FUTURE PROCEEDINGS

A. State Engineer Approval of Project Water Rights Change Applications Improperly Relied on Future Monitoring Plan in Lieu of Required NRS § 533.370 Findings

As noted above, White Pine County, with support of WPW, filed applications 91444 and 91445 with the State Engineer to change the point of diversion and place of use of water rights for the Project. No protests were filed and no hearing was held. Even had protests been filed, the window for filing a petition for judicial review of the State Engineer's approval of the applications has long passed.

[11] The WPW model further fails to account for cumulative effects from nearby mine-dewatering operations at the Robinson Mine, which artificially introduces recharge into Steptoe Valley, which artificial recharge may eventually cease. Roux, at 12. Because these activities are hydraulically connected to the Project area, their omission causes the model to overestimate natural recharge and underestimate Project drawdown.

The Nevada State Engineer's 2022 approval of these Project water rights change applications contains no findings with regard to the statutory requirements governing change applications, namely availability of water, conflicts with existing rights or protectable interests in domestic wells, or consistency with the public interest. *See* NRS § 533.370.[12] Similarly, the State Engineer's administrative record for the project's change applications 91444 and 91445, obtained by GBWN through a public records request, shows little evidence that the State Engineer evaluated whether there is water available in the proposed source of supply or whether WPW's proposed pumping would conflict with existing rights, protectable interests in domestic wells, or the public interest. *See* NRS § 533.370(2). No basin-specific model or cumulative impact analysis appears in the State Engineer record, and key data cited by WPW has not been made publicly available. Rather, according to WPW's FERC Final License Application, "[a]s the change applications were approved and no formal protests were filed, there is a presumption of no adverse effect to the groundwater resources. This assumption along with an evaluation of any effect related to the initial fill will be further studied in the planned hydrogeologic study."[13]

Rather than making findings on water availability, conflicts with existing rights, and consistency with the public interest as required under Nevada law, the State Engineer's 2022 approval of the Project's change applications instead required the future submission of a monitoring plan. In *Eureka County v. State Engineer*, 131 Nev. 846, 359 P.3d 1114 (2015) ("*Eureka I*"), the Nevada Supreme Court held that the State Engineer may not approve a water-right application contingent upon the later development of monitoring or mitigation measures that are essential to determining compliance with NRS § 533.370. By relying on a future monitoring plan, the contents and effectiveness of which are entirely unknown, to justify approval of WPW's applications, the State Engineer effectively deferred making the required findings regarding impacts and mitigation. Because the State Engineer did not evaluate or determine the extent of potential impacts, it cannot reasonably be concluded that such impacts are amenable to effective monitoring or mitigation, particularly in the absence of any monitoring plan detailing how those impacts would be detected or addressed. This failure to make the determinations required by Nevada law, or to evaluate the adequacy of the proposed plan to prevent conflicts with existing rights, protect domestic wells, or safeguard the public interest, renders the approvals legally deficient and inconsistent with NRS § 533.370 and *Eureka I*.

Even without the filing of protests or the holding of a hearing, the State Engineer may not approve change applications that violate Nevada law or lack substantial evidentiary support in the record. Nevada law imposes on the State Engineer a duty to reject an application if it does not meet statutory requirements regardless of whether protests have been filed or a hearing held.[14] Thus, there may be opportunities to challenge the State Engineer's approval of the Project's change applications. Beyond potential direct challenges, the forthcoming monitoring plan review offers an opportunity to address this violation of Nevada law and advocate for the City of Ely's and GBWN's participation in that process. Recommendations related to this deficiency are provided in the accompanying confidential attorney-client memorandum.

[12] NRS § 533.370(2) requires rejection of an application where there is no water available in the source of supply, or where it would conflict with existing rights or protectable interests in domestic wells or prove detrimental to the public interest.
[13] FLA, Exhibit E, § 3.4.2.
[14] *See* NRS § 533.370(2).

B. WPW Has Failed to Obtain a State Engineer Permit for Tunnel Dewatering

Modeling conducted by Roux for GBWN indicates that construction of the Proposed Project's tunnels beneath the Duck Creek Range would intersect the local water table and generate continuous groundwater inflow of approximately 130 gallons per minute ("gpm") during excavation, requiring active dewatering. Roux's analysis describes this as "an un-permitted extraction of a local water resource," noting that the potential groundwater discharge, which does not appear to have been considered in the Project, could lower groundwater elevations beneath the Duck Creek Range and affect springs on its upper eastern slopes.[15] Roux further observed that the disposition of any dewatered water has not been addressed, and that groundwater which would otherwise move toward the basin-fill below and west of the tunnel may be diverted elsewhere, thereby altering local groundwater conditions.[16] It does not appear that WPW has applied to the State Engineer for a permit authorizing this tunnel dewatering.

The failure by WPW to apply for a permit from the State Engineer authorizing this diversion and dewatering violates Nevada water law requirements that all groundwater diversions be conducted pursuant to a permitted water right. The lack of a dewatering permit not only contravenes state law but also undermines WPW's compliance with NRS § 533.370's standards governing availability of water, prohibition against conflict with existing rights, and requirement that the change be consistent with the public interest, given that the unaccounted extraction could alter local gradients, diminish recharge to adjacent springs, and interfere with existing rights held by the City of Ely and other users in Steptoe Valley. Recommendations related to this deficiency are addressed in the confidential attorney-client memorandum accompanying this memo.

C. Anticipated Future Project Change Applications

WPW's filings with FERC and the Nevada State Engineer indicate that additional change applications will be required to authorize the final configuration of the Project's wellfield for initial fill and maintenance pumping.[17] Under Nevada law, such change applications are subject to the same statutory criteria and evidentiary requirements set forth in NRS § 533.370 that apply to original appropriations. Accordingly, GBWN and the City of Ely should closely monitor and protest any such applications. Future change application proceedings will provide an opportunity to challenge the adequacy of WPW's hydrologic analysis and to ensure that all affected rights holders, including the City of Ely, have a meaningful opportunity to protect their water rights and related interests. Recommendations related to this opportunity are addressed in the accompanying confidential attorney-client memorandum.

CONCLUSION

Proper management of groundwater in Steptoe Valley is essential to protecting local water resources, including rights owned by the City of Ely. The White Pine Pumped Storage Project poses substantial, unmitigated risks that have not been adequately analyzed or addressed. GBWN and the City of Ely should engage proactively, as recommended in the accompanying confidential memorandum to ensure science-based review, enforceable effective mitigation, and compliance with Nevada water law before any groundwater development proceeds.

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[15] Roux, at 10.
[16] *Id.*
[17] *See* FLA, Exhibit B, § 4.2.

ATTACHMENT A

ROUX, INC. MEMORANDUM

JULY 8, 2024

MEMORANDUM - White Pine Pumped Storage Project

OCTOBER 5, 2025

MEMORANDUM

Date: July 8, 2024

To: Kyle Roerink, Great Basin Water Network

From: Andy Zdon, Roux Associates, Inc.

Subject: **Groundwater impacts of the proposed White Pine Pumped Storage Project, Steptoe Valley, Nevada**

This technical memorandum addresses the hydrology related to the proposed White Pine Waterpower, LLC (WPW) White Pine Pumped Storage Project (Project), and has been prepared by Roux Associates, Inc. (Roux) on behalf of the Great Basin Water Network (GBWN). This memorandum is based on our review of existing literature, and Roux's use of the Great Basin Carbonate and Alluvial Aquifer System (GBCAAS) Model to run multiple water use simulations associated with the Project. The GBCAAS Model is a three-dimensional, numerical groundwater flow model developed by the U.S. Geological Survey (USGS). Roux did not conduct a field inspection of Steptoe Valley for the purposes of this memorandum. Instead of using GBCAAS to evaluate Project impacts, WPW cites to the Basin and Range Carbonate and Alluvial Aquifer System Study (BARCASS) to support its water availability presentation. It is important to note that BARCASS is a conceptual hydrogeologic framework study. It is, nor does it include a numerical groundwater flow model that can be used for predictive purposes (Welch, 2006).

The purposes of this memorandum are to:

- Provide a preliminary review of the proposed Project and its hydrologic effects as outlined in Project documentation;
- Provide a review of the robustness of the hydrologic information and groundwater modeling reported in the Project's FERC licensing documents; and,
- Provide an independent review of potential Project impacts to springs, groundwater-dependent vegetation and surrounding well owners.

Summary

According to the Project's Final License Application (WPW, 2023) "[w]ater for the Project will come from groundwater wells appurtenant to existing permitted water rights. The water will be diverted from a proposed new wellfield in the Steptoe Valley Basin, south of the proposed lower reservoir." The initial volume of water necessary to fill the lower reservoir is estimated to be 5,000 acre-feet (AF) and would be filled over a 12- to 18-month period. WPW estimates that the Project would need between 240 and 560 acre-feet per year (AFY) of water to replenish water lost through seepage, leakage, and evaporation, but also states that maximum annual water loss is not expected to exceed 720 AF.

Once the lower reservoir is filled, approximately 4,082 AF could be cycled between the lower reservoir and upper reservoir each day.

Roux evaluated hydrologic impacts of the Project resulting from the applicant's failure to-date to perform an adequate hydrologic analysis of Project impacts. The scenario assumes that Project groundwater pumping would consist of an initial 18-month reservoir fill pumping period at a pumping rate of 3,000 gallons per minute (GPM, allowable per the associated groundwater permit) followed by maintenance pumping of approximately 550 GPM for the remaining 100 years. The 100-year project length is based on our understanding of WPW plans as expressed at a recent public meeting and in project documents (Roerink, 2024 and WPW, 2023).

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California ■ Illinois ■ Massachusetts ■ New Jersey ■ New York ■ Texas

Although Roux originally proposed to consider effects of dewatering and related recharge operations associated with mining at Ruth (west of Ely), these effects cannot be reliably simulated using the USGS GBCAAS Model as pumping in Ruth is not included in the model. While they are not readily amenable to simulation for the purpose of this report, it will be necessary to take that pumping into consideration when cumulative impacts are evaluated.

Key takeaways from our review are as follows:

- The limited analytical modeling presented in the WPW licensing application package incorporates underlying assumptions that are not valid given existing hydrogeologic conditions and is not based on the best available science;
- As a result of model assumptions, the limited analytical modeling in the WPW licensing application package appears to substantially underestimate potential substantial Project impacts;
- The use of the U.S. Geological Survey-developed Great Basin Carbonate and Alluvial Aquifer System (GBCAAS) numerical model results in Project scenarios which affect spring discharges and groundwater levels in pumping areas throughout a substantial portion of Steptoe Valley containing prior existing water rights that are in continuous use;
- Small changes in head can substantially affect whether surface water is present at springs (particularly small springs) therefore based on Roux's modeling results a spring mitigation plan should be prepared for the Project;
- The use of the GBCAAS model indicates that more than 100 GPM of unpermitted dewatering discharge is likely due to construction of the horizontal tunnel under the Duck Creek Range, which will act as a drain;
- Post-project recovery of groundwater levels is anticipated to take substantially longer than the anticipated Project period of operation (100 years); and,
- A WPW Project-specific groundwater investigation and WPW project-focused numerical modeling effort is needed to further evaluate WPW Project impacts.

Background

The locations of eastern Nevada groundwater basins including Steptoe Valley and the Project are presented on Figure 1. WPW's proposed Project in Steptoe Valley has groundwater rights (described below) which permit the pumping of up to approximately 5,100 AFY of groundwater from the east-central portion of Steptoe Valley, a part of the headwaters of the Goshute Valley regional groundwater flow system. The points of diversion for those groundwater rights are located as presented in Figure 2 and are associated with the Project well field.

Project Description

WPW's White Pine Pumped Storage Hydropower Project is a 1,000 megawatt energy closed-loop storage project proposed by rPlus Hydro, a Salt Lake City company, doing business as WPW. The Final License Application for the proposed Project includes a fairly straightforward explanation: "Pumped storage projects move water between reservoirs located at different elevations (i.e., an upper and a lower reservoir) to store and generate electricity. Generally, when electricity demand is low, excess electric generation capacity in the grid is used to pump water from the lower reservoir to the upper reservoir. When electricity demand is high, the stored water is released from the upper reservoir to the lower reservoir through a turbine to generate electricity. A closed-loop pumped storage project is generally defined as a pumped storage project that utilizes reservoirs situated at locations other than natural waterways, lakes, wetlands, and other natural surface water features, and may rely on temporary withdrawals from surface waters or groundwater only for the purposes of initial fill and of the periodic recharge needed for project operation." (WPW, 2023).

Project Groundwater Permits

WPW has a lease interest in two permits for groundwater use owned by White Pine County, Nevada. These permits (91444 and 91445) are provided as Attachment 3. As noted on the permits, the total combined duty of water under these permits shall not exceed 5,100 afy (equivalent to an average pumping rate of 3,162 gpm). Of note is that the permits cite the following: "*If any portion of this permit is cancelled or if any portion of water is not placed to the intended beneficial use, then that portion of the right will revert to the source and not to the base water right."* According to the Water Use and Option to Purchase Agreement entered into by WPW and White Pine County on February 23, 2021, once the initial fill using water leased to WPW by White Pine County has been completed, permits 91444 and 91445 would remain in the ownership of White Pine County, which would need to file change applications to (1) support a different use for the initial fill water; and (2) permanently transfer a portion of the permitted rights to WPW to support the Project's maintenance pumping. Thus, while WPW only intends to pump at the full permitted amount during the initial fill period, it is possible, if not likely, that pumping by White Pine County at the full permitted duty will continue indefinitely.

Hydrogeologic Characteristics of Steptoe Valley

The Project area within Steptoe Valley Hydrographic Area is in White Pine County, Nevada, within the Basin and Range geomorphic province. The perennial yield of Steptoe Valley has been established as 70,000 afy. Steptoe Valley covers an area of nearly 2,000 square miles. The Project is located along the east-central margin of the valley, northwest of Ely, the largest community in the valley. The valley is bounded on the west by the Egan and Cherry Creek Ranges and on the east by the Duck Creek and Schell Creek Ranges. Most of the groundwater in storage is within the basin fill. Lesser quantities of groundwater will be stored in the bedrock units that bound the valley. The Basin and Range region (also referred to as the Great Basin) is characterized by basins of internal drainage with considerable topographic relief, alternating between narrow faulted mountain chains and flat arid valleys or basins. The ranges generally trend north-northwest parallel to the regional structural regime.

The bedrock units that bound the valley are comprised of a series of clastic, carbonate, and intrusive and extrusive igneous rock (Eakin, et.al., 1967). In the Project area, bedrock of the Duck Creek Range, which lies immediately east of the proposed Project well field, makes up earth materials through and under which Project infrastructure will be present. These rocks are comprised of Upper Precambrian through Lower Cambrian quartzose sedimentary rocks; fractured parts transmit some water (Eakin, et.al., 1967).

The Steptoe Valley area is covered by coalescing alluvial fans forming broad slopes between the surrounding mountains and the valley floor. Coarse-grained deposits (primarily sand and gravel) within the basin fill are responsible for transmitting the greatest quantities of groundwater in the Steptoe Valley drainage basin. The basin fill is generally unconsolidated, moderately to well-sorted sand, gravel, silt, and clay.

Faulting along the base of the mountains (e.g., along the base of the Duck Creek Range) may affect horizontal groundwater movement. The USGS Model (Brooks, 2017) does not include detailed fault delineation, and where faults are present that affect the lateral movement of groundwater, groundwater elevation contours may deflect at, or next to, these geologic structures. Additionally, the geometry of cones of depression may elongate along these faults as changes in head are transmitted preferentially along the fault.

The regional gradient of the groundwater flow system is toward the north (Eakin, et.al., 1967, Brooks, 2017) As described earlier, Steptoe Valley is within the headwaters of the Goshute Valley Regional Groundwater Flow System.

Steptoe Valley Existing Conditions

The perennial yield of a basin as defined in Nevada is the amount of usable water from a groundwater aquifer that can be economically withdrawn and consumed each year for an indefinite period of time without depleting the source. This definition does not consider losses to ecological resources such as springs unless there was an otherwise human use for that spring water. The perennial yield of Steptoe Valley is 70,000 afy and is based on a decades old evaluation (Eakin, et.al., 1967). Steptoe Valley is an overallocated basin in that groundwater allocations (more than 100,000 acre-feet per year) substantially exceed the published perennial yield. Despite this, in comparison, the year with the highest reported pumping estimate for Steptoe Valley is 2017 with a reported 47,547 acre-feet of pumping (Nevada Division of Water Resources, 2021). This estimate does not appear to include all domestic pumping.

A PowerPoint prepared by the White Pine County Natural Resources Advisory Committee (2024) is provided in Attachment 1. This PowerPoint provides a real-time summary of existing groundwater conditions in Steptoe Valley using State Engineer data and mapping. These State Engineer data confirms that groundwater levels in Steptoe Valley currently are in decline (Nevada Division of Water Resources, 2023)

Groundwater-level hydrographs of selected monitoring wells in the valley indicate that while in some locations, groundwater levels are stable (e.g., Pinion Pine LN and Broadbent Park Wells in Ely), elsewhere in the area, wells north of Ely, in the Hercules Gap area, and around McGill show significant groundwater level declines over the same period of record (see White Pine County Natural Resources Advisory Committee, 2024 in Attachment 1). Additionally, wells north of the Project area also show downward trends under the existing pumping regime. Although isolated seemingly stable well hydrographs can be identified as shown in the Project documentation (WPW, 2023), that documentation does not adequately represent Steptoe Valley conditions which are in moderate decline (Nevada Division of Water Resources, 2023).

These groundwater-level declines will also likely result in spring-level declines, assuming there is hydraulic connectivity between springs and pumped aquifers. Two springs (Lackawanna and McGill) have been reported as thermal springs (Garside and Schilling, 1979). The Lackawanna Springs (also called Lackawanna Hot Springs) were reported as flowing at 135 gpm, with water temperatures ranging from 70 to 95 degrees Fahrenheit. McGill Spring (also known as McGill Warm Spring) was reported in 1920 as having temperatures up to 84 degrees Fahrenheit and flowing at 4,500 gpm (Garside and Schilling, 1979). Numerous other springs are present in Steptoe Valley, many of these appearing to be shallow water-table springs. Both thermal and non-thermal springs can be susceptible to decreasing discharge due to pumping stresses. A summary of these springs, along with associated water rights and simulated scenario drawdowns are presented in Table 1. Water rights documentation for these springs are provided in Attachment 3. A map showing spring locations is presented on Figure 3.

Sustainability of Groundwater Systems

The volume of groundwater in storage is an important aspect of the groundwater system. Changes in storage are observed in the field by changes in groundwater levels. A fundamental groundwater equation and the basis for evaluations of groundwater budgets (inflow vs. outflow estimates) is:

Inflow – Outflow = Change in Storage

When outflow (groundwater discharge both directly in-basin or through underflow to surrounding basins) exceeds inflow (groundwater recharge in basin plus contributions from surrounding basins), there is a negative change in groundwater in storage and groundwater levels can be expected to decline. When inflow exceeds outflow, the reverse is true. When the system is in equilibrium, water levels will generally

remain relatively constant despite short-term fluctuations. Where they occur, long-term groundwater level declines are a clear sign that outflow has been exceeding inflow for an extended period. This has been seen in various wells within Steptoe Valley as shown in the PowerPoint presented in Attachment 1 (White Pine County Natural Resources Advisory Committee, 2024). It should also be noted that in many areas, the recovery of groundwater levels following the removal of groundwater from storage can take much longer than the period it took to decline, depending on the volume removed from storage, groundwater recharge, precipitation trends, and the geology of the basin. This phenomenon appears to be a likely scenario in the case of the current Project proposal.

Furthermore, under predevelopment conditions, a groundwater system is in equilibrium where inflow equals outflow. Groundwater pumping such as that proposed by WPW causes a disruption in this equilibrium, and recharge amounts, and other biological and hydrologic conditions can change. More often, discharge amounts and patterns are affected. This includes the loss of phreatophytic vegetation (vegetation whose water requirements are met by roots tapping groundwater such as in the area of springs) and reduction or elimination of spring flow. All pumped water must be supplied by one or more of the following:

- Decreases in groundwater storage (lowered groundwater levels);
- Increased or induced recharge or underflow (e.g., from southern Steptoe Valley as simulated in this case); and/or,
- Decreased discharge either in the form of reduced subsurface outflow or decreases in natural forms of discharge such as evapotranspiration, spring flow or river base flow (such as would occur at Lackawanna and other springs in Steptoe Valley).

Regardless of the amount of groundwater pumped, there will always be groundwater drawdown (and the removal of water from storage) in the vicinity of pumping wells, a necessity to induce the flow of groundwater to said wells. This area of groundwater drawdown is referred to as a cone of depression. For most groundwater systems, the change in storage in response to pumping is a transient phenomenon that occurs as the system readjusts to the pumping stress. The relative contributions of changes in storage, increases in recharge, and decreases in natural discharge evolve over time. The timing of that evolution in natural discharge change can be difficult to predict.

If the system can come to a new equilibrium (i.e., a combination of increased recharge and/or decreased discharge), the storage decreases will stop, and inflow will again equal outflow with the changes to the inflow/outflow components (capture) described above. The amount of groundwater “available” for a future groundwater development project is therefore dependent on what these long-term changes are, and how these changes affect the water resources and groundwater-dependent environmental resources of the area.

Steptoe Valley Spring Characteristics

Springs are places where groundwater reaches the ground surface, discharging as surface flow. By nature of their character, springs are sensitive to changes in groundwater level. For some springs, the reduction of less than one foot of groundwater elevation can result in the difference between surface water flow being present or absent. Springs present in Steptoe Valley are likely to fall into this category (e.g., Goat Spring). Some springs are small, seasonal, locally perched, features where last year’s rainfall that soaked into the ground has hit a barrier to its downhill flow path, forcing that water back to the ground surface. The discharge from these local springs is gravity driven. Other springs are tied to deeper and more distant groundwater flow paths that may extend well beyond the boundaries of the local watershed. Because these flow paths are deeper, they are generally not affected by seasonal rainfall or changes in air

temperature, they usually have more consistent flow, and if the flow paths are sufficiently deep, they are characterized by warmer groundwater discharge temperatures that remain relatively consistent over time and may be thermal. These springs will commonly have discharges that are anomalously large for their limited watershed and local precipitation. These latter springs rise to the surface under pressure (similar to Lackawanna and McGill Springs).

How Groundwater Capture Can Impact Springs

In the Steptoe Valley and surrounding area, the primary risk to springs is the potential impact due to regional pumping. In the case of the WPW Project, the effects of Project pumping would be additive (superimposed) on the effects of existing pumping. As described earlier, the proximity of the proposed Project pumping to springs and neighboring basin-fill aquifers is likely to have a deleterious effect. In Steptoe Valley, these effects are likely to result in decreases in groundwater elevation (drawdown), local changes to hydraulic gradients and horizontal and vertical gradient-directions, and reductions in spring flow.

Hydrologic Analysis

We reviewed many technical documents related to the proposed Project and the hydrogeology of Steptoe Valley and the surrounding area. Highlights from those studies are discussed below. According to Exhibit E (Draft Environmental Report) of the Final License Application (WPW, 2023), "The effect of drawdown due to pumping at peak rates to fill the Project's lower reservoir is expected to be confined to the area local to the project wellfield. Analytical estimates indicate that drawdown from static for the system under continuous pumping at the design nominal rate of 3,000 gpm will be approximately 90 feet at the pumping center." Although a specific "analytical method" is not noted related to that statement, the standard approach is based on the Theis non-equilibrium flow equation. The Theis equation (or the Cooper-Jacob approximation of the Theis non-equilibrium flow equation) analytical method has underlying assumptions that are not consistent with area hydrogeologic conditions and as a result appear to substantially underestimate potential project impacts. Examples of these underlying assumptions are:

- Assumption of aquifer with infinite areal extent;
- The aquifer is homogeneous (i.e., the aquifer materials are the same everywhere); and,
- The aquifer is isotropic (i.e., the hydraulic conductivity is the same in all directions including vertically.

These underlying assumptions give rise to perfectly circular representations of a cone of depression (such as represented in Figure 3.4-2 of the Environmental Report), something that is rarely observed in the natural environment. In the case of the Project area, the presence of low-permeability bedrock immediately east of the Project well field, the normal anisotropy associated with alluvial aquifer systems, and spatial variability of basin fill and bedrock materials, these assumptions are not valid for this application.

In order to address these insufficiencies and to conduct a preliminary review of potential impacts, Roux used the GBCAAS Model (Brooks, et.al., 2017), a three-dimensional, numerical groundwater flow model developed by the U.S. Geological Survey (USGS), for our review. The GBCASS model is capable of predicting Project impacts in far greater detail and with less uncertainty than the Applicant's application of the Theis equation in that it represents existing geologic conditions in a more specific approach.

Use of the GBCAAS Model

As described earlier, the USGS' GBCAAS Model was used by Roux to estimate hydrological responses to the proposed Project pumping scheme. The model was also used to estimate the unpermitted, but

inevitable dewatering outflow due to the construction of the horizontal tunnel anticipated to be advanced into the lower slopes of the Duck Creek Range.

The GBCAAS Model is a regional groundwater model that encompasses alluvial, carbonate, and volcanic aquifer systems across Utah and portions of Nevada, California, and Idaho (Brooks, 2017). The initial release of the model simulated only steady-state flow conditions. The current version of the model, GBCAASv3.0, includes transient groundwater flow capabilities (specific storage and specific yield parameterizations have been added), has been recalibrated, and only employs local grid refinement in a part of the model domain that covers an area unrelated to Steptoe Valley.

The regional model provides an objective framework from which to extract representative hydrologic properties, such as hydraulic conductivity, for local aquifer materials (e.g., carbonate rocks, alluvium) in addition to estimates for net local recharge. However, the GBCAAS Model, which is based upon the USGS's MODFLOW simulator, includes simplifying assumptions that are appropriate for a regional-scale model encompassing varying and complex geometry but may be problematic at the local scale, including a coarse model grid (1-mile by 1-mile in the Steptoe Valley area) and the assumption of confined groundwater flow across all model layers. The latter assumption, supported by a high specific storage value in the uppermost model layer, provides model numerical stability in the face of highly variable layer thicknesses and heterogeneities in hydrologic properties. Nonetheless, both assumptions limit model resolution at the scale of cones of depression associated with the operation of individual pumping wells.

To circumvent the limitations of the GBCAAS Model for simulating pumping operations in the Steptoe Valley, a local submodel was created from the regional model. This submodel encompasses the following modifications listed below.

1. Boundaries were defined approximately 10 to 15 miles away from the proposed pumping locations, depending on direction. Within these boundaries, all local hydrologic properties assigned in the regional model, including horizontal and vertical hydraulic conductivities, specific storage, and the spatially variability in thicknesses of the model's eight layers, were mapped onto a finer grid consisting of 1,000-foot by 1,000-foot grid cells (Figure 4). All properties were assigned to the new grid points via interpolation of the regional model grid values using radial basis function.
2. All four boundaries of the local submodel were assigned as general head boundaries, with the associated groundwater head values interpolated from the ending state of the calibration phase of the regional model.
3. Areal recharge (e.g., mountain front recharge) was assigned across the submodel grid via interpolation of net recharge associated with the first period of the projection phase of the regional model.
4. Faults represented by MODFLOW's Horizontal Flow Barrier package in the regional model that breach the local submodel were mapped to the submodel as polylines, preserving the existing assigned fault conductances in layer intercepts.
5. Grid cells assigned to MODFLOW's Drain package in the regional model (to represent water losses to springs and/or evapotranspiration) were used as a basis for interpolating the corresponding drain conductance and elevation values to the local submodel grid structure by nearest-neighbor interpolation.
6. All model cells were specified as convertible (i.e., potentially unconfined), as opposed to confined-only as in the regional model. This included assigning a specific yield, S_y, of 0.11 to the top layer, reflecting an average of the value posited in MODFLOW's HSU package (Anderman and Hill, 2000) for this layer in the regional model (S_y = 0.074) and a more location-specific estimate of 0.15 for valley fill material in the Steptoe Valley suggested by the USGS (Eakin et al., 1967). The default specific yield of 0.01 for non-fill materials assumed in the regional model was assigned to

the remaining model layers (to represent fractured rock). In addition, the hydrologic ground surface was extended upward in areas where the regional model indicated groundwater head values above the ground surface. This step was implemented to prevent simulated spurious local confined conditions.

7. The local submodel was developed using the most recent release of MODFLOW, MODFLOW-6 (Langevin et al., 2017). MODFLOW-6 includes the ability to use a Newton solver to facilitate numerical solution of unconfined flow models and also allows specification of an unstructured grid. Consequently, the local submodel grid was refined to a 250-foot by 200-foot grid spacing in the vicinity of the proposed injection wells and extending east to encompass the upper storage reservoir (Figure 5).

The local submodel was first run in steady-state mode to establish initial conditions; these generally match well against the modeled groundwater head distribution from the end of the calibration phase of the GBCAAS Model (Figure 6). As noted, local pumping from nearby domestic supply or agricultural wells is not included in either the local submodel or the regional groundwater model, nor is the significant pumping associated with mine dewatering to the west in the Ruth area.

Subsequently, the local submodel was run in transient mode to evaluate the potential impacts of pumping needed to fill the upper storage reservoir. This entailed specified pumping from the three northernmost well locations, each operating at 1,000 gpm for a period of 18 months as summarized in the Final License Application (White Pine Waterpower, 2023). Although a fourth well is specified, that well was assumed to be a backup well. MODFLOW's Well package was used to distribute pumping uniformly across the top three model layers at the proposed well location. The implied aquifer transmissivity across these model layers in the vicinity of the proposed pumping well locations – about 3,500 square feet per day (ft^2/day) – is in general agreement with the assumed range of transmissivity values (1,350-4,500 ft^2/day) used to estimate individual well drawdowns, as described in the Project license application (WPW, 2023). However, among other simplifications, the drawdown cones illustrated in the Final License Document do not account for the impact of the truncation of this relatively permeable part of the aquifer system by less permeable geology immediately to the east (Figure 7). Recharge was assumed to occur at a constant rate during the transient simulation.

A second, longer-term simulation was run with the local submodel to evaluate the impact of pumping to replace evaporative and leakage losses from the reservoirs during the Project's operating life. For this scenario, pumping at 560 afy (or approximately 350 gpm), as specified in the Final License Application, was assumed to occur from the northernmost well, spanning a period of 100 years. This scenario assumed an ambient baseline potentiometric surface (e.g., unpumped) as an initial condition.

Finally, a separate simulation was run to evaluate potential inflow into Project infrastructure including tunneling.

Modeling Results

Initial Fill/Ongoing Makeup Water Pumping Modeling Scenario:

Local submodel results for the initial 18-month reservoir-filling scenario are summarized on Figures 8 through 12. Drawdown in groundwater head with respect to the initial (un-pumped) head distribution in the model (converted to a positive quantity for presentation) is shown on Figure 8, showing simulated head changes of more than 2 feet extending as far as approximately 4 miles, or over an area of more than roughly 28,000 acres in central Steptoe Valley, and a reduction of underflow northward. The impacts

of other pumping sources should not appreciably influence these simulated drawdowns as presented, so long as that additional pumping is not altered in response to reservoir filling or maintenance operations.

Water budget components within the 2-foot drawdown contour, expressed as volumetric fluxes via MODFLOW's ZoneBudget post-processor, are presented on Figure 9. These results show that the majority of pumped water during the reservoir filling stage is ultimately provided by dewatering of the unconfined portion of the aquifer (reduced groundwater levels) and a change in groundwater underflow through the area. Some uncertainty is associated with the specific yield value, as the storage properties assigned to the regional model were not calibrated to local data. For example, the impact to simulated drawdown contours after 18 months of reservoir-filling pumping under a lower assumed value of Sy = 0.74 is shown on Figure 10, showing a minor lateral extension of the area encompassed by the 2-foot drawdown. Added uncertainties include whether to extend higher specific yield values to greater depths (i.e., to additional model layers) or whether specific storage values assigned to greater depths should reflect typical bedrock values (i.e., the regional model default assumption) or unconsolidated fill material. Such uncertainties cannot be easily resolved without additional site-specific geological information.

The change in underflow stemming from pumping is indicated by local perturbations in the groundwater flux vector field (through Layer 2) as shown on Figure 11 for the baseline specific storage value of 0.11. The directional impacts to groundwater flow resulting from pumping at the end of the 18-month period are primarily to the immediate west of the three pumping wells, with overall regional flow directions from the south to the north through the valley largely unaffected.

Simulated head changes of more than 2 feet after 100 years of reservoir maintenance pumping extend a similar distance as in the transient model at the end of the 18-month pumping period (Figure 12). However, maximum drawdowns near the pumping wells are far larger for the 18-month (reservoir-filling) case than the 100-year (maintenance) case. In either scenario, the distal drawdowns of a few feet could entail significant impacts to springs (and associated infrastructure), and existing rights to spring flow in the area. This is of particular note given the absence of a mitigation plan related to potential WPW Project impacts on springs and existing water-right holders (e.g., well owners). For reference, the location of the McGill well is shown on both sets of contour maps.

As described in the water budget discussion presented earlier in this memorandum, ultimately for the aquifer to reach a new equilibrium condition under the proposed Project pumping, changes to inflow and outflow components will occur to balance out the new pumping stress. In this case, additional underflow is induced northward from southern Steptoe Valley, and there will likely be an incremental decrease in underflow northward toward Goshute Valley. Additionally, decreases in evapotranspiration and spring discharge to varying extents depending on the ultimate pumping regime can be expected.

Additionally, Project pumping likely would result in changes to the aquifer's transmissivity. The aquifer transmissivity is a function of hydraulic conductivity and the saturated thickness of the aquifer. As noted in the existing conditions section of this memorandum, downward trends in groundwater levels are currently being seen in a large portion of Steptoe Valley, including west and north of the Project area. The drawdowns identified for the Project would be additive to these existing trends. Roux did not conduct a review of the well construction details of the agricultural wells associated with the pivot systems present in the area. However, as groundwater levels decrease, the saturated thickness decreases, and thus over time transmissivity decreases. Therefore, greater drawdown and/or decreased well yields could be observed, particularly in the pivot areas around the community of McGill.

Finally, as described earlier, when a substantial stress is placed on an aquifer system such as this, once pumping ceases, although recovery will immediately begin to occur in the well field, the more distal portions of the cone of depression may continue to expand and deepen for many years after pumping

ceases. In some cases, this can occur for hundreds of years. As part of this review, Roux did not test this due to the uncertainty with what post-WPW Project pumping may look like during decommissioning. However, that should be analyzed as part of more in-depth WPW Project impact analyses.

Project Tunnel Construction Dewatering Modeling Scenario:

As an added evaluation, the potential release of water during Project construction into the proposed horizontal conduit beneath the upper reservoir, which will transmit water to the lower reservoir, was evaluated by imposing a drain condition along the trace of the tunnel through the local submodel, specifically within the locally refined grid to the east of the pumping wells. MODFLOW's drain package was applied along both a horizontal shaft (i.e., tailrace tunnel) extending between the lower and upper reservoirs (at the approximate elevation of the lower reservoir) and along a vertical shaft (i.e., headrace tunnel) extending from the upper reservoir – at approximately the reservoir elevation – down to the elevation of the horizontal shaft. Drain conductances along both shafts were assigned based on the hydraulic conductivity of the local geologic material, the proposed tunnel widths, and the local model grid cell geometry. Drainage of groundwater into the conduit(s) was modeled as a transient process, occurring over 18 months. Model results show a maximum total release rate of groundwater into the tunnel system, in areas where the conduit is below the water table, of approximately 130 gpm. While this flux of water is probably easily manageable as an engineering consideration during construction of the energy storage system, it nonetheless is an un-permitted extraction of a local water resource. This potential groundwater discharge, which does not appear to have been considered in this Project, could affect groundwater elevations beneath the Duck Creek Range, and springs present on the upper eastern slopes of the Duck Creek Range. Additionally, the disposition of any tunnel dewatering water is not considered, and that groundwater which would otherwise move directly toward the basin-fill below and to the west of the tunnel may be diverted elsewhere affecting local groundwater conditions.

Uncertainty

For the purpose of Roux's analysis and in the context of future impact analyses for the WPW Project, it must be recognized that a number of uncertainties exist including:

- The estimates described above could underestimate the amount and extent of drawdown as the transmissivity (the measure of the ability of the aquifer to yield water) of the basin-fill aquifer is simulated to not decrease over time even though the parameter is dependent on the saturated thickness of the aquifer (Brooks, 2017) and the fact that groundwater recharge could be overestimated;
- Uncertainties in interbasinal groundwater movement and how that affect the groundwater budget for Steptoe Valley;
- Absence of hydraulic testing in the largely undeveloped Duck Creek Range where substantial infrastructure including tunneling may have unforeseen impacts, particularly based on the disposition of the water derived;
- Storage properties are considered uncalibrated outside of Parowan Valley, Utah (Brooks, 2017);
- Faults not simulated could act as barriers or conduits to groundwater flow providing greater uncertainty to model results;
- Over-generalizing the areas with similar hydraulic characteristics in the models resulting from limited data may affect the model simulations;
- Uncertainties associated with the GBCAAS, particularly where data are lacking on which to base calibration in certain areas;
- Uncertainties associated with interbasinal flow are dependent on numerous factors, many of which are not measurable in a manner to incorporate spacial variability of earth materials; and,

- Uncertainties associated with water losses from project infrastructure.

Given the numerous uncertainties associated with the modeling of impacts, significant site-specific information should be obtained and additional numerical modeling incorporating that data should be performed in order to rigorously evaluate the Project's potential impacts. Additionally, Project impacts should be evaluated conservatively, or in other words, any approval of the application and/or related plan for monitoring and mitigation of impacts must consider that impacts could be greater than anticipated.

Conclusions

Based on the results of the analyses, the key takeaways from this modeling evaluation are summarized in this section. Due to the differences between the generalized analytical approach for estimating drawdown in the Final License Application analyses (WPW, 2023) and Roux's more granular numerical approach using the GBCAAS model, substantial differences in the effects of Project pumping are observed. The more rigorous three-dimensional techniques using the U.S. Geological Survey-developed GBCAAS model that takes into account geological variability over the Project area indicates that: (1) anticipated impacts to the Steptoe Valley groundwater system, and springs in particular, are greater than presented in the Final License Application; and (2) evaluating Project impacts is sensitive to aspects of the groundwater system not replicated in the analytical modeling in the Final License Application. The drawdown predicted in the scenarios presented in this memorandum will be additive to existing groundwater level declines that have been noted in the area.

Initial Fill/Ongoing Makeup Water Pumping Modeling Scenario:

Based on the Project description, the effects after 18-months of the startup pumping (3,000 gpm combined from the three wells) are provided below:

- Approximately 2 to 3 feet of head loss will be observed at several springs along the eastern edge of the Egan Range including Lackawanna Spring (owned by City of Ely), springs at Hercules Gap (owned by City of Ely), Goat Spring, and another unnamed spring.
- Due to uncertainties around the hydrology of rangefront faulting along the western base of the Duck Creek Range not well defined in the model, McGill Spring may also be affected by the Project pumping.
- Approximately 20 feet of drawdown would be observed over an area of approximately 840 acres in the area of the pumping wells with drawdown in excess of 100 feet at the project wells.
- More than 2 feet of drawdown would be observed over a 28,000-acre area (beyond that, or in addition to that, occurring from existing pumping) and would be anticipated at the McGill Well.
- Drawdown in the irrigation pivot area south of McGill Well would range from 2 to 8 feet.

Continued pumping for makeup water at a lesser pumping rate would lessen the depth of the cone of depression in the area of the pumping wells, but the more distant extent of the cone of depression would be similar to the initial 18-month period (Figure 13). This is because the lessened pumping rate is offset by greater longevity of the makeup water pumping.

As shown on Figure 14, a substantial number of domestic, agricultural, and/or other wells are within the footprint of the cone of depression anticipated to be caused by the initial infill period. Roux did not conduct an exhaustive review of the implications of predicted drawdowns and related well construction and current groundwater level data (if available). However, as noted in this memorandum, groundwater levels in the

area have been noted to be declining in this part of Steptoe Valley, and the predicted simulation drawdowns would be additive to existing drawdown conditions.

Project Tunnel Construction Dewatering Modeling Scenario:

Roux simulated groundwater discharge that would occur as a result of tunneling under the Duck Creek Range and observed the following:

- Approximately 130 gpm of discharge can be anticipated from the combined horizontal and vertical tunneling that would occur as part of the Project construction as water table conditions are encountered beneath the Duck Creek Range; and
- The 130 gpm of dewatering from the tunneling is currently without a permit.

The effects of the cessation of recharge operations resulting from Ruth Mine dewatering (west of Ely) cannot be reliably simulated using the USGS GBCAAS Model. The results presented herein differ substantially from those presented by WPW in their licensing documentation. This is the result of a more rigorous tool used by Roux (using a USGS-developed numerical model) than the tool relied on by Piteau (2023) (who used a desktop analytical model). The analytical model used by Piteau contains a combination of broad assumptions and unrealistic parameters in the analytical model. Additionally, it appears that the well-interference that would occur between production wells (superposition) is not represented.

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Figures

Figure 1 – Site Location Map

Figure 2 – White Pine Water Project Site Plan

Figure 3 – Spring Locations

Figure 4 – Ragsdale, Goat and Lackawanna Springs

Figure 5 – Local Submodel

Figure 6 – Local Grid Refinement

Figure 7 – Interpolated Groundwater Heads

Figure 8 – Interpolated Hydraulic Conductivity Distribution

Figure 9 – Drawdown, Initial Fill Period

Figure 10 – Water Budget Component Fluxes, Initial Fill Period

Figure 11 – Drawdown, 18-month Initial Fill Period, Specific Yield 0.074

Figure 12 – Groundwater Flux Vectors – Initial Fill Period

Figure 13 – Drawdown at End of Maintenance Pumping

Figure 14 – Drawdown and Existing Wells, 18-month Initial Fill Period

Tables

Table 1 – Springs, Water Rights and Simulated Drawdown

Attachments

Attachment 1 – White Pine County Natural Resources Advisory Committee Presentation

Attachment 2 – Water Rights Documentation for Springs

Attachment 3 – Project Water Rights Documentation

Figure 1
WPW Project Location

Date: 3/13/2024
Project: GBWN Steptoe
Image Source: USGS

ROUX

Figure 2

Locations of proposed energy storage reservoirs and associated pumping well locations

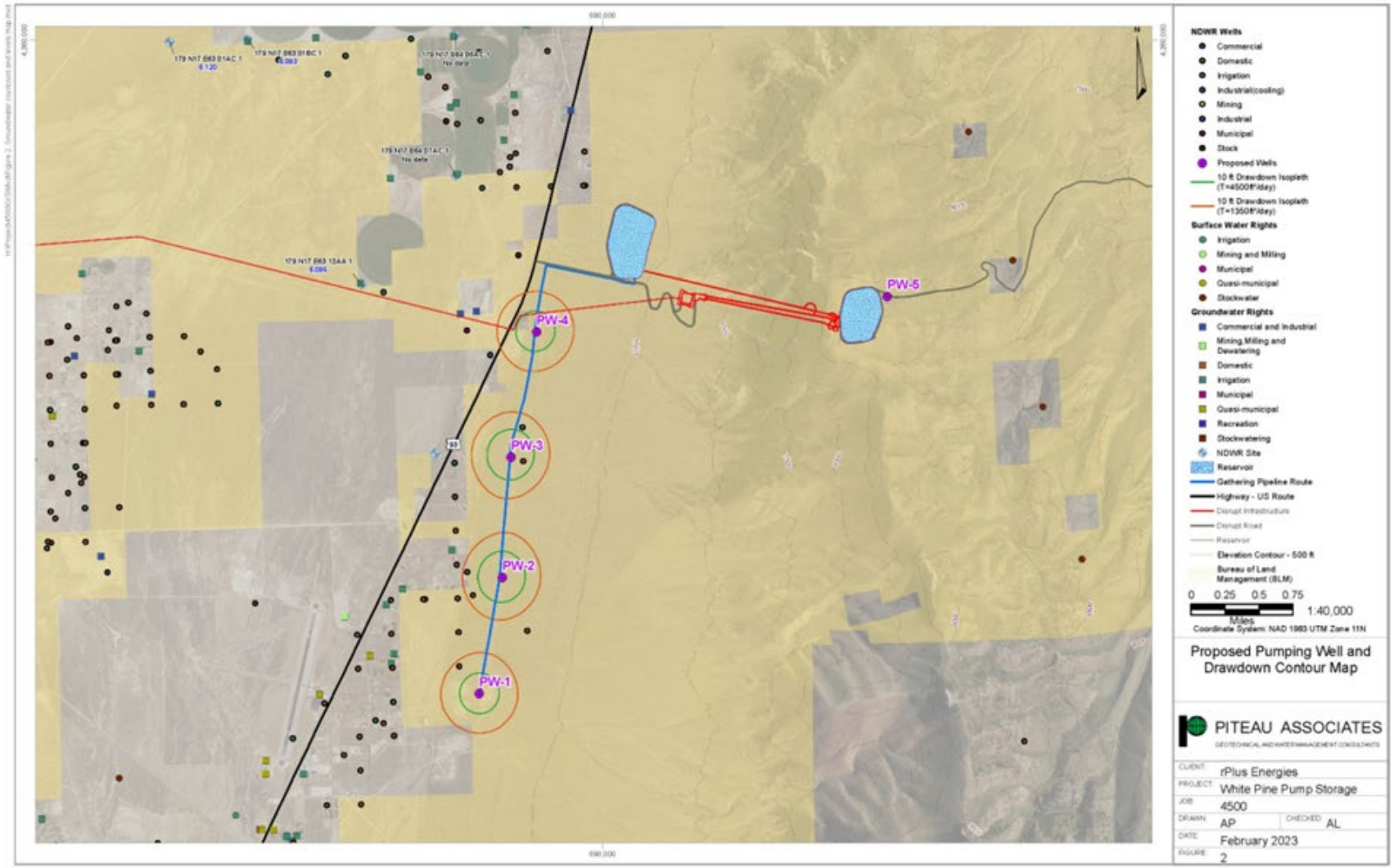


Figure 3.4-2. Proposed Pumping Well and Drawdown Contour Map

N

Date: 3/13/24
Project: GBWN - Steptoe
Image Source: WPW, 2023

ROUX

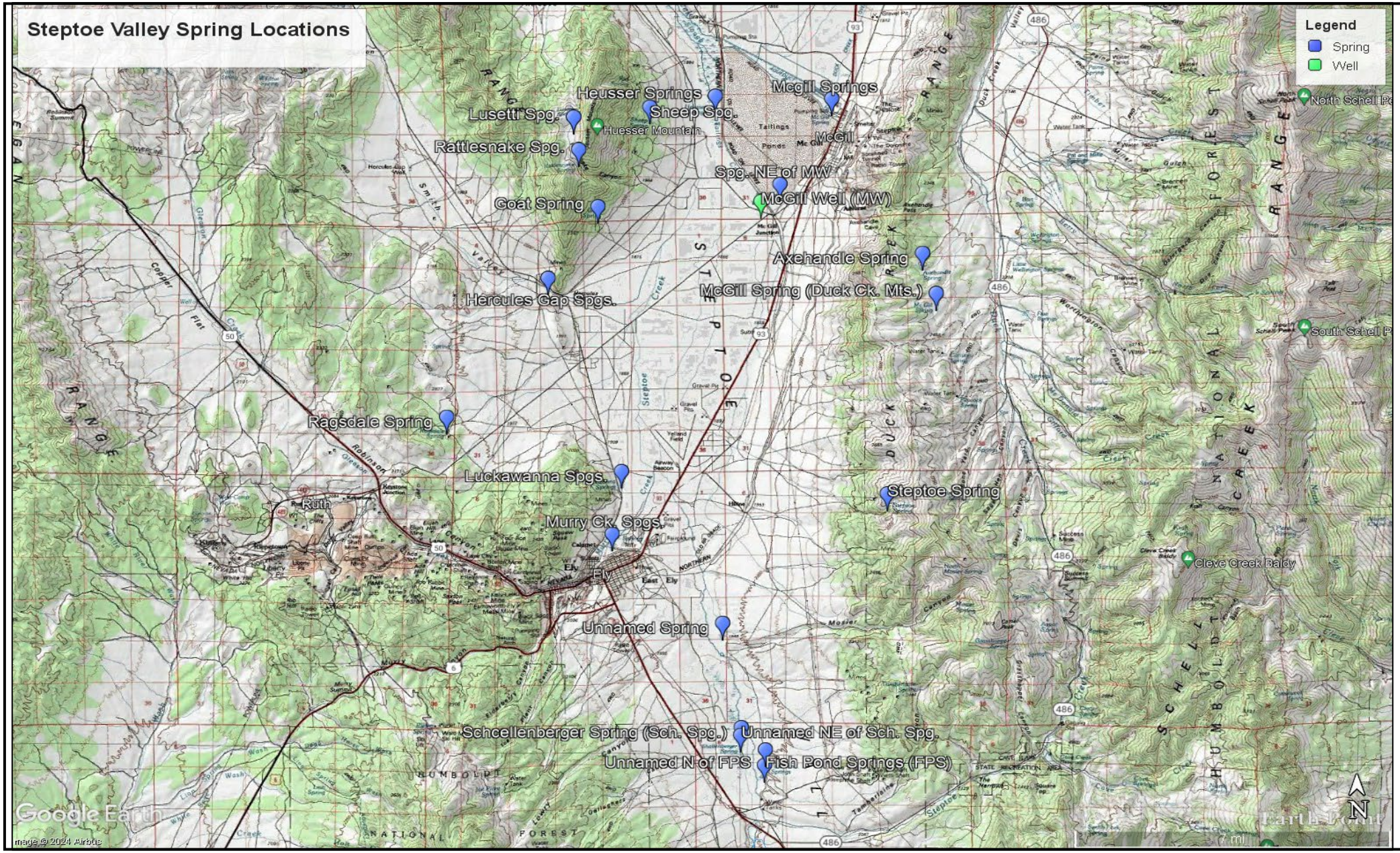


Figure 3
Spring Locations

Date: 3/13/2024
Project: GBWN Steptoe
Image Source: USGS

ROUX

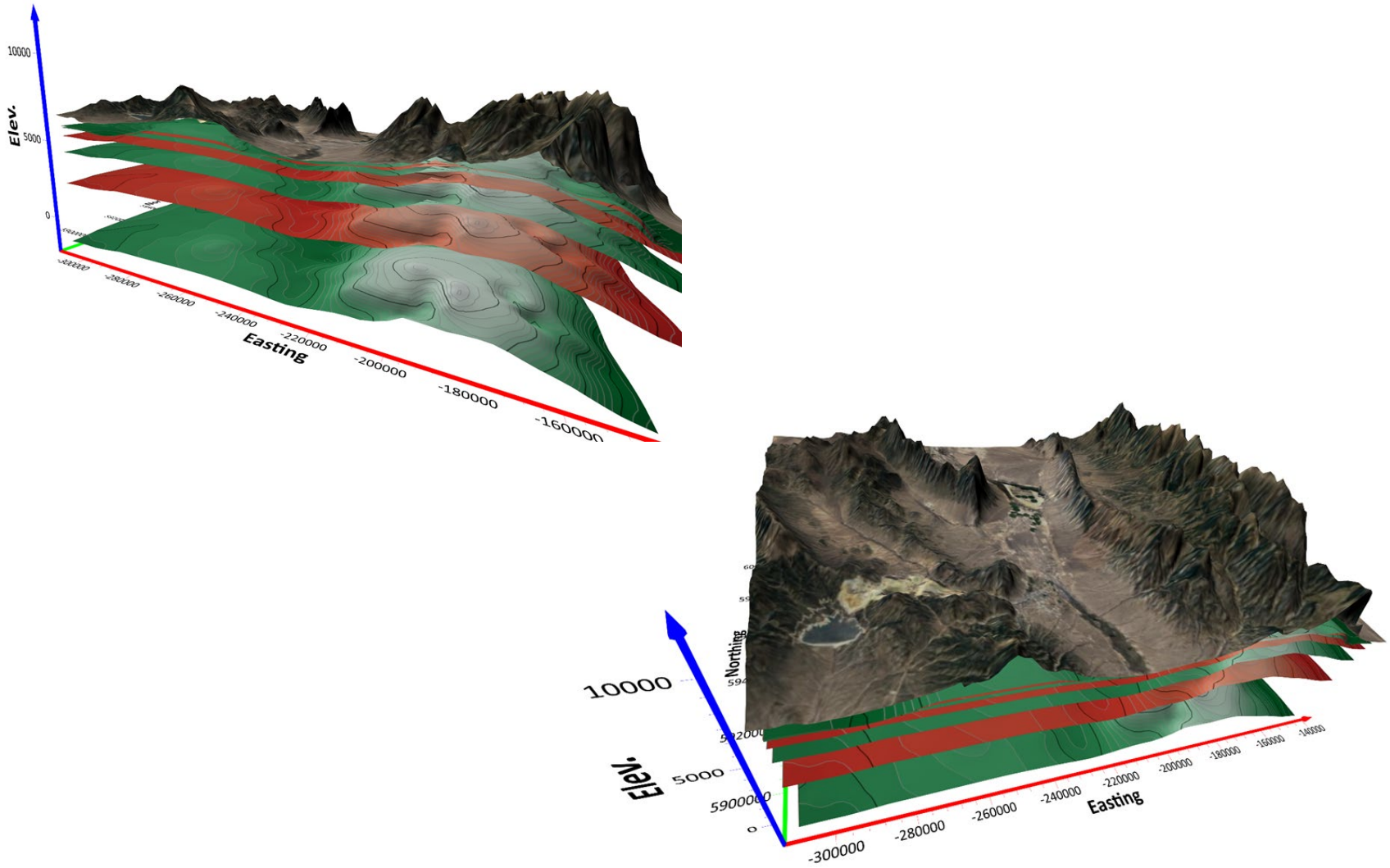


Figure 4

Local submodel, including model layers and terrain.

(Ground surface elevations extracted from the National Map, https://www.usgs.gov/programs/national-geospatial-program/national-map.)

Date: March 13, 2024
Project: GBWN Steptoe

ROUX

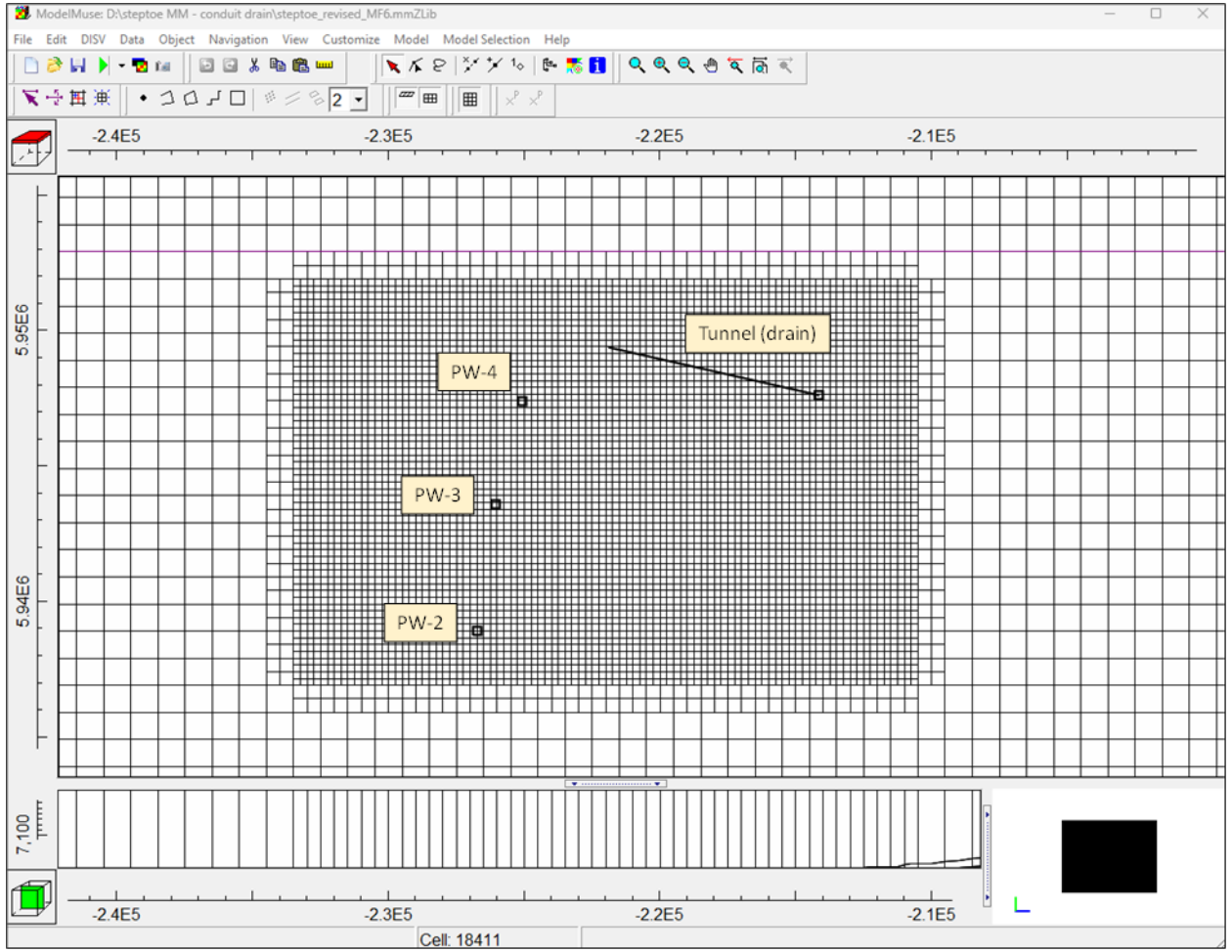


Figure 5

Local grid refinement in MODFLOW-6 in the local submodel in the vicinity of the proposed pumping wells and storage reservoirs

Date: March 13, 2024
Project: GBWN Steptoe

ROUX

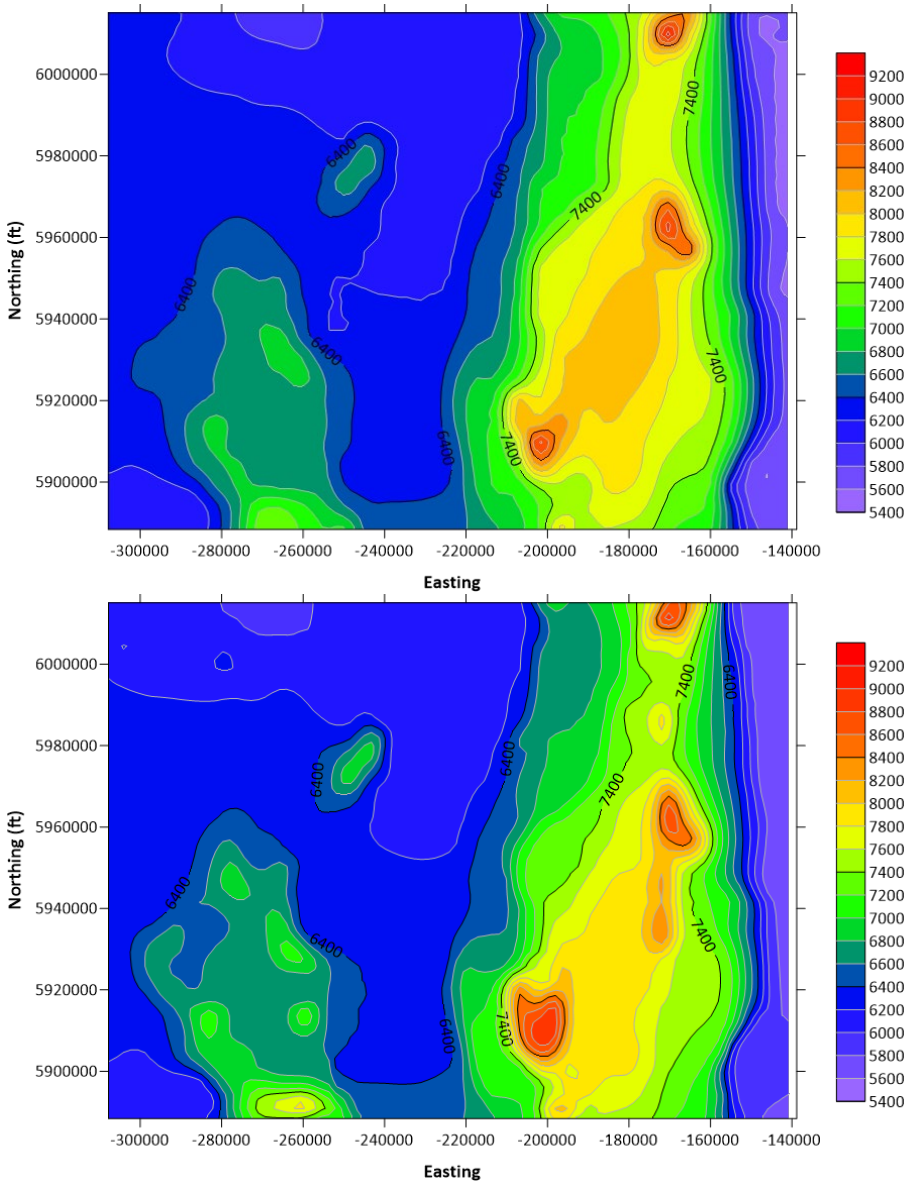


Figure 6

Interpolated groundwater heads (feet above Mean Sea Level) in the top layer of the regional model at the end of the calibration phase (top) and the local submodel after initial steady-state equilibration to recharge and local boundary conditions (bottom

Date: March 13, 2024
Project: GBWN Steptoe

ROUX

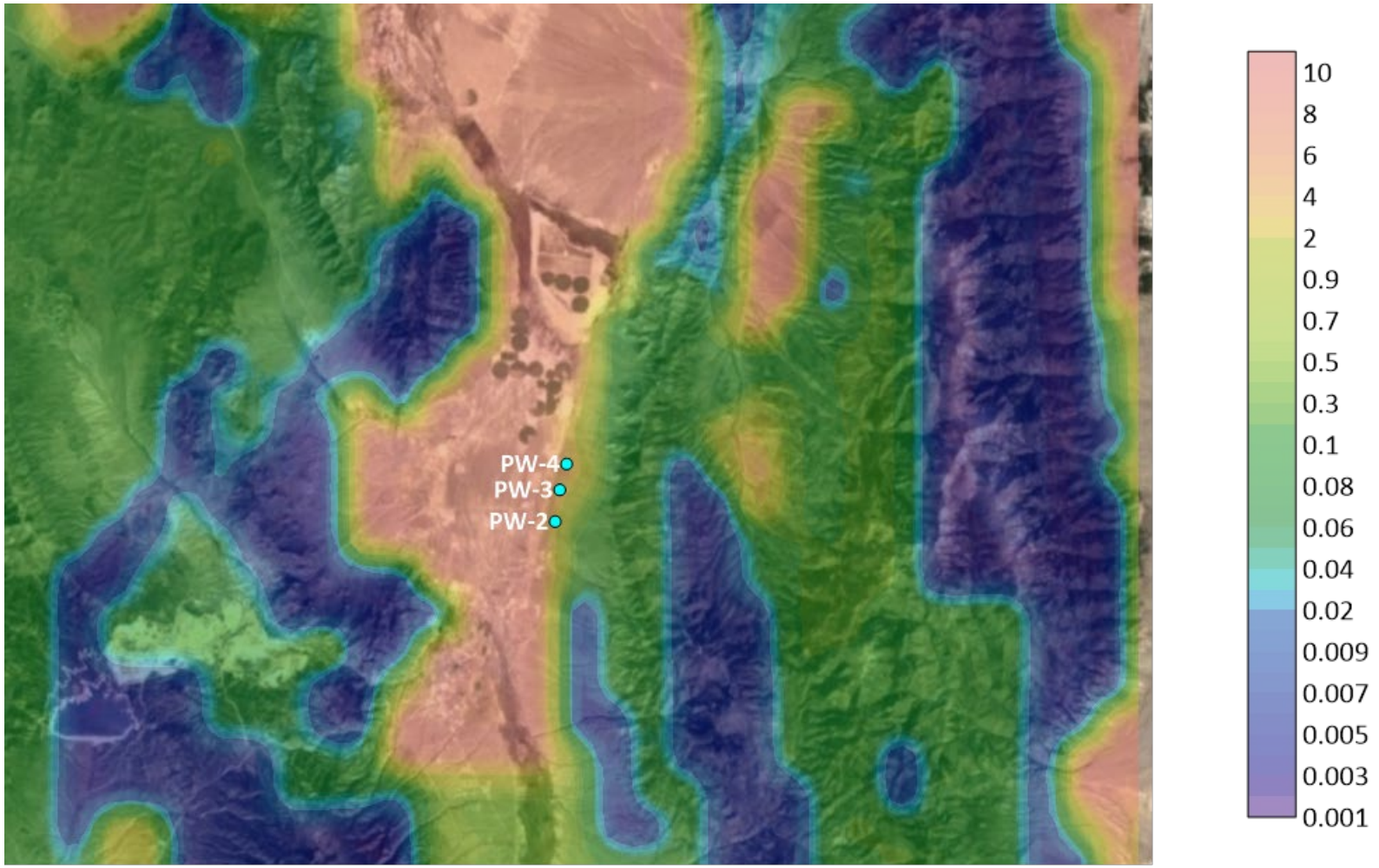


Figure 7

Interpolated hydraulic conductivity distribution (ft/day) in Layer 3 of the local submodel, with the proposed pumping well locations indicated

Date: March 13, 2024
Project: GBWN Steptoe

ROUX

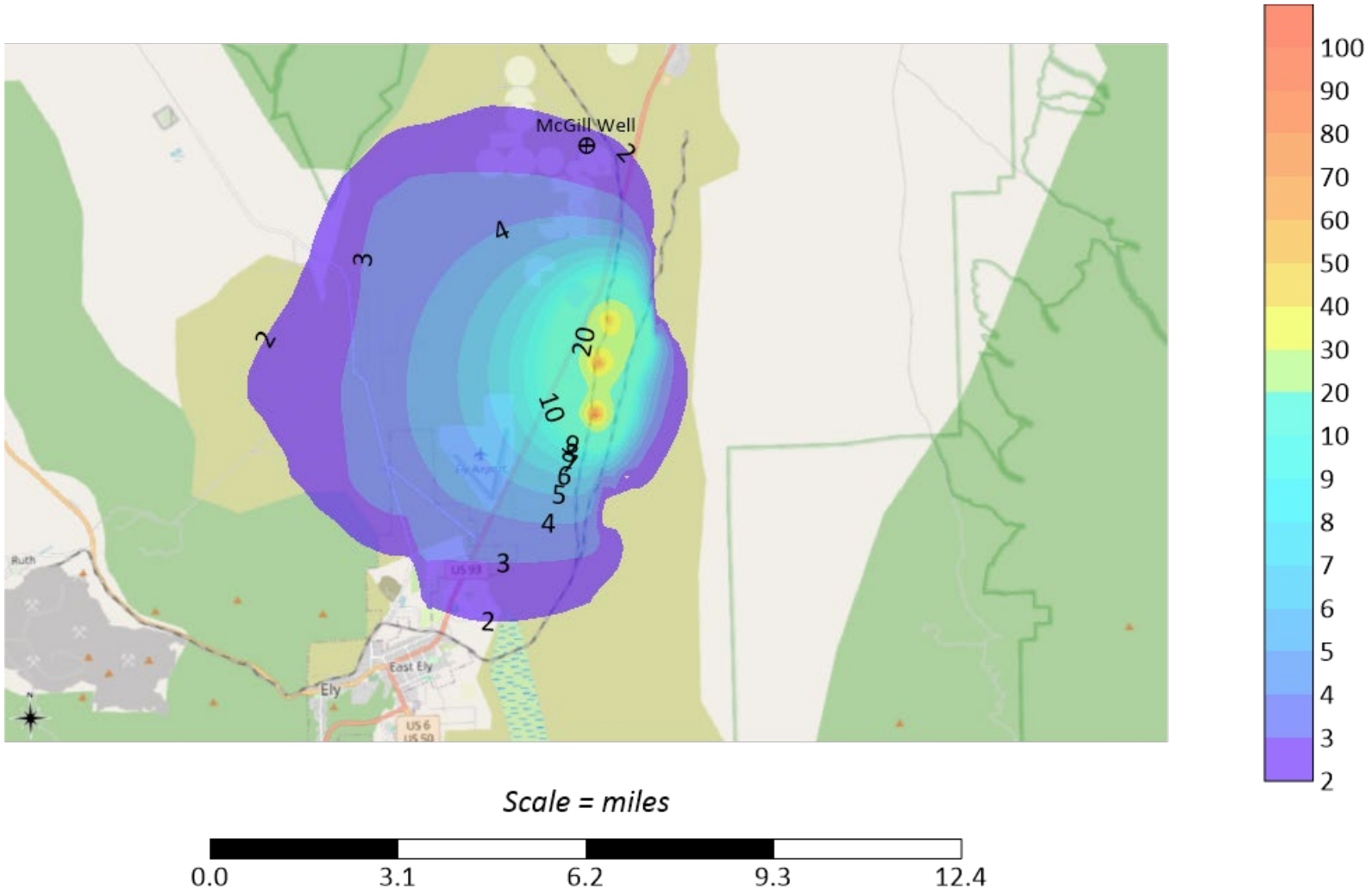


Figure 8

Simulated time-dependent changes in groundwater heads (Layer 2; in feet) after 18 months of pumping three wells at 1,000 GPM each

Date: March 13, 2024
Project: GBWN Steptoe

ROUX

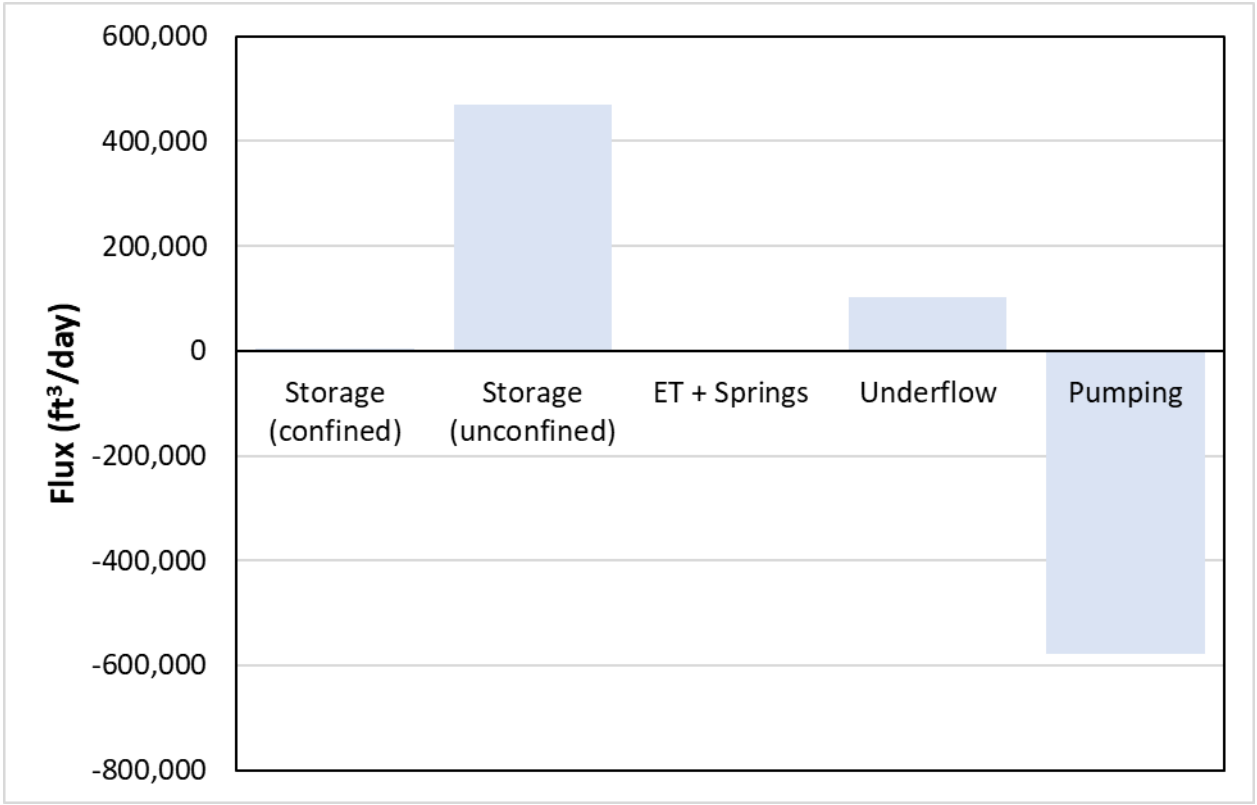
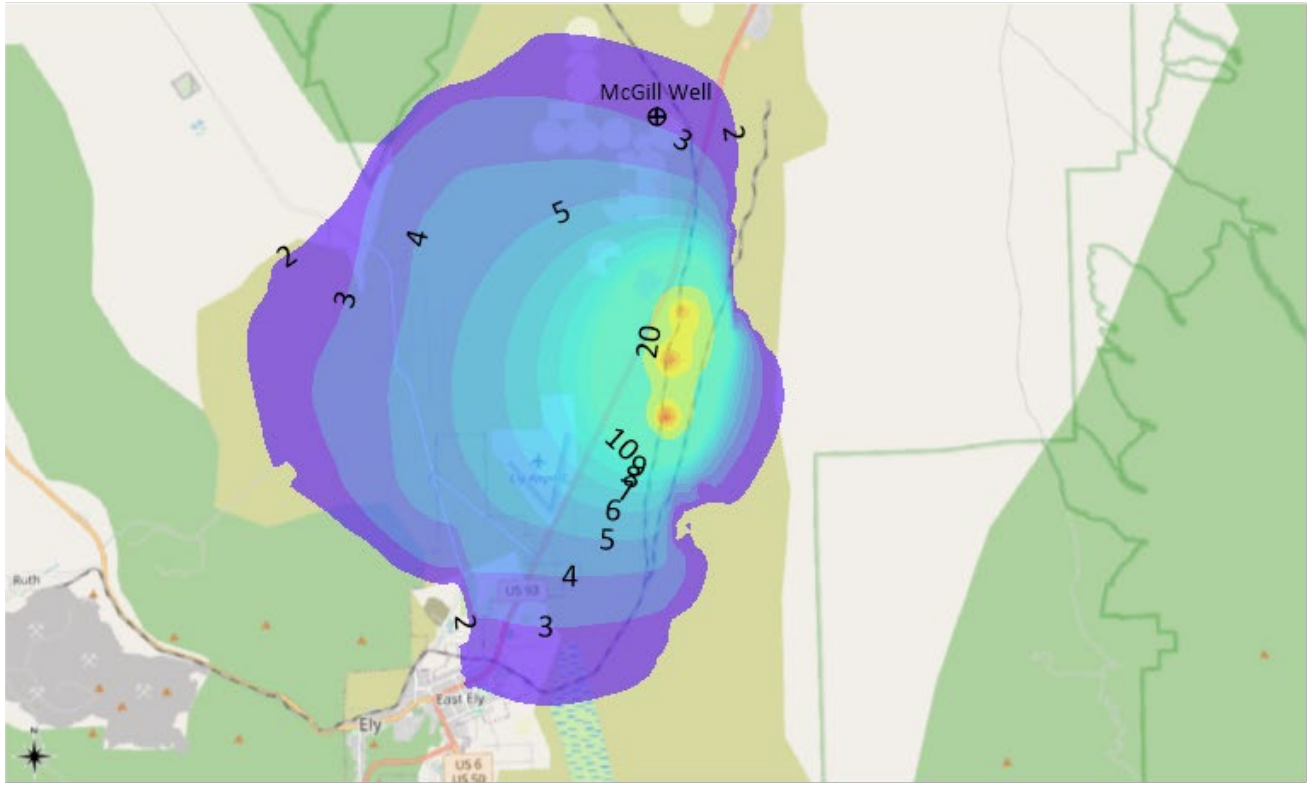


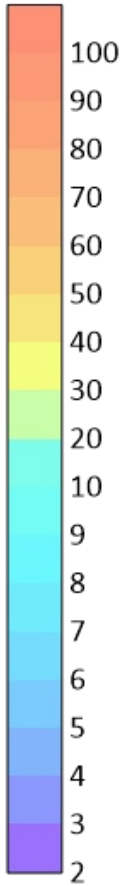
Figure 9

Water budget component fluxes at the end of 18 months of pumping at 3,000 GPM, integrated within the 2-foot drawdown contour

Date: March 13, 2024
Project: GBWN Steptoe

ROUX





Scale = miles

0.0 3.1 6.2 9.3 12.4

Figure 10

Simulated time-dependent changes in groundwater heads (Layer 2; in feet) after 18 months of pumping three wells at 1,000 GPM each, with specific yield in Layer 1 set to 0.074.

Date: March 13, 2024
Project: GBWN Steptoe

ROUX

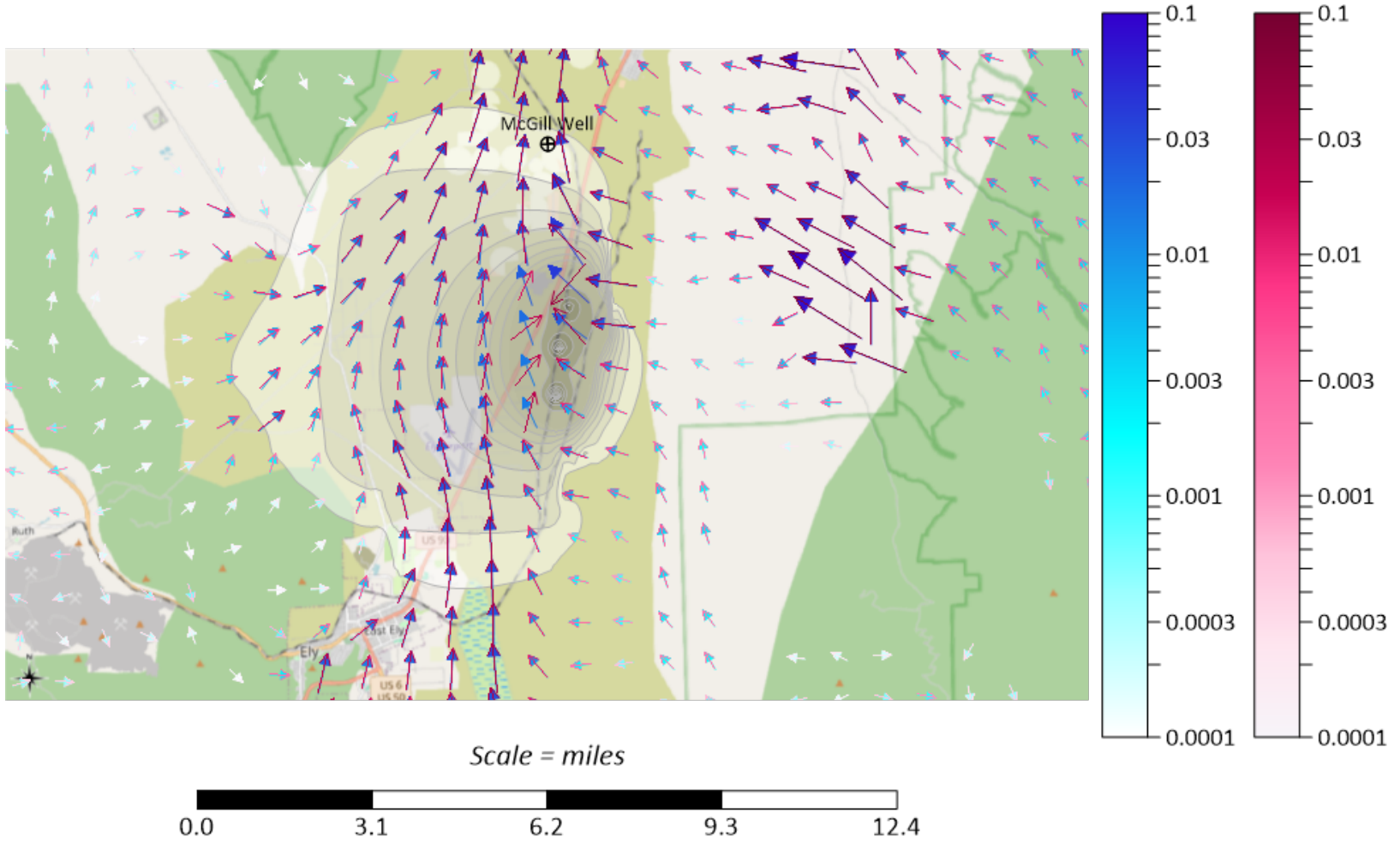
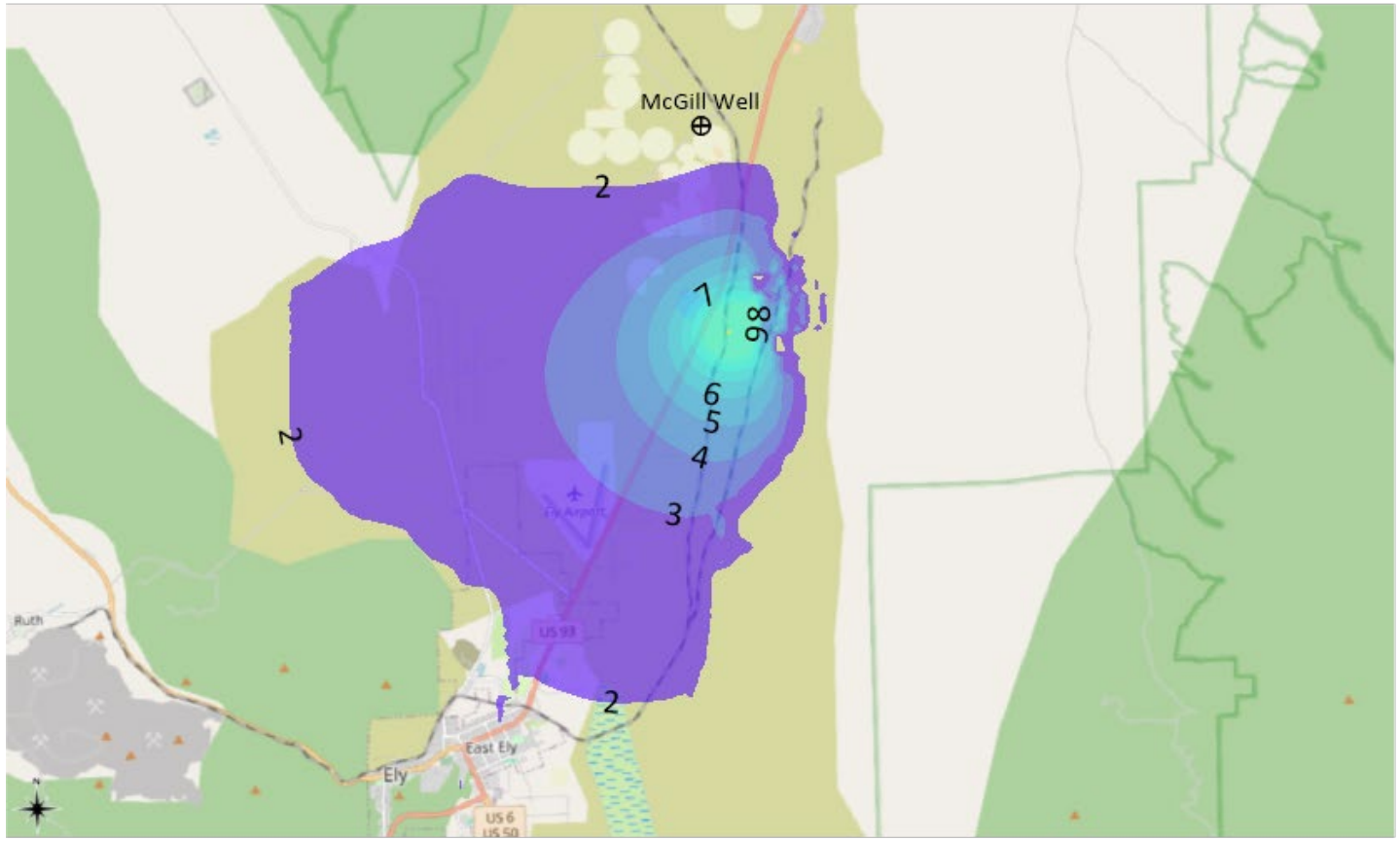


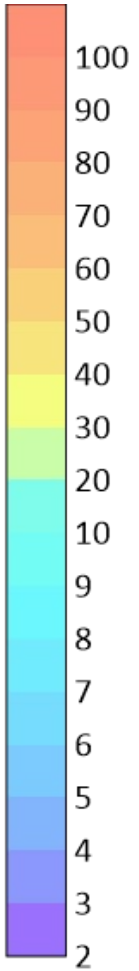
Figure 11

Groundwater flux vector field (ft3/day) through Layer 2, with baseline (pre-pumping) conditions shown in blue and pumping conditions (three wells operating at 1,000 GPM each for 18 months) shown in pink

Date: March 13, 2024
Project: GBWN Steptoe

ROUX





Scale = miles

0.0 3.1 6.2 9.3 12.4

Figure 12

Simulated changes in groundwater heads (Layer 1; in feet)) after 100 years of pumping from a single well at approximately 350 GPM to replace storage reservoir losses stemming from evaporation and leakage

Date: March 13, 2024
Project: GBWN Steptoe

ROUX

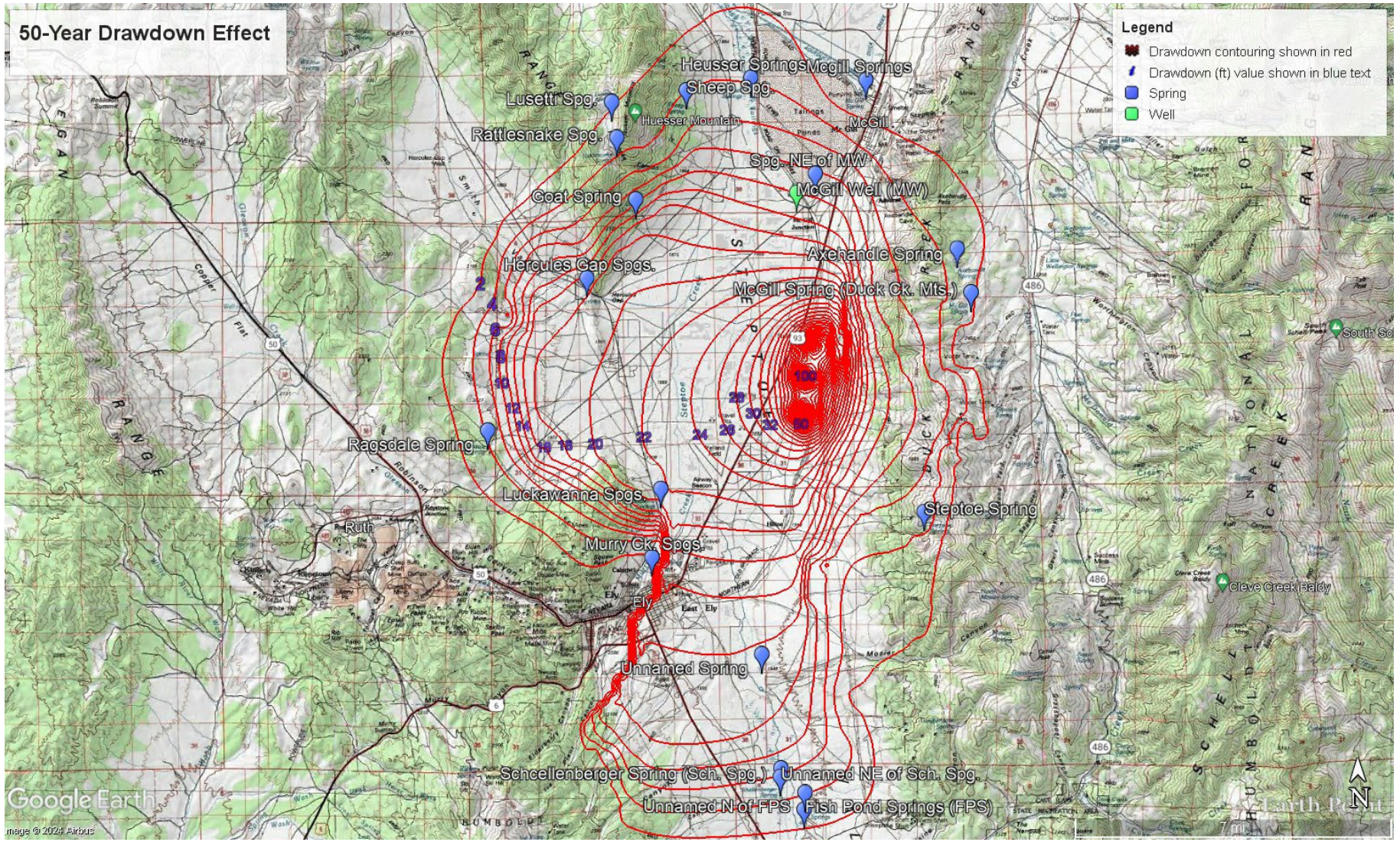


Figure 13

Simulated changes in groundwater heads (Layer 1; in feet)) after 50 years of pumping at 3000 GPM to maintain water duty in permits

Date: March 13, 2024
Project: GBWN Steptoe

ROUX

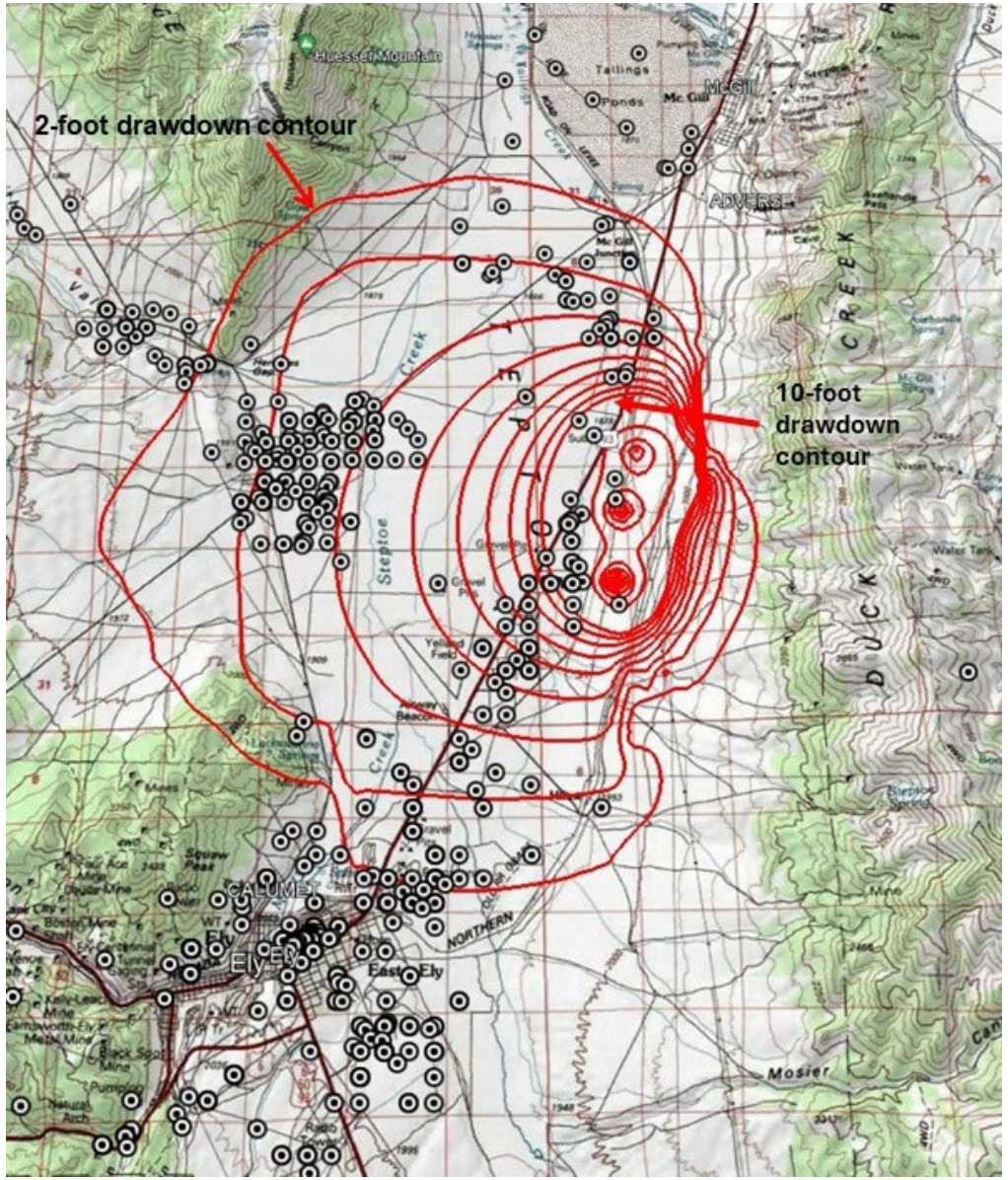


Figure 14

Initial Fill Drawdown and Existing Wells

Date: July 8, 2024
Project: GBWN Steptoe

ROUX

Table 1 -
Steptoe Valley Springs
Nevada, U.S.

Spring/Well Name	Latitude	Longitude	Elevation (ft)	Water Right Permit #[1]	Water Right Certificate #[1]	Water Right Permit/Certificate Owner	Drawdown (ft) Full Pumping 3000 gpm - 18 months	Drawdown Maintenance Pumping (ft) - 98.5 years after end of full pumping
Fish Pond Springs (FPS)	39.18625	-114.80861	6492	--	--	--	<2	<2
Unnamed N of FPS	39.18085	-114.80905	6505	--	--	--	<2	<2
Schcellenberger Spring (Sch. Sp.)	39.19134	-114.81859	6480	--	--	--	<2	<2
Unnamed NE of Sch. Sp.	39.19399	-114.81832	6473	--	--	--	<2	<2
Unnamed Spring	39.23029	-114.82557	6394	--	--	--	<2	<2
Murry Ck. Spgs.	39.26148	-114.87011	6354	338	1085c	ELY MUNICIPAL WATER DEPARTMENT	<2	<2
Luckawanna Spgs.	39.28319	-114.86616	6291	20812 & 20813	6261c & 6288c	ELY MUNICIPAL WATER DEPARTMENT	4	<2
Steptoe Spring	39.27517	-114.75927	7924	--	--	--	<2	<2
Ragsdale Spring	39.30239	-114.93669	6697	--	--	--	<2	<2
Hercules Gap Spgs.	39.35049	-114.89551	6261	15011	V02273 & '6168c	ELY MUNICIPAL WATER DEPT. & ROMEO, ALBERT	2	2
McGill Spring (Duck Ck. Mts.)	39.34392	-114.73903	7963	4992	0904c	JOHN UHALDE & CO.	<2	<2
Axehandle Spring	39.35781	-114.74426	7750	4994	0906c	JOHN UHALDE & CO.	<2	<2
McGill Well (MW)	39.37695	-114.80878	6113	--	57183	MCGILL-RUTH CONSOLIDATED SEWER & WATER G.I.D.	<2	<2
Spg. NE of MW	39.38290	-114.80100	6111	--	--	--	<2	<2
Goat Spring	39.37511	-114.87494	6701	11502	3400c	PESCIO BROTHERS LLC	2	<2
Rattlesnake Spg.	39.39389	-114.88209	8023	11964	3780c	PESCIO BROTHERS LLC	<2	<2
Sheep Spg.	39.40950	-114.85367	6733	18836	5854c	PESCIO BROTHERS LLC	<2	<2
Lusetti Spg.	39.40485	-114.88392	8474	6059	0837c	THELORA SPENDLOVE FAMILY TRUST	<2	<2
Heusser Springs	39.41378	-114.82703	6085	--	--	--	<2	<2
Mcgill Springs	39.41252	-114.77967	6132	42106 & 45563	12177c & 13471c	KENNECOTT NEVADA COPPER COMPANY	2	<2

Notes:

Latitude and longitude shown in WGS84

ft = feet

< = less than

-- = not available

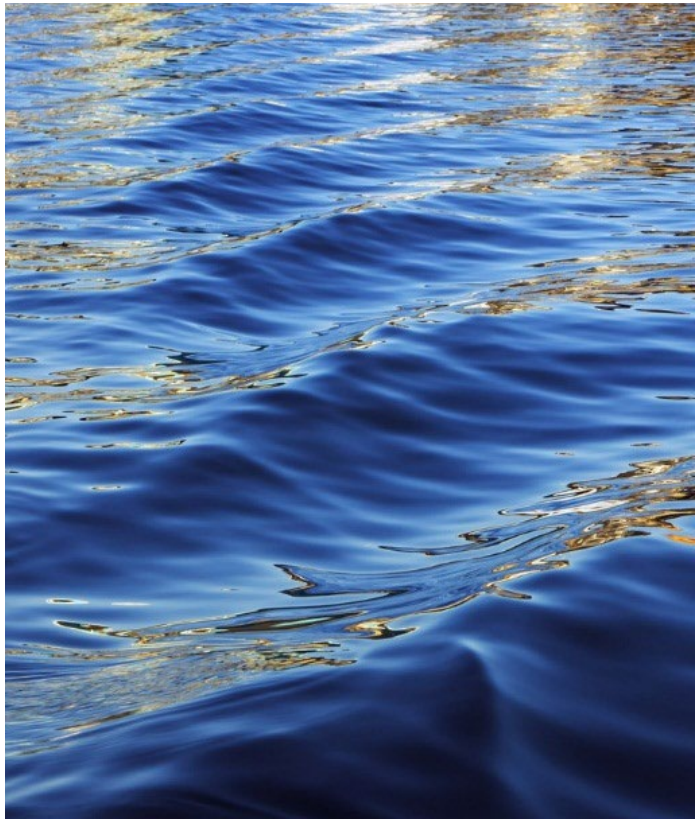
1 = Water right permit and certificate information collected from the State of Nevada Division of Water Resources (https://water.nv.gov/waterrights.aspx)

ATTACHMENT 1

WHITE PINE TECHNICAL ADVISORY COMMITTEE PRESENTATION

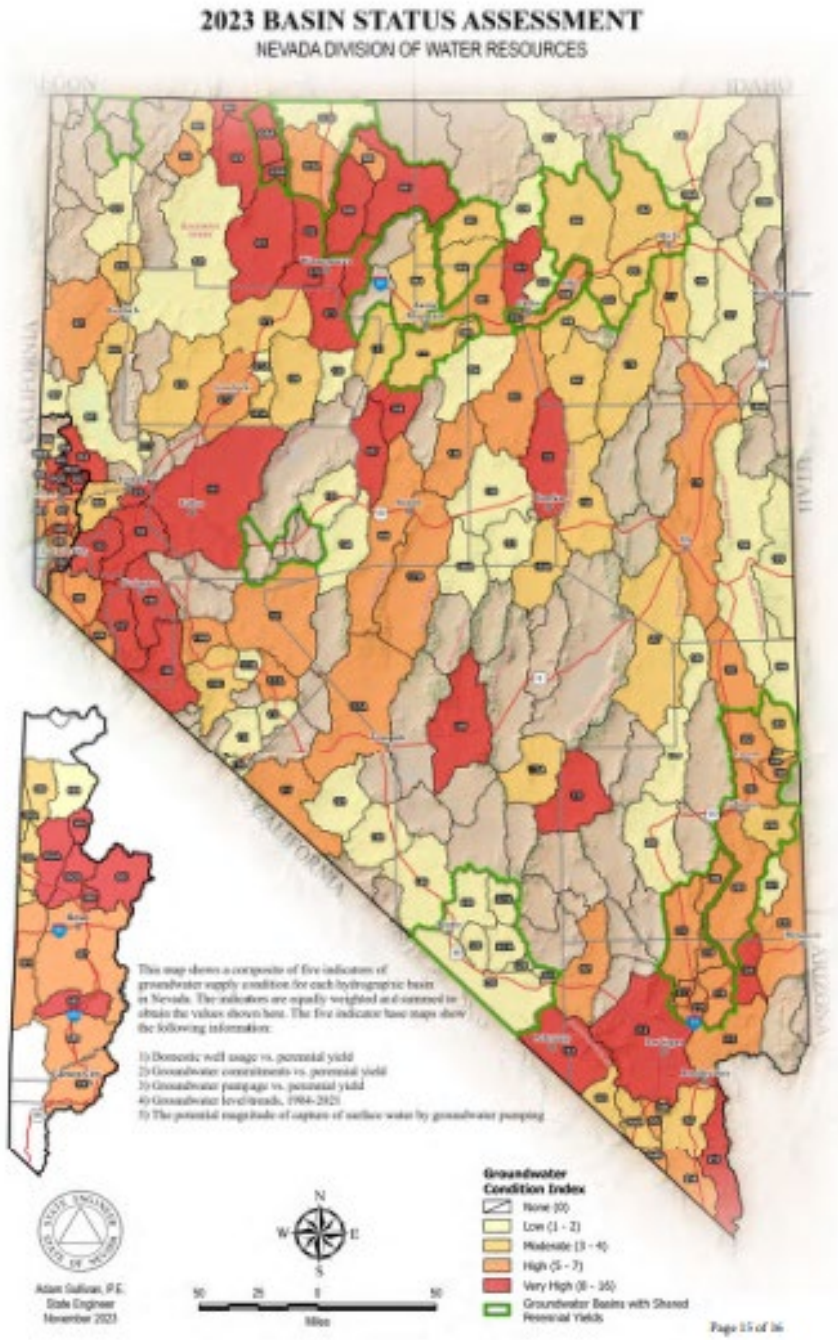
Steptoe Valley Water Resource Update 2024

White Pine County Commission Meeting February 2024



Steptoe Valley Basin 179

- Perennial Yield
- Underground Water Allocations
- Surface Water Allocations
- 2017 Pumping Reports
- Groundwater levels
- Water and Economic Development



Perennial Yield

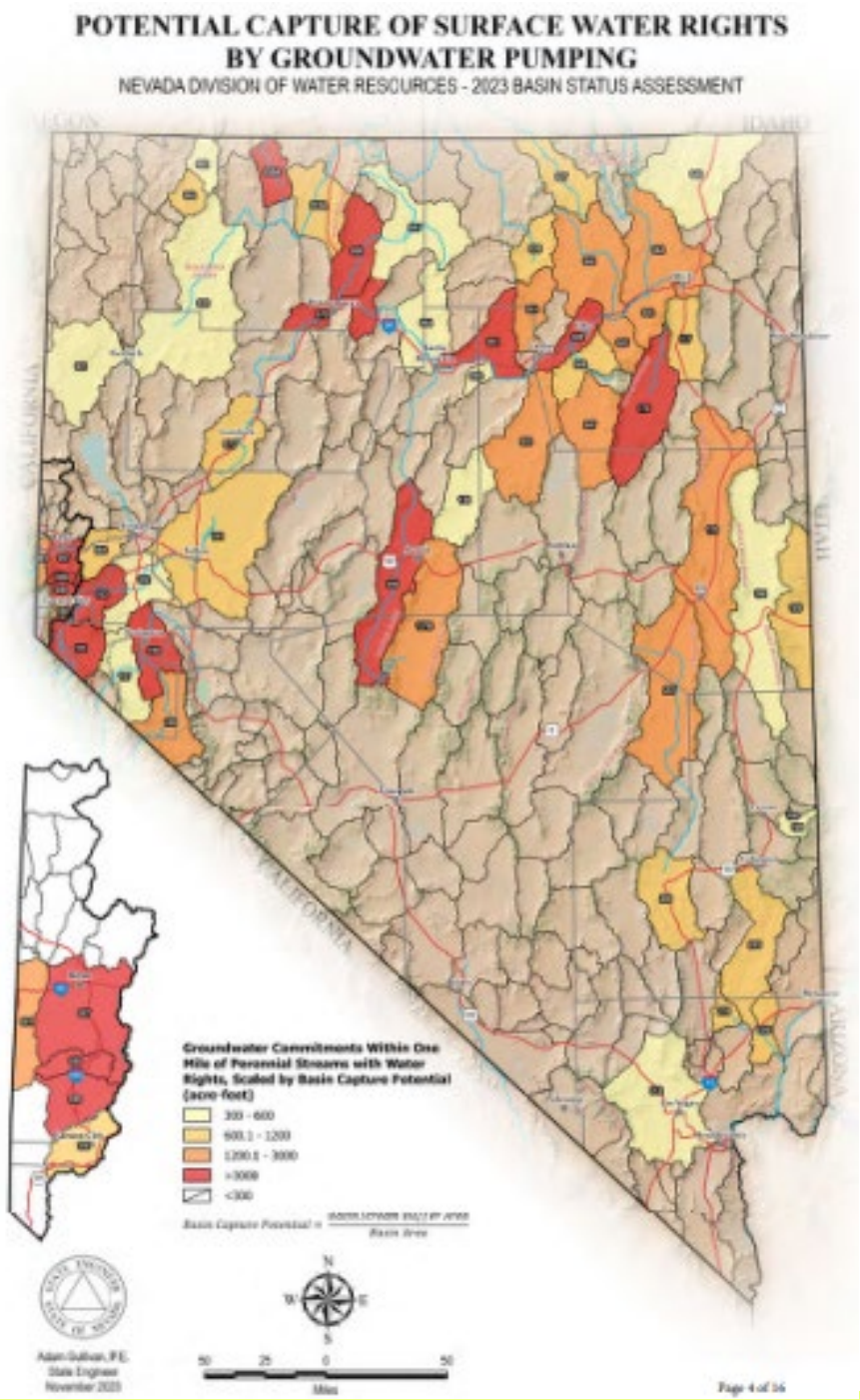
- USGS estimates of perennial yield are necessary to provide the State Engineer with a guideline by which to limit groundwater allocations
- Perennial yield is the amount of usable water from a ground-water aquifer which can be economically withdrawn and consumed each year for an indefinite period of time without depleting the source.
- The perennial yield cannot be more than the natural recharge to a groundwater basin, usually less.
- Water Resource- Reconnaissance Series Report 42. 1967
  - Established 70,000 Acre feet perennial yield for Steptoe Valley

Underground Water Allocations

Manner of Use	Underground	Geothermal	Other Ground Water
Commercial	47.17	0.00	0.00
Construction	0.00	0.00	0.00
Domestic	6.97	0.00	0.00
Environmental	0.00	0.00	0.00
Industrial	25,046.40	0.00	0.00
Irrigation	38,766.22	0.00	704.62
Mining, Milling & Dewatering	42,394.39	0.00	24,612.60
Municipal	11,990.70	0.00	0.00
Power	0.00	0.00	0.00
Quasi-Municipal	1,354.78	0.00	0.00
Recreation	27.98	0.00	0.00
Stockwater	294.85	0.00	0.00
Storage	0.00	0.00	0.00
Wildlife	2.46	0.00	0.00
Other	0.00	0.00	0.00
Totals	119,931.92	0.00	25,317.22

Surface Water Allocations

- 139881.1193 Total acre feet
- Not included in Perennial Yield
- Irrigation 49774.89
- Stock water 976.820204
- Mining and Milling 10710.29518
- Wildlife 21318.16151
- Recreation 2128.81895
- Domestic 2
- Municipal 7246.46947
- Industrial/Power/Other 47723.66396

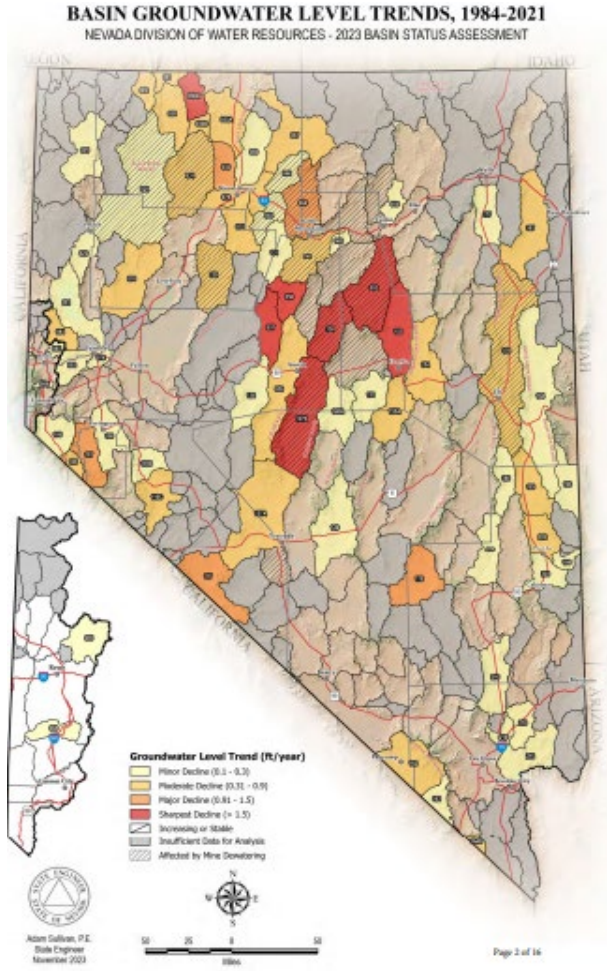


2017 Nevada Groundwater Pumpage Report

- Total estimated groundwater pumped in acre feet in 2017
  - 47,547 Acre Feet

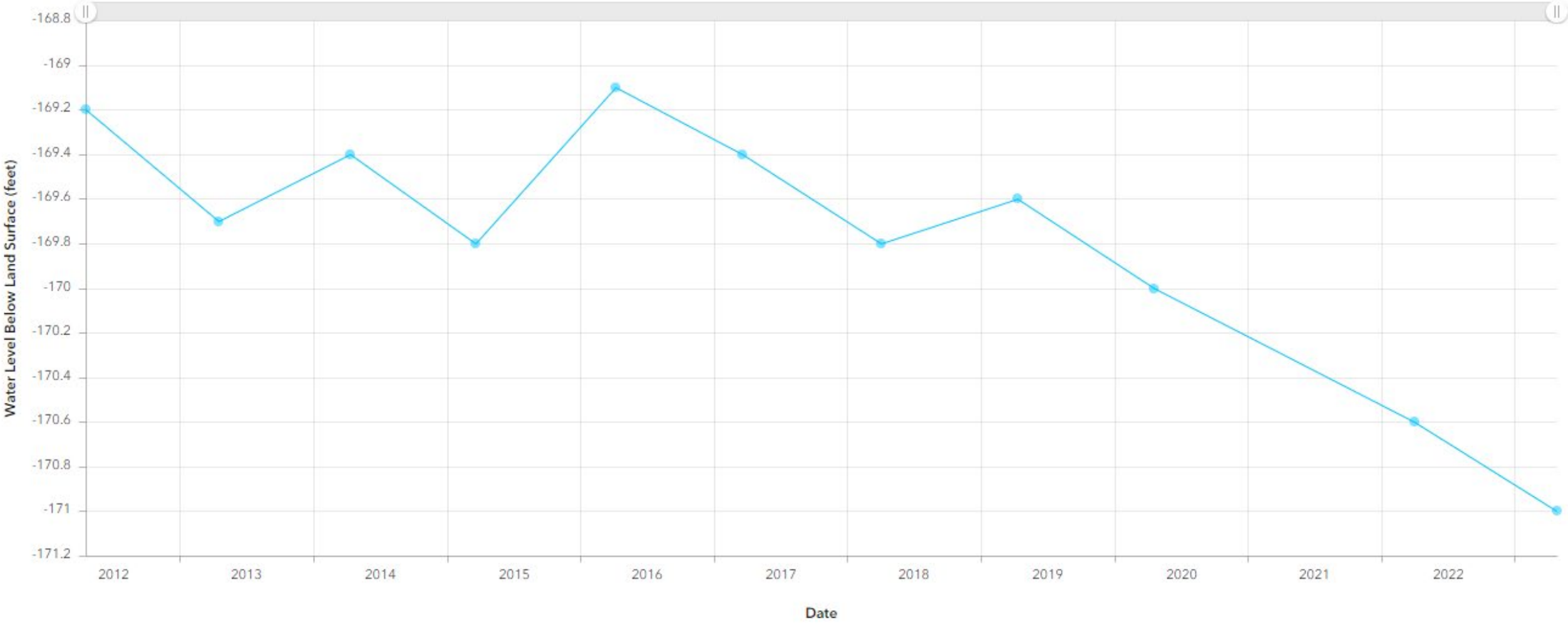
Basin Number	Sub	Basin Name	County	Inventory Type	COM	CON	DOM	ENV	IND	IRR	MM	MUN	OTH	PWR	QM	REC	STK	WLD	Total
175		Long Valley	White Pine		0	0	0	0	0	0	492	0	0	0	0	0	27	0	519
176		Ruby Valley	Elko		4	0	111	0	0	12,943	0	0	0	0	24	0	91	1	13,175
176		Ruby Valley	White Pine		0	0	1	0	0	0	201	0	0	0	0	0	2	0	204
177		Clover Valley	Elko	C	27	0	53	0	0	9,290	0	0	0	0	15	0	31	0	9,416
178	A	Butte Valley - Northern Part	Elko		0	0	2	0	0	0	0	0	0	0	0	0	15	0	17
178	B	Butte Valley - Southern Part	Elko		0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
178	B	Butte Valley - Southern Part	White Pine		0	0	0	0	0	0	0	0	0	0	0	0	23	0	23
179		Steptoe Valley	Elko	C	0	0	4	0	0	629	0	0	0	0	0	0	3	0	636
179		Steptoe Valley	White Pine	C	33	0	454	0	38	28,678	11,214	5,180	0	0	1,258	29	26	2	46,911

Steptoe Valley Groundwater Levels

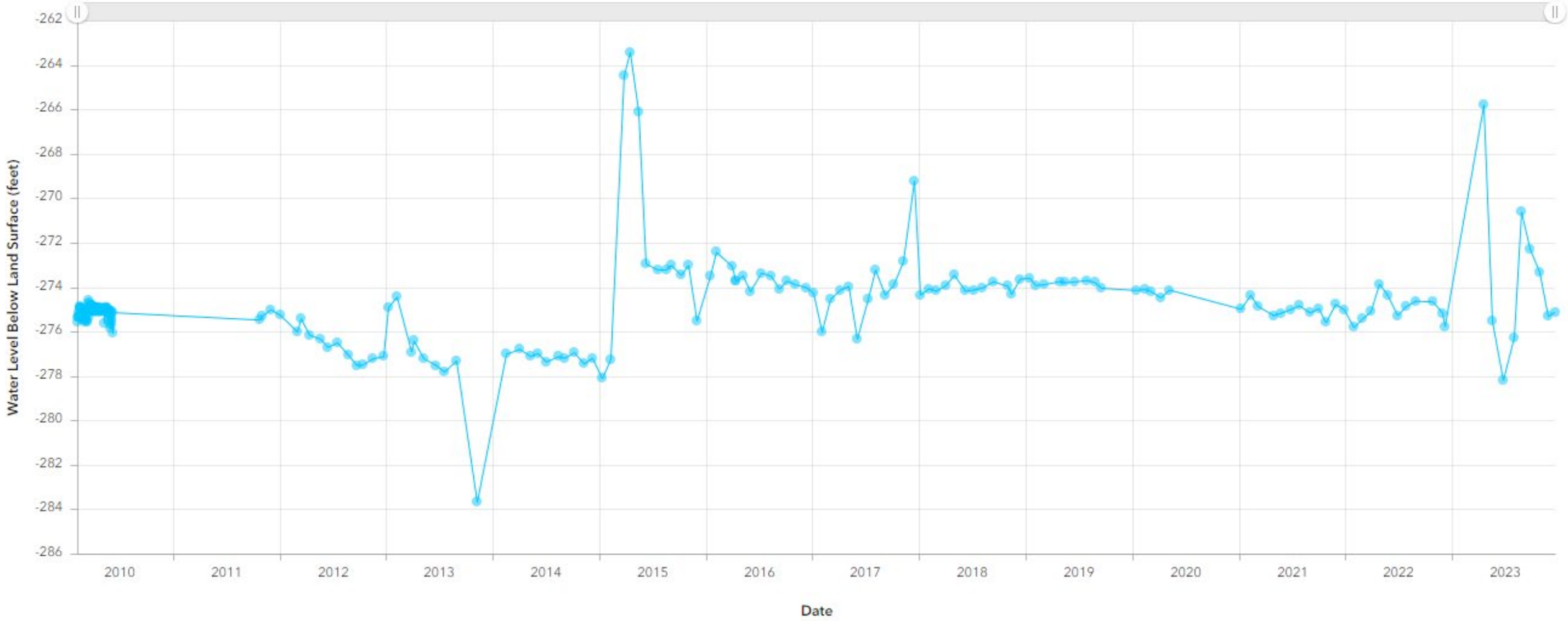


- Basin Designation September 1979
  - Order 731
- Designation of Preferred Use August 1980
  - Order 754
- Declaring Preferred Use August 1983
  - Order 821
- 10 Wells from South to North
- Graphs from NDWR Water Level Dashboard

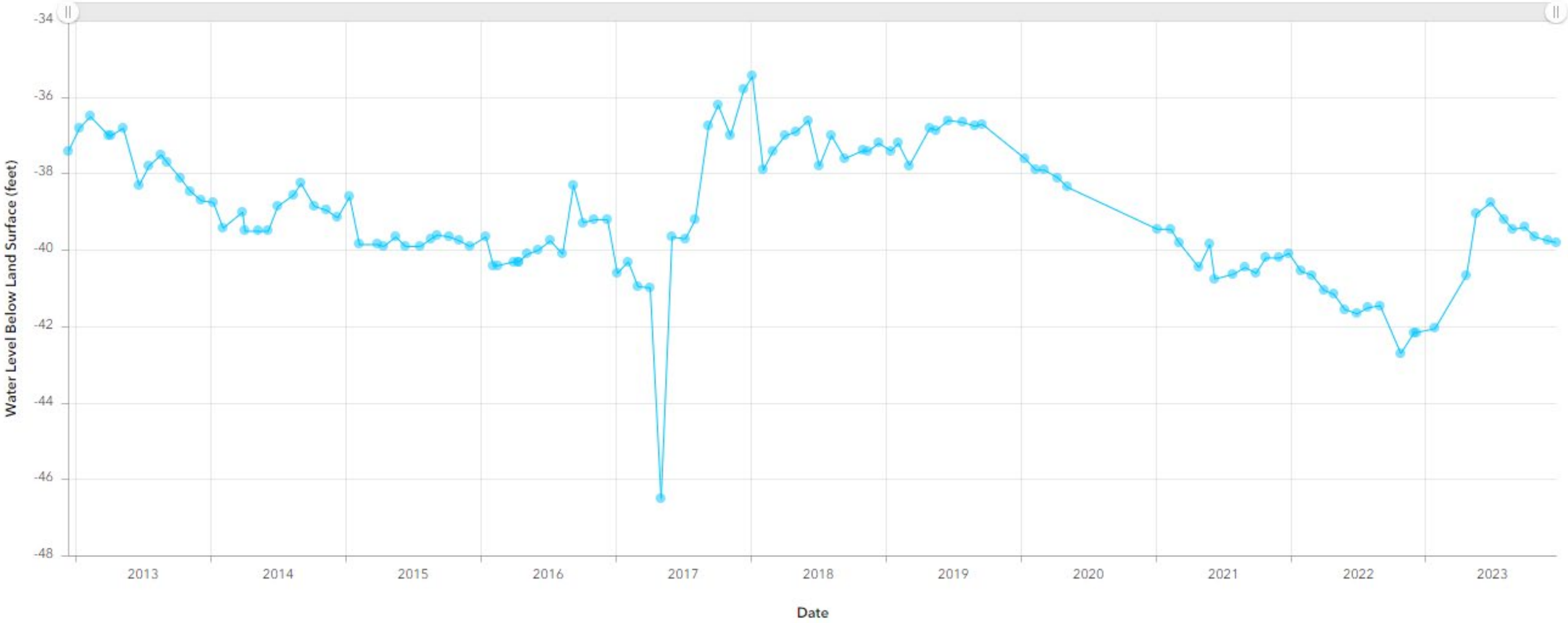
Horse Camp Well 179 N13 E64 22CB 1



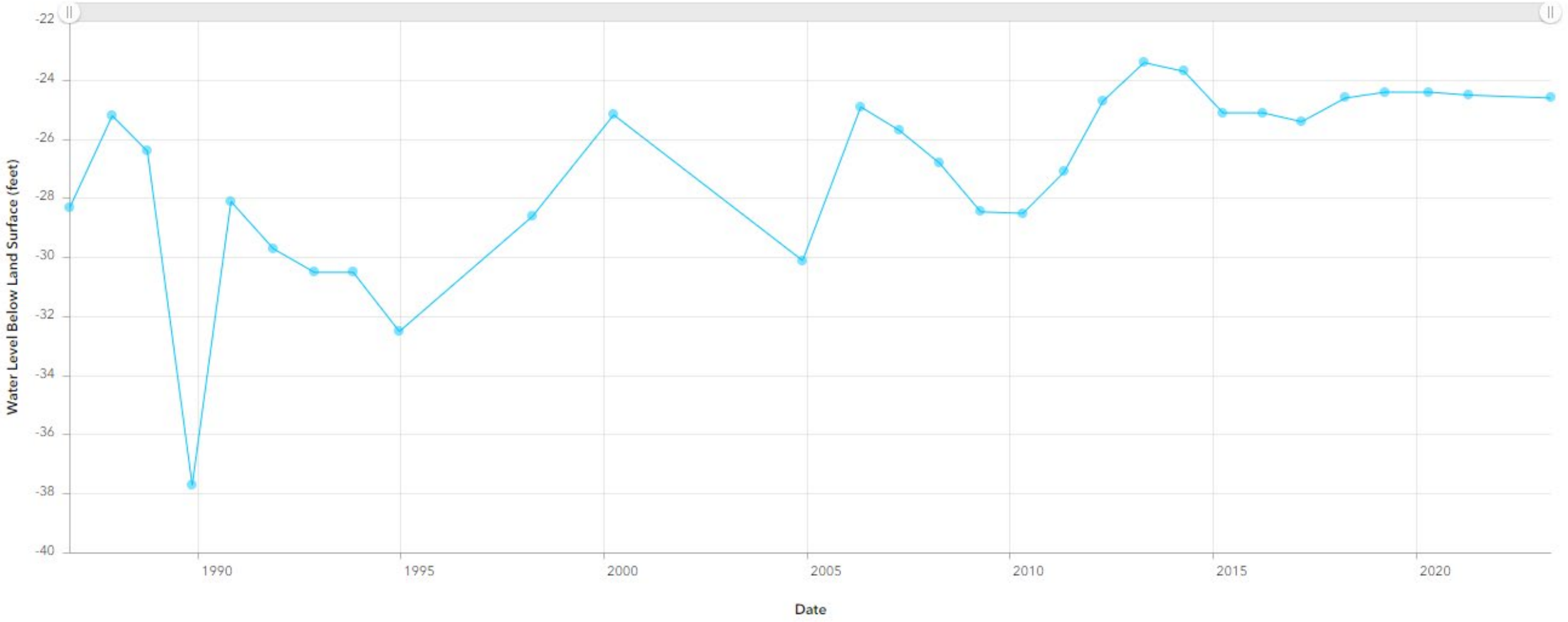
Pinion Pine LN Well 179 N16 E63 27DBAD1



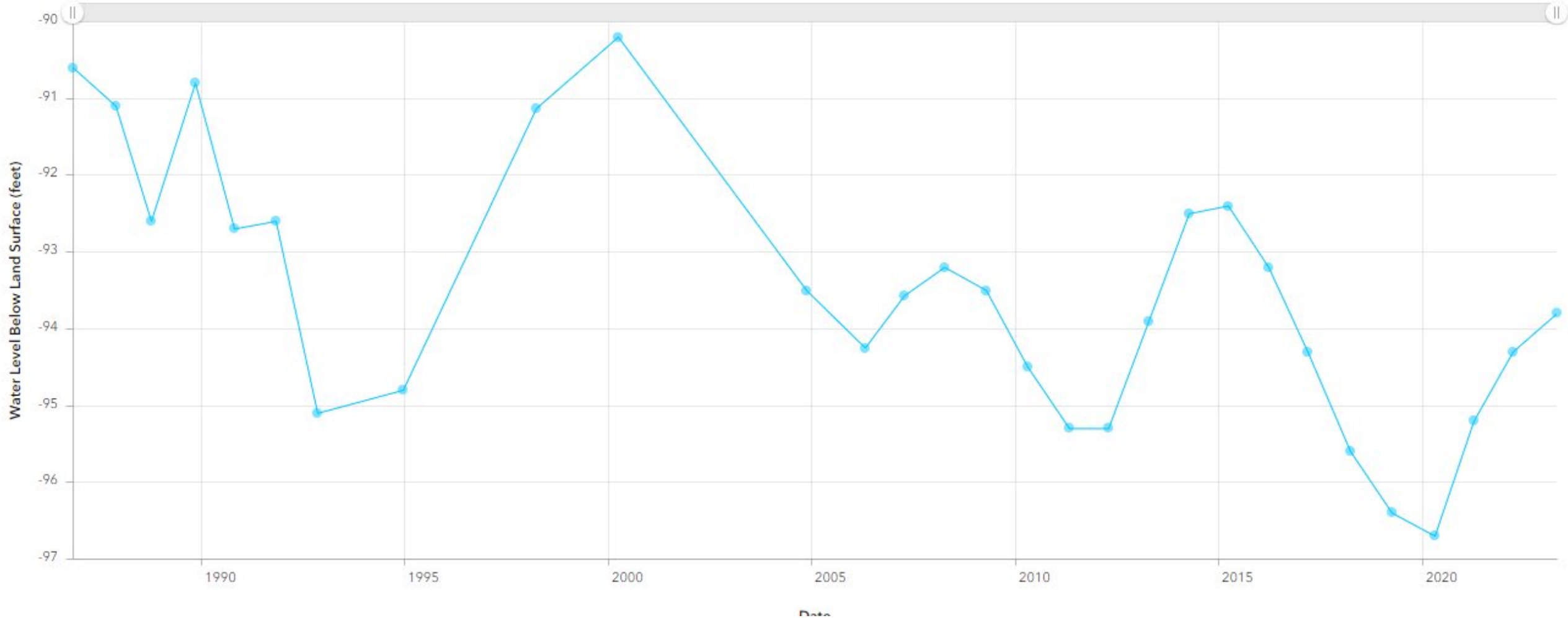
Broadbent Park Well 179 N16 E63 16CCAB1



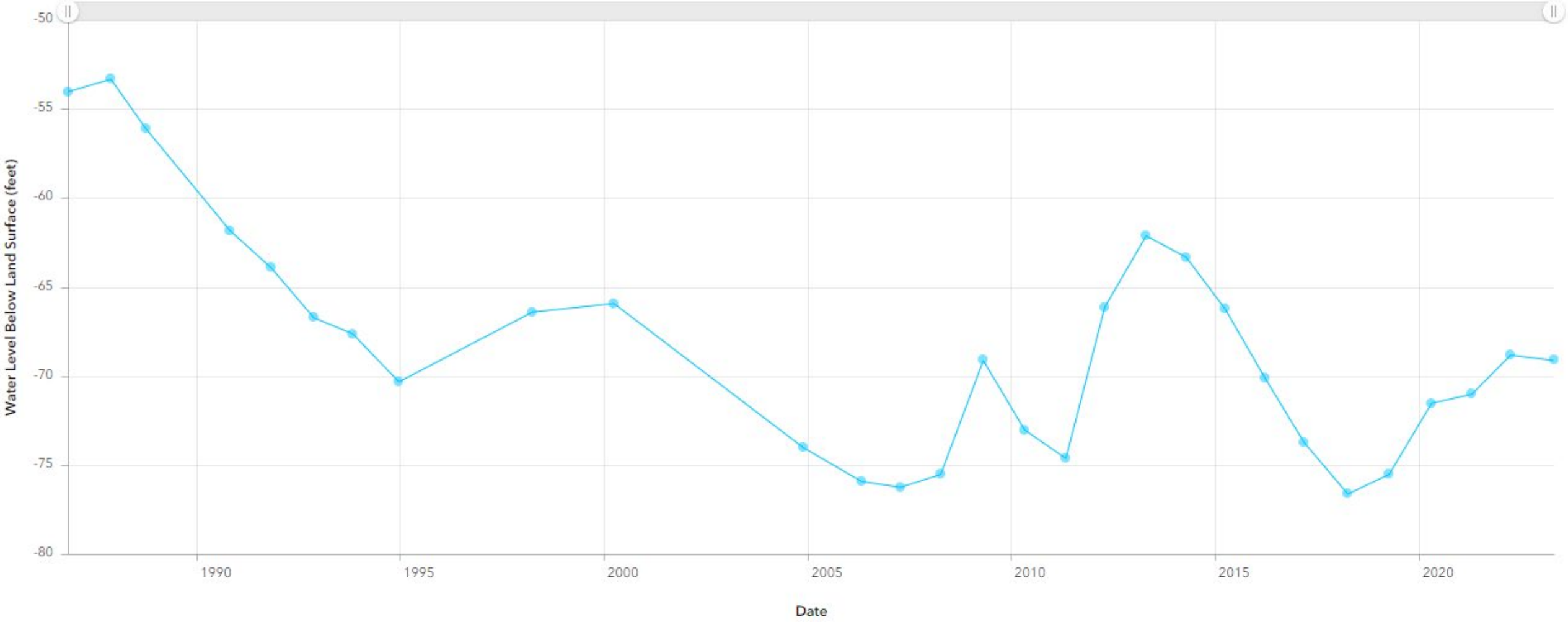
Rodeo Lane Well 179 N16 E63 14AB 1



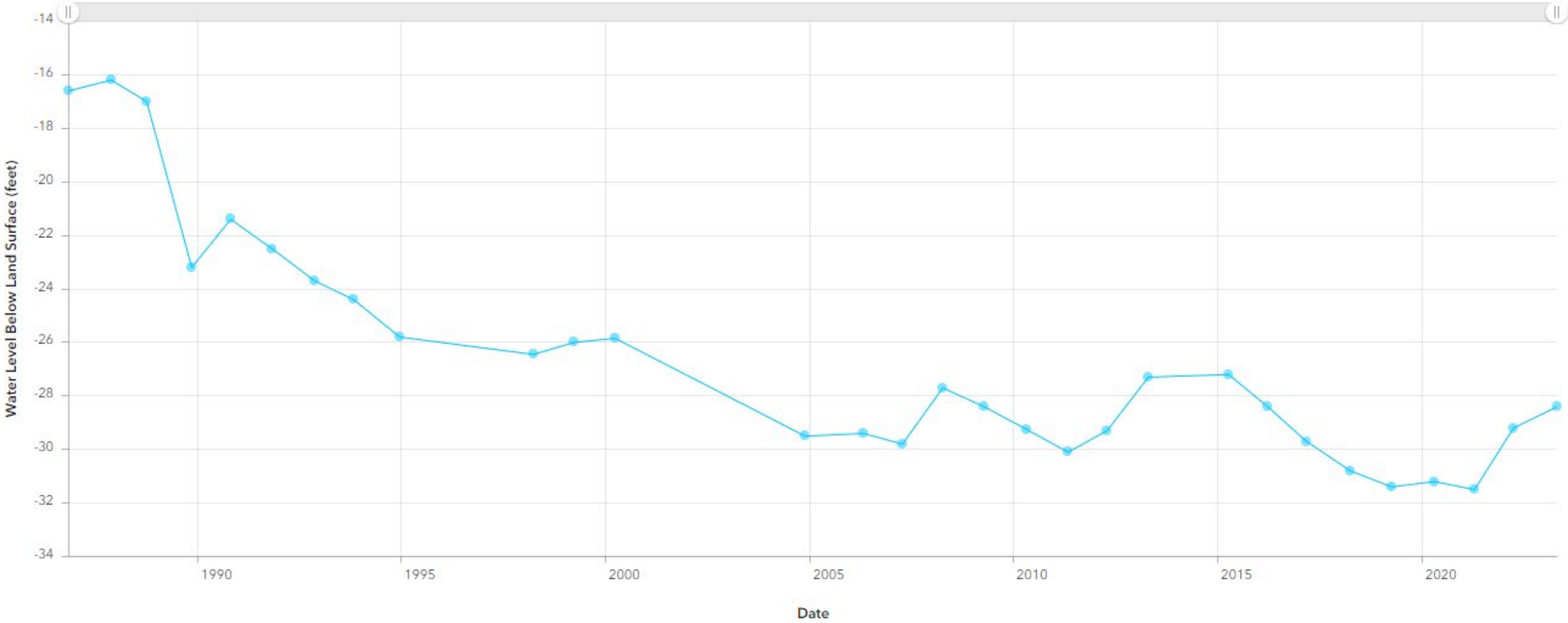
Cross Timbers Well 179 N17 E63 22BA



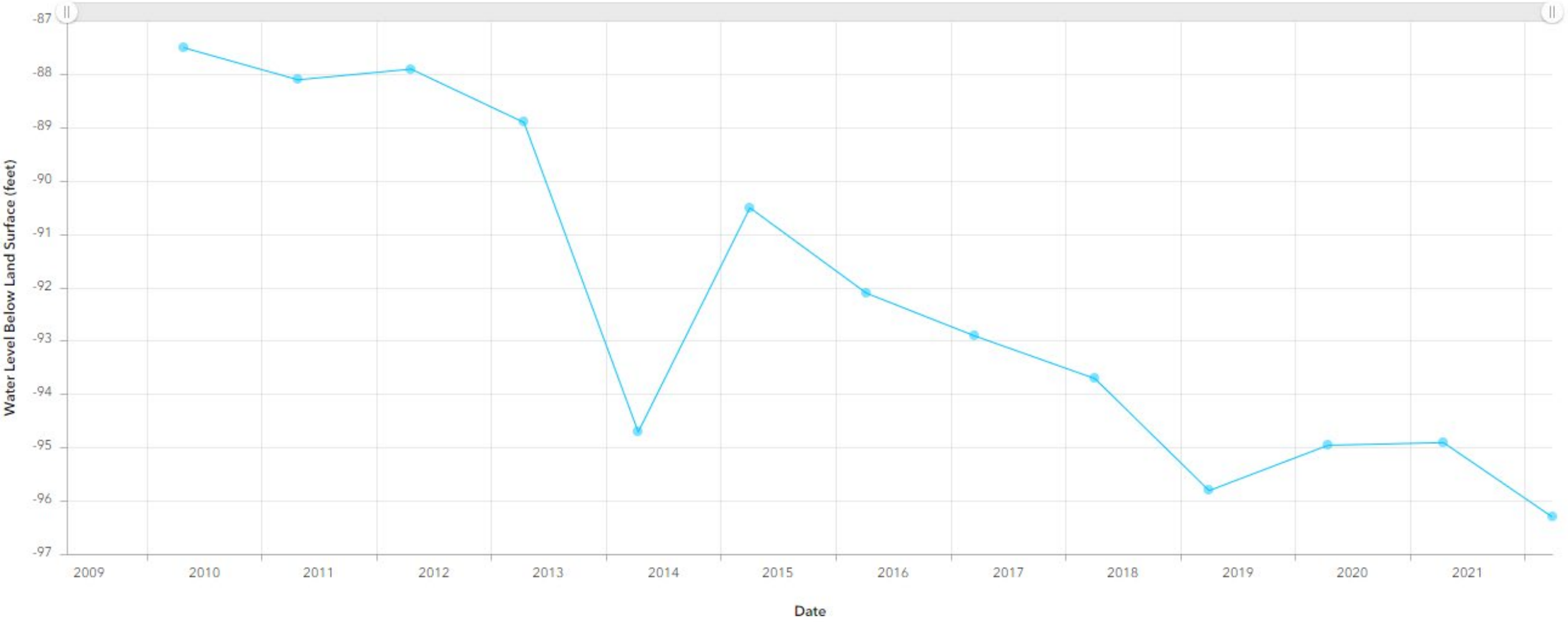
McGill Highway Well 179 N17 E64 19BA 1



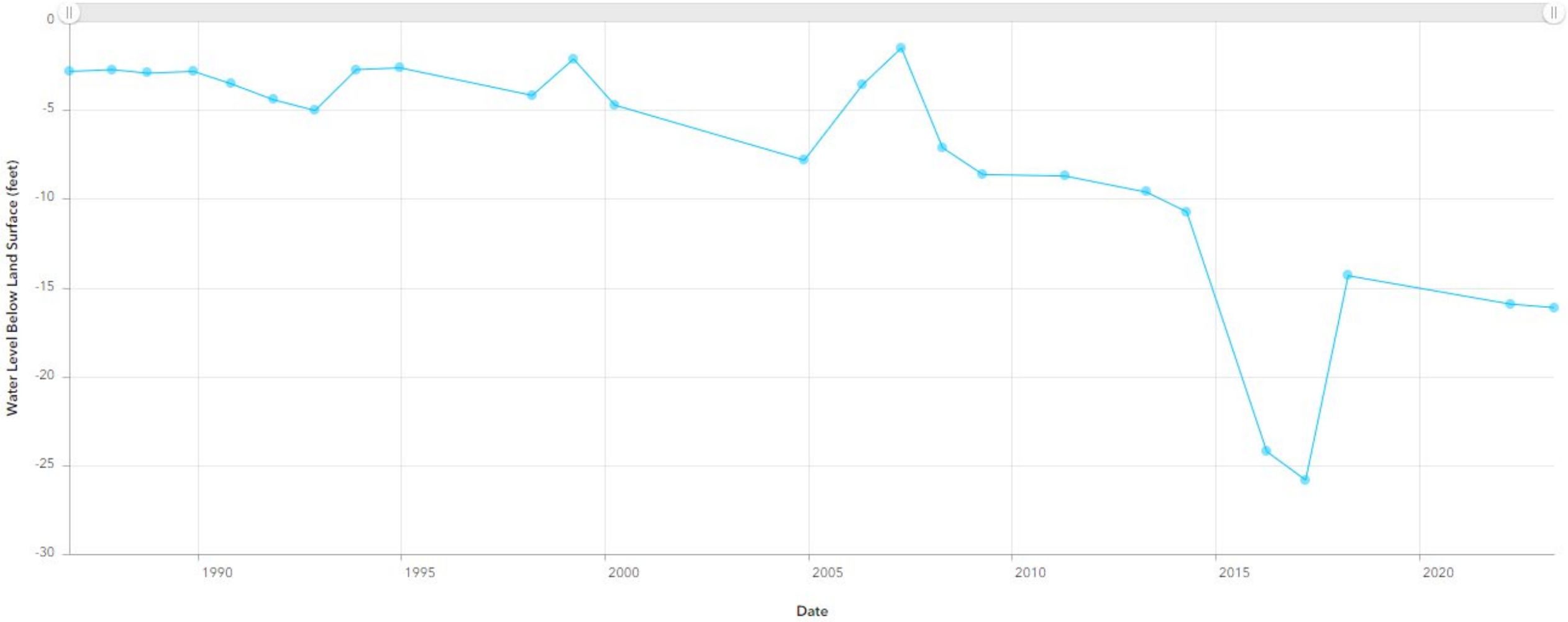
Irrigation Well Southwest of Tailings 179 N17 E63 01BC 1



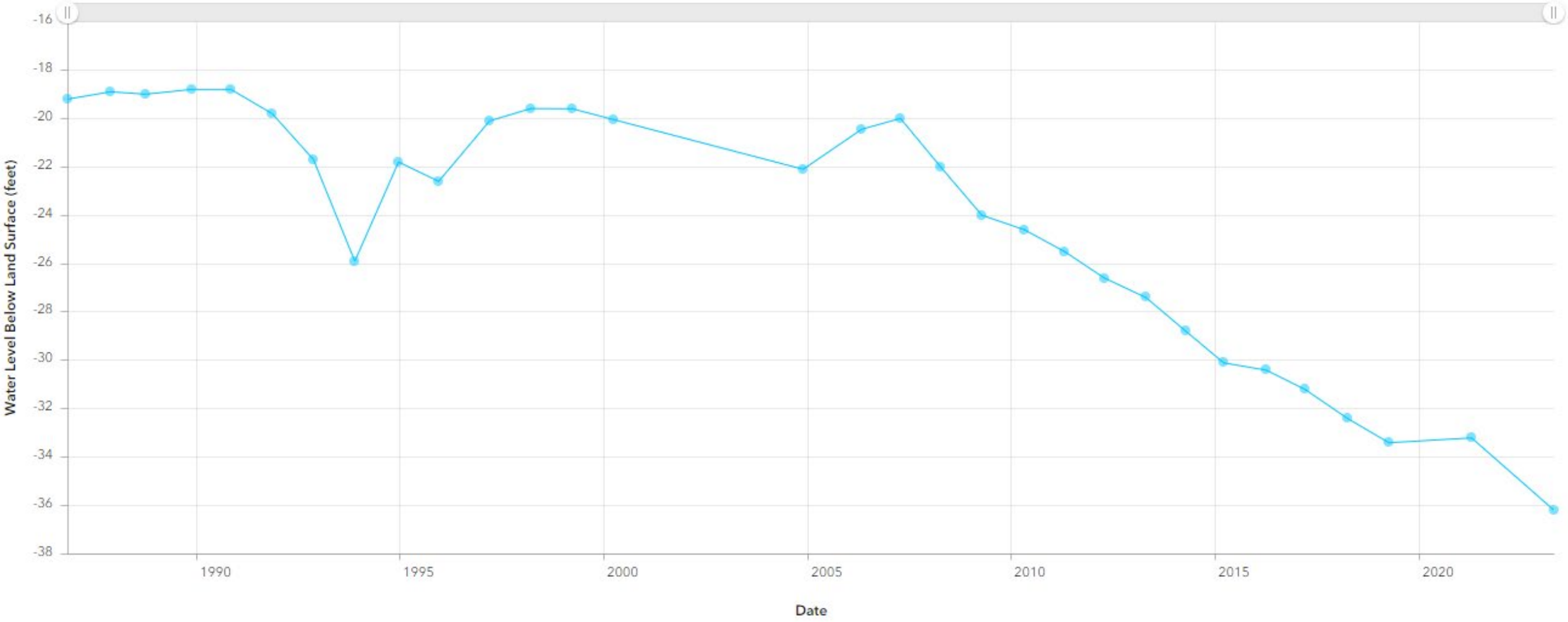
Second Creek Well 179 N20 E64 21AAA 1



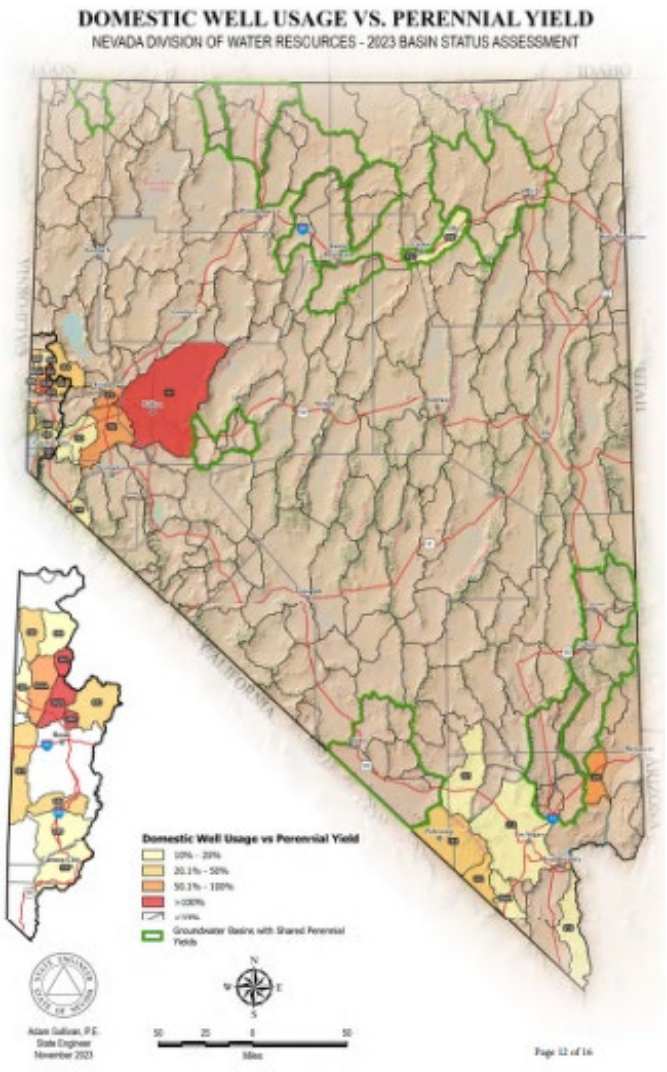
Mount Neva Road Well 179 N21 E64 30DC 2



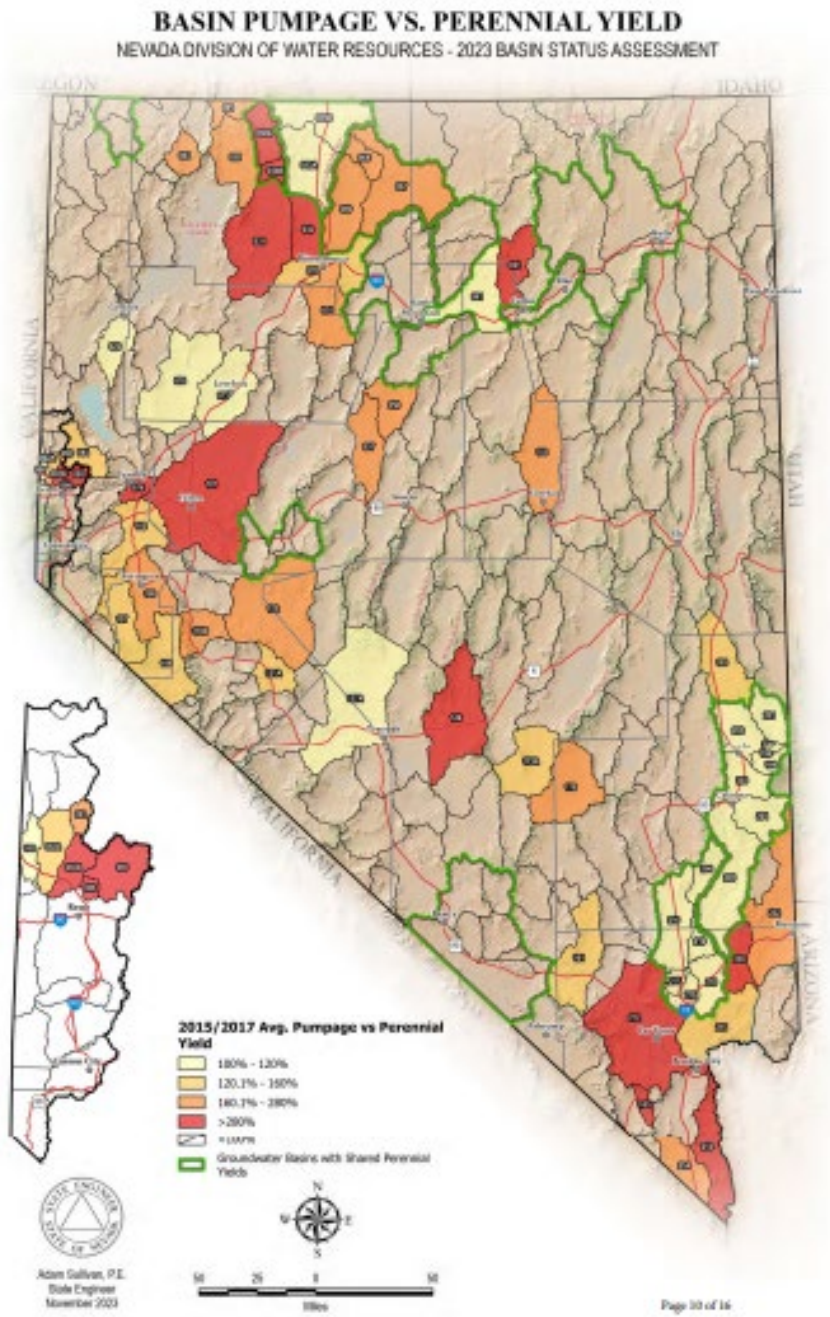
Lages Irrigation Well 179 N26 E65 28BA 1



Water Level Trends



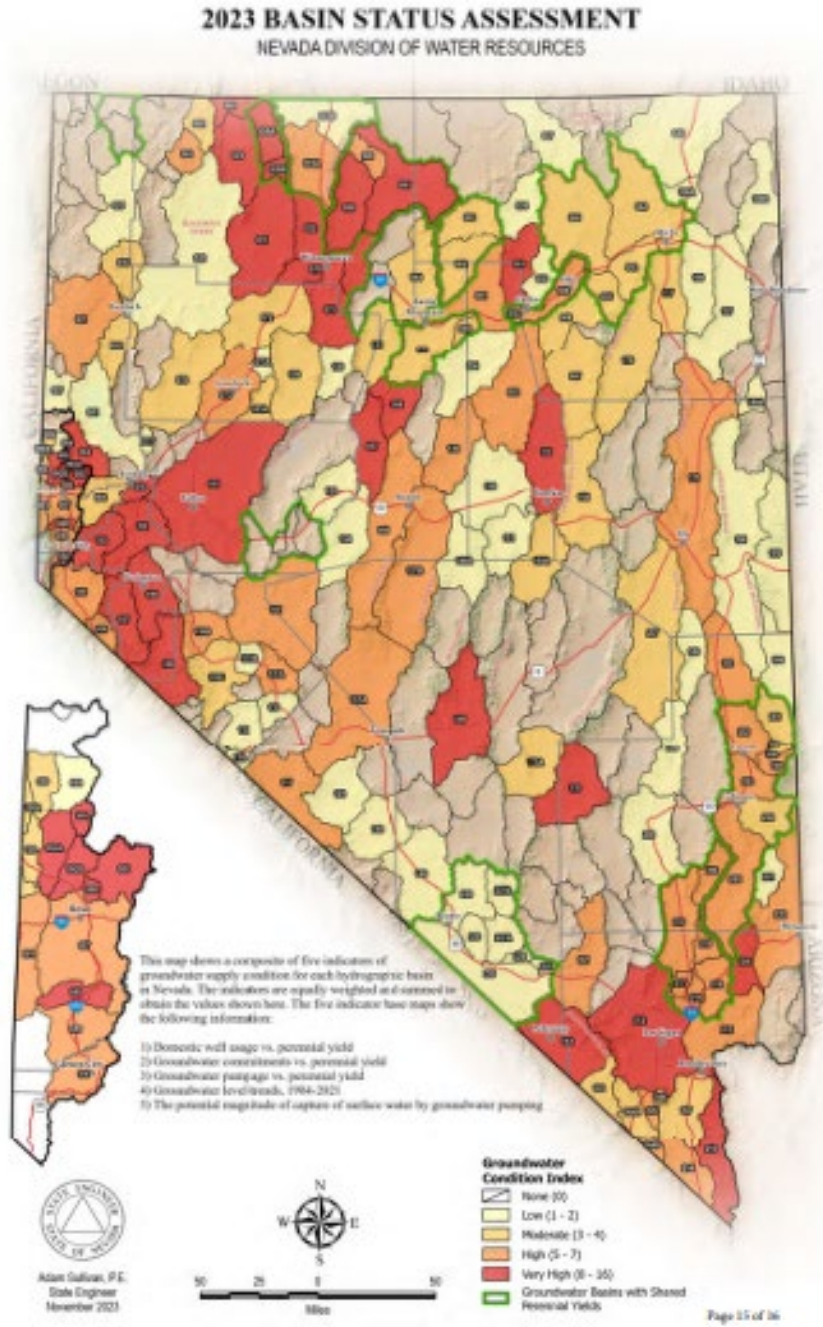
- Mine dewatering in Ely area
- Municipal and Domestic water increase
- Generally in a slight decline
- Future groundwater use could increase decline
- Concentration of groundwater withdrawal should be monitored



Water and Economic Development

- New residential development with water conservation
  - 5 acre+ lots vs. subdivisions vs. multi-family units
- Municipal water demands
  - Infrastructure and water supply
- Waste water management
  - Septic tank concentration vs. wastewater treatment plants
- Agriculture water conservation
  - Flood, sprinkler, pivot, drip line irrigation
- New Industry

Questions?



Cody Odgers

ATTACHMENT 2

PROJECT AREA SPRING WATER RIGHTS

Application No. 4994 Certificate Record No. 906 Book 4 Page 906

THE STATE OF NEVADA

CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, W. N. McGill, Manager of The Adams-McGill Company has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from East Ax Handle Spring through a pipeline and trough for stockwatering purposes. The point of diversion of water from the source is as follows: at a point in SE¼ NW¼ Sec. 11, T. 17 N., R. 64 E., M.D.B.&M., from whence the E. quarter corner said Sec. 11 bears S. 75 18' E. 3370 feet,

situated in White Pine County, State of Nevada.

NOW KNOW YE, That the State Engineer, under the provisions of Section 72, Chapter 140, Statutes of 1913 has determined the date, source, purpose and amount of such appropriation, together with the place to which such water is appurtenant, as follows:

Name of appropriator The Adams-McGill Company

Postoffice address Ely, White Pine County, Nevada

Amount of appropriation 0.025 of a cubic foot of water per second

Period of use, from March 1st to October 1st of each year

Date of priority of appropriation April 5th, 1918

Description of works of diversion and use: Water is conveyed through 75 feet of 1¼ inch iron pipe to 175 feet of circular metal watering troughs 20 inches in diameter where it is used for watering cattle and sheep

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place where acquired and to the purpose for which acquired.

IN TESTIMONY WHEREOF, I, Robert A. Allen, State Engineer of Nevada, have hereunto set my hand and the seal of my office, this 11th day of December, A.D. 1923.

Robert A. Allen
State Engineer

Compared W. M.

ASSIGNED

AMENDED

APPLICATION FOR PERMIT Serial No. 4994

TO APPROPRIATE THE PUBLIC WATERS OF THE STATE OF NEVADA

Date of first receipt and filing in State Engineer's office APR-5 1918
Returned to applicant for correction APR-5 1918
Corrected application filed APR 10 1918

The undersigned W.N.McGill,
Name of applicant.
of Ely, County of White Pine,
State of Nevada, hereby makes application for permission to appropriate the public waters of the State of Nevada, as hereinafter stated. (If applicant is a corporation give date and place of incorporation.)

1. The source of the proposed appropriation is East Ax Handle Spring
Name of stream, lake, or other source.

2. The amount of water applied for is One (1) second-feet.
One second-foot equals 40 miners' inches.

3. The water to be used for Watering stock and domestic use.
Irrigation, power, mining, manufacturing, domestic, or other use.

4. The water is to be diverted from its source at the following point: SE¼ of NW¼, Sec.11, T.17 N., R. 64 E., M.D.B. & M.,
Describe as being within a 40-acre subdivision of public survey, or by course and distance to a section corner. If on unsurveyed land it should be so stated.

IF THE WATER IS TO BE USED FOR IRRIGATION, SUPPLY THE FOLLOWING INFORMATION:

(a) Number of acres to be irrigated is None

(b) Description of land to be irrigated Not for irrigation.
Describe by legal subdivision, or if on unsurveyed land it should be so stated and a description provided in accordance with special instruction from the State Engineer when application is returned for correction.

(c) Irrigation will begin about _____ and end about _____, of each year.
Month. Month.

IF WATER IS TO BE USED FOR POWER, MINING, TRANSPORTATION, OR OTHER USE, SUPPLY THE FOLLOWING INFORMATION:

(d) Power to be developed is Not for power horsepower.

(e) Works to be located Steel trough for watering stock to be located in SE¼ of NW¼, Sec.11, T.17 N., R. 64 E., M.D.B. & M.,
Give 40-acre subdivision on which works will be located, or locate by course and distance to a section corner.

(f) Point of return of water to stream Not to be returned.
Describe in same manner as point of diversion.

(g) Remarks 7000 Sheep and 300 cattle water at said troughs daily.

DESCRIPTION OF PROPOSED WORKS

Water to be diverted by means of pipe and delivered into galvanized
State manner in which water is to be diverted, whether by dam or other works, whether through pipes, ditches, flumes, or other conduits. If water
iron-troughs 20 x 10 inches, 100 feet long.
is to be stored in reservoirs it should be so stated and the location of the reservoir should be given with reference to the legal subdivisions.

5. Estimated cost of works $350.00

6. Estimated time required to construct works One year.

7. Remarks
For use of applicant.

W.N.McGill, , Applicant.

By

Compared P.P.Jones

This sheet inspected

, Engineer.

APPROVAL OF STATE ENGINEER

This is to certify that I have examined the foregoing application, and do hereby grant the same, subject to the following limitations and conditions:

This permit is issued subject to all prior rights on the source. The State reserves the right to regulate the use of the water herein granted at any and all times. It is distinctly understood that the applicant agrees to the terms herein contained.

The amount of water to be appropriated shall be limited to the amount which can be applied to beneficial use, and not to exceed 0.025 cubic feet per second. (One fortieth)

Actual construction work shall begin on or before November 10,1918.

Proof of commencement of work shall be filed before December 10, 1918.

Work must be prosecuted with reasonable diligence and be completed on or before May 10, 1919.

Proof of completion of work shall be filed before June 10, 1919.

Application of water to beneficial use shall be made on or before Sept. 10, 1919. Proof of the application of water to beneficial use must be filed with State Engineer on or before October 10, 1919.

Proof of labor filed DEC -2 1918 WITNESS MY HAND AND SEAL this 10th day

Proof of completion of work filed. DEC -2 1918 of September, 1918.

Proof of beneficial use filed DEC -2 1918

Certificate issued JAN 29 1919

Seymour Case.

State Engineer.

Certificate No. 906 Bk4 Dec. 11, 1923 for 0.025 c.f.s.

Application No. 11502 Certificate Record No. 3400 Book 10 Page 3400

THE STATE OF NEVADA

CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, D. V. Romeos, Stockraiser has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from Goat Spring through well, pipe line and troughs for Stockwatering purposes. The point of diversion of water from the source is as follows: SE¼ SW¼ Section 34, T. 18 N., R. 63 E., M.D.B.&M., unsurveyed, or at a point from which the SW Corner of Section 10, T. 17 N., R. 63 E., bears S. 8° 10' W., 10,854.00 feet. situated in White Pine County, State of Nevada.

NOW KNOW YE, That the State Engineer, under the provisions of Section 72, Chapter 46, Statutes of 1937 has determined the date, source, purpose and amount of such appropriation, together with the place to which such water is appurtenant, as follows:

Name of appropriator D. V. Romeos

Post-office address P. O. Box 663, Ely, Nevada

Amount of appropriation 0.0025 c.f.s., or sufficient to water 400 head of sheep and goats.

Period of use, from January 1 to December 31 of each year

Date of priority of appropriation February 27, 1946

Description of works of diversion, manner and place of use:

Water is developed by means of a hand dug well 4' x 6' x 6' deep walled to the surface with rock; 50 feet of 1½ inch pipe laid into the well conveys the water to four wooden troughs each 8" x 12" and totaling 50 feet in length. Flow of water to troughs is controlled by a 1½ inch valve. The well, pipeline and troughs are located in the SE¼ SW¼ Section 34, T. 18 N., R. 63 E., M.D.B.&M.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place where acquired and to the purpose for which acquired.

IN TESTIMONY WHEREOF, I ALFRED MERRITT SMITH, State Engineer of Nevada, have hereunto set my hand and the seal of my office, this 18th day of January, A. D. 1950.

Alfred Merritt Smith
State Engineer.

Recorded Feb. 11, 1950 Bk. 151 Misc. Pages 253-254
White Pine County Records
Compared LM-AT

ASSIGNED

APPLICATION FOR PERMIT Serial No. **11502**

TO APPROPRIATE THE PUBLIC WATERS OF THE STATE OF NEVADA

Date of first receipt and filing in State Engineer's office FEB 27 1946
Returned to applicant for correction
Corrected application filed

The undersigned D. V. ROMEOS
Name of applicant
of Ely, County of White Pine,
State of Nevada, hereby make s application for permission to appropriate the public waters of the State of Nevada, as hereinafter stated. (If applicant is a corporation, give date and place of incorporation.)

1. The source of the proposed appropriation is Goat Spring
Name of stream, lake, or other source

2. The amount of water applied for is 0.03 second-feet.
One second-foot equals 40 miners' inches

3. The water to be used for Watering sheep and goats - 1000 sheep 100 goats.
Irrigation, power, mining, manufacturing, domestic, or other use

4. The water is to be diverted from its source at the following point:
on unsurveyed land, S.W.Cor. Sec. 10-T 17 N. R. 63 E M.D.B.& M. being
Describe as being within a 40-acre subdivision of public survey, or by course and distance to a section corner. If on unsurveyed land, it should be so stated.
10854 ft distant. S. 8° 10' W.

IF THE WATER IS TO BE USED FOR IRRIGATION, SUPPLY THE FOLLOWING INFORMATION:

(a) Number of acres to be irrigated is

(b) Description of land to be irrigated
Describe by legal subdivision, or if on unsurveyed land it should be so stated and a description provided in accordance with special instruction from the State Engineer when application is returned for correction.

(c) Use will begin about Jan. st (Month) and end about Dec. 31 (Month), of each year.

IF WATER IS TO BE USED FOR POWER, MINING, STOCK WATERING, OR OTHER USE, SUPPLY THE FOLLOWING INFORMATION:

(d) Power to be developed is horsepower.

(e) Place of use Works to be located on unsurveyed land, Approximately in SE¼ SW¼ Sec. 34 T.18N. R.63 E. M.D.B.&M.; SW¼ Cor. Sec. 10 being S. 8°10' W. 10854 ft.
Give location of place of use by legal subdivision

(f) Point of return of water to stream
Describe in same manner as point of diversion.

(g) State number and kinds of animals to be watered 1000 sheep 100 Goats

(h) Use will begin about Jan 1 (Month) and end about Dec 31 (Month), of each year.

(i) Remarks Well at spring 4' x 6'- 6' feet deep with 50 ft of 1½'' pipe line and 50 ft 8 '' x 12" wood troughs

DESCRIPTION OF PROPOSED WORKS

Well 4' by 6' by 6' deep- 50ft. 1½ inch pipe line and 50 ft. of wood watering troughs 8'' by 12"

State manner in which water is to be diverted, whether by dam or other works, whether through pipes, ditches, flumes, or other conduits. If water is to be stored in reservoirs, it should be so stated and the location of the reservoir should be given with reference to the legal subdivisions.

5. Estimated cost of works $300.00

6. Estimated time required to construct works now completed

7. Remarks these works were heretofore completed under a previous application No 9577 which became delinquent for failure to make amended application- Petitioner has been sole user of these waters 1930-1931 ; said application No 9577 having been made by this applicant

For use of applicant

D. V. Romeos, Applicant.

By C. A. Eddy
His Attorney

Compared RB-AT

This sheet inspected

, Engineer.

APPROVAL OF STATE ENGINEER

This is to certify that I have examined the foregoing application, and do hereby grant the same, subject to the following limitations and conditions:

This permit is issued subject to all prior rights on the source. The State retains the right to regulate the use of the water herein granted at any and all times.

The amount of water to be appropriated shall be limited to the amount which can be applied to beneficial use, and not to exceed 0.007 cubic feet per second, or sufficient to water 1000 head of sheep and 100 goats.

Actual construction work shall begin on or before October 28, 1947

Proof of commencement of work shall be filed before November 28, 1947

Work must be prosecuted with reasonable diligence and be completed on or before October 28, 1948

Proof of completion of work shall be filed before November 28, 1948

Application of water to beneficial use shall be made on or before October 28, 1949. Proof of the application of water to beneficial use must be filed with State Engineer on or before November 28, 1949

Map Filed FEB 27 1946

Proof of commencement of work filed OCT 14 1947

Proof of Completion of work filed OCT 14 1947

PROOF OF BENEFICIAL USE FILED OCT 10 1949

WITNESS MY HAND AND SEAL this 28th day of April, 1947

Alfred Merritt Smith
State Engineer.

Certificate No. 3400 Issued Jan 18 1950 for 0.00250 cfs for Stock

Recorded Feb. 11, 1950 Bk 151 Misc. Pages 253-254

White Pine County Records.

Application No. 15011 Certificate Record No. 6168 Book 19 Page 6168

THE STATE OF NEVADA
CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, LaVerle F. Barnes-Agent has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from Hercules Gap Spring Channel through development of channel and ditches for stockwatering purposes. The point of diversion of water from the source is as follows: SE¼ SW¼ Sec. 10, T. 17N., R. 63E., M.D.B.&M. or at a point from which the SW corner of said Sec. 10 bears S. 53° 10' W. 1760.0 feet. situated in White Pine County, State of Nevada.

NOW KNOW YE, That the State Engineer, under the provisions of Sec. 72, Chapter 46, Statutes of 1937 has determined the date, source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

Name of appropriator Albert Romeo

Post-office address Ely, Nevada

Amount of appropriation 0.0052 c.f.s. or sufficient to water 170 head of cattle.

Period of use, from March 15th to December 15th of each year

Date of priority of appropriation April 30, 1953.

Description of works of diversion, manner and place of use:
Water is developed from Hercules Gap Spring and then conveyed by a ditch system to portions of Sections 1, 2, 10 and 11, T. 17N., R. 63E., M.D.B.&M. and Section 36, T. 18N., R. 63E., M.D.B.&M. where it is used to water 170 head of cattle.

This certificate is issued subject to the terms of the permit.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place and for the purpose as set forth herein.

IN TESTIMONY WHEREOF, I GEORGE W. HENNEN, State Engineer of Nevada, have hereunto set my hand and the seal of my office, this 10th day of February, A. D. 1967.

Compared jb/dh

Recorded 2-22-67 Bk. 256 Page 91 White Pine County Records.

Roland D. Westergard, Asst. State Engineer.

1923

THE STATE OF NEVADA

02273

PROOF OF APPROPRIATION OF WATER FOR STOCK WATERING PURPOSES

From Unnamed Springs.
Name of natural water course

Through Hercules Gap pipe line to Hercules Gap troughs.
Name of ditch, pipe line, etc.

Arthur Smith, the undersigned, being first duly sworn, deposes and says that the statements herein contained relative to the appropriation of water by ELY WATER COMPANY, a Maine Corporation. are full and correct to the best of his knowledge and belief.

He represents Ely Water Company by virtue of his official position
If proof is not made by claimant, deponent should state on this line by virtue of what authority he represents the claimant

as President thereof.

(1) Name of claimant ELY WATER COMPANY, a Maine Corporation.

Address East Ely, County of White Pine,

State of Nevada.

(2) The means of diversion employed is pipe line about 200 feet long.
Dam and ditch, pipe line, flume, etc.

(3) The water is impounded in reservoir and troughs.
Troughs, reservoirs, tanks, etc.

(4) The construction of the ditch or other works was begun about the year 1911., and completed in the same year. Wooden troughs about 1911, steel troughs about 1916.

(5) The nature of the claimant's title to the land upon which the works are located is fee simple by deed from Adams- McGill Company and California Pacific Realty Company dated December 5th. 1932.

(6) The claimant's water right ~~was~~ (was not) recorded in the office of the County Recorder of White Pine County, at Page ------ of Book ---- of ----------

(7) The approximate number of animals watered by the claimant during the first year was ,

and said watering was conducted for an approximate period of days during each of the following months. Prior to the year 1898 W.N.McGill, lessee, of portion of land, watered about 100 head of cattle there during greater portion of each year. Title to this portion of land was acquired by him in 1900. Partnership of Adams-McGill ~~Company~~ watered about 400 head of cattleand ~~6000 sheep thereduring years 1898 to 1912.~~ After 1912 Adams-McGill Company watered about 12000 sheep therein the Spring and Fall, two months each season.

(8) The approximate number of animals watered by claimant in subsequent years was as follows:

Ely Water Company went in possession of the land about June 1931 and has applied the water for the watering of approximately 600 head of cattle and 3000 head of sheep since that date.

(9) The amount of water which it has been necessary to divert for the said purpose has been

one-third cubic feet per second.

40 miners inches equals 1 cubic foot per second

(10) The water is diverted from its source at ..... feet from

True bearing to nearest 5 minutes distance

the ..... corner of Section ....., T. ....., R. ..... E.,

Mount Diablo Base and Meridian.

NOTE—Information under (10) must invariably be given when a public corner is within 6 miles, unless the State Engineer consents to some other form of description.

(11) The works are located at SW 1/4; SE 1/4 Section 9; Tp. 17 N. Range 63 east.

Describe as within a 40-acre subdivision of public survey or by a tie in same manner as under (10)

Remarks: The Spring which is the main source of the water supply is near the North-west corner of the above described forty acre sub-division. There is a second spring on marshy ground near the South-east corner of the North-east quarter of the South-west quarter of thesame section, from which water is conveyed to the spring first mentioned by means of an open ditch. A reservoir about forty feet by one hundred feet in size lies slightly to the East of the main spring and impounds the flow thereof. The pipe line runs from this main spring South-easterly to Steel troughs 18 inches or twenty inches in width and about 200 feet long, situate on the forty first above described. All land upon which springs and diversion works are situated passed to Ely Water Company by deed dated December 5th, 1932., hereinabove under paragraph 5 referred to, together with all the water rights appurtenant thereto.

Remarks:

ELY WATER COMPANY.

by [signature] Its President.

Subscribed and sworn to before me this 3rd day of February, 1933

[signature]

Notary Public in and for the County of White Pine

My commission expires December 5th. 1935., 19

This part of form to be left blank by claimant

Filing Serial No. [redacted] 02273

STATE OF NEVADA

Proof of Appropriation of
Water for Stock Purposes

Water Source Unnamed Spring

Through Hercules Gap pipeline

Claimant Ely Water Co.

Filed in the office of the State Engineer on

2-11-33, 19

Geo. W. Malone.

State Engineer.

Certificate No. ..... issued hereunder

....., 19.....

Form Aa 3-21-28—1000

AMENDED

15011

APPLICATION FOR PERMIT **Serial No.**

TO APPROPRIATE THE PUBLIC WATERS OF THE STATE OF NEVADA

Date of first receipt and filing in State Engineer's office APR 30 1953
Returned to applicant for correction MAY 14 1953
Corrected application filed JUN 1 1953

The undersigned Albert Romeo
Name of applicant
of McGill, County of White Pine,
State of Nevada, hereby make application for permission to appropriate the public waters of the State of Nevada, as hereinafter stated. (If applicant is a corporation, give date and place of incorporation.)

1. The source of the proposed appropriation is
Name of stream, lake, or other source
Hercules Gap Spring Channel

2. The amount of water applied for is one second-feet.
One second-foot equals 40 miners' inches

3. The water to be used for stockwatering
Irrigation, power, mining, manufacturing, domestic, or other use

4. The water is to be diverted from its source at the following point: in the SE¼ SW¼ Section 10, T. 17 N., R. 63 E., M.D.M. whence the SW
Describe as being within a 40-acre subdivision of public-survey, or by course and distance to a section corner. If on unsurveyed land, it should be so stated.
Corner of said Section 10 bears S 53° 10' W., 1760 ft. distant.

IF THE WATER IS TO BE USED FOR IRRIGATION, SUPPLY THE FOLLOWING INFORMATION:

(a) Number of acres to be irrigated is

(b) Description of land to be irrigated
Describe by legal subdivision, or if on unsurveyed land it should be so stated and a description provided in accordance with special instruction from the State Engineer when application is returned for correction.

(c) Use will begin about ____ (Month) and end about ____ (Month), of each year.

IF WATER IS TO BE USED FOR POWER, MINING, STOCK WATERING, OR OTHER USE, SUPPLY THE FOLLOWING INFORMATION

(d) Power to be developed is horsepower.

(e) Place of use S½ SW¼ Sec. 10, T. 17 N., R. 63 E., and along proposed ditch channel in through portions of Sections 1, 2, 10 and 11, T. 17 N., R. 63 E. and Sec. 36, T. 18 N., R. 63 E., M.D.M.
Give location of place of use by legal subdivision

(f) Point of return of water to stream
Describe in same manner as point of diversion

(g) State number and kinds of animals to be watered 150 head cattle and 20 head horses

(h) Use will begin about Jan. 1 (Month) and end about Dec. 31 (Month), of each year.

(i) Remarks Stock will water in reservoir at the point of diversion and along the ditch from the reservoir to the land irrigated in Sec. 36, T. 18 N., R. 63 E., M.D.M.

DESCRIPTION OF PROPOSED WORKS

Horseshoe Dam 100 ft. long, 5 ft. high, 10 ft. wide on top.

State manner in which water is to be diverted, whether by dam or other works, whether through pipes, ditches, flumes, or other conduits. If water is to be stored in reservoirs, it should be so stated and the location of the reservoir should be given with reference to the legal subdivisions.

Ditch 5 ft. wide, 2 ft. deep about 3 miles long.

5. Estimated cost of works $2,000

6. Estimated time required to construct works 2 years

7. Remarks

For use of applicant

/s/ Albert Romeo, Applicant.

By

Compared A.P.2R. hs/ns

This sheet inspected

, Engineer.

APPROVAL OF STATE ENGINEER

This is to certify that I have examined the foregoing application, and do hereby grant the same, subject to the following limitations and conditions: This permit is issued subject to all existing rights on the source. It is understood that the amount of water herein granted is only a temporary allowance and that the final water right obtained under this permit will be dependent upon the period of use and the average number of cattle served from the waters of this source. The State retains the right to regulate the use of the water herein granted at any and all times but does not take responsibility for the use of the Federal range.

The amount of water to be appropriated shall be limited to the amount which can be applied to beneficial use, and not to exceed 0.0052 cubic feet per second. or sufficient water to water 150 head of cattle and 20 horses.

Actual construction work shall begin on or before March 20, 1966

Proof of commencement of work shall be filed before April 20, 1966

Work must be prosecuted with reasonable diligence and be completed on or before March 20, 1967

Proof of completion of work shall be filed before April 20, 1967

Application of water to beneficial use shall be made on or before March 20, 1968. Proof of the application of water to beneficial use must be filed with State Engineer on or before April 20, 1968

WITNESS MY HAND AND SEAL this 20th day of September, 1965

GEORGE W. HENNEN
State Engineer.

By Orland D. Watergard
Assistant State Engineer

Map Filed APR 30 1953

Commencement Filed DEC 15 1965

PROOF OF BENEFICIAL USE FILED APR 25 1966

Cert 6168 issued Feb. 10, 1967

Recorded 2-9-67 BK286 pg. 191

Application No. 20813 Certificate Record No. 6261 Book 19 Page 6261

THE STATE OF NEVADA
CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, Mark Chilton has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from Lackawanna Spring through pipeline, collection box, pump for milling purposes. The point of diversion of water from the source is as follows: SE¼ NE¼ Section 3, T. 16N., R. 63E., M.D.B.&M. or at a point from which the NE corner of said Section 3 bears N. 29° 54' 21" W., a distance of 2,401.14 feet. situated in White Pine County, State of Nevada.

NOW KNOW YE, That the State Engineer, under the provisions of NRS 533.425, has determined the date, source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

Name of appropriator City of Ely

Post-office address Ely, Nevada

Amount of appropriation 0.56 c.f.s. but not to exceed 132.107 mg annually

Period of use, from January 1st to December 31st of each year

Date of priority of appropriation October 23, 1962

Description of works of diversion, manner and place of use: Water is developed in the spring area thence conveyed by 4, 4" pipes to a collection box at pump house thence pumped through a 3" pipe to 2 storage tanks with a total capacity of 105,000 gallons thence conveyed by a 3½ inch pipe to the mill. Water is thence conveyed by a 6" tailing line and 4 x 4 ditch to a tailing pond from which some water is returned to the natural channal. Water is used in the mill in a floatation, chemical leaching process and dust suppression located within the SW¼ NE¼ Section 3, T. 16N., R. 63E., M.D.B.&M.

This certificate is issued subject to the terms of the permit.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place and for the purpose as set forth herein.

IN TESTIMONY WHEREOF, I GEORGE W. HENNEN, State Engineer of Nevada, have hereunto set my hand and the seal of my office, this 24th day of April, A.D. 1967.

Compared jb/DH

Recorded 5-3-67 Bk. 286 Page 237 White Pine County Records.

Roland D. Westergard, Asst. State Engineer.

1923

Application No. 20812 Certificate Record No. 6288 Book 19 Page 6288

THE STATE OF NEVADA
CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, Mark Chilton (agent) has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from Lackawanna Springs through open channel for stockwatering purposes. The point of diversion of water from the source is as follows: SE¼ NE¼ Sec. 3, T. 16N., R. 63E., M.D.B.&M. or at a point from which the NE corner of said Sec. 3 bears N. 28° 35' E a distance of 2395.0 feet. situated in White Pine County, State of Nevada.

NOW KNOW YE, That the State Engineer, under the provisions of NRS 533.425, has determined the date, source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

Name of appropriator Ely Municipal Water Department

Post-office address Ely, Nevada

Amount of appropriation 0.0172 or sufficient to water 500 head of cattle & 50 horses.

Period of use, from January 1st to December 31st of each year

Date of priority of appropriation October 23, 1962

Description of works of diversion, manner and place of use. Water is developed in a spring thence allowed to flow in the natural channel. Cattle are allowed to water the entire ½ mile of channel located in the SE¼ NE¼ NE¼ NE¼ Section 3, T. 16N., R. 63E., M.D.B.&M.

This certificate is issued subject to the terms of the permit.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place and for the purpose as set forth herein.

IN TESTIMONY WHEREOF, I, GEORGE W. HENNEN, State Engineer of Nevada, have hereunto set my hand and the seal of my office, this 24th day of May A.D. 19 67.

Roland D. Westergard, Asst. State Engineer.

Compared jb/jw

Recorded 6-7-67 Bk. 28A Page 247 White Pine County Records.

1923

ASSIGNED

AMENDED Serial No. 20812

APPLICATION FOR PERMIT

TO APPROPRIATE THE PUBLIC WATERS OF THE STATE OF NEVADA

Date of filing in State Engineer's Office OCT 23 1962

Returned to applicant for correction MAR 7 1963

Corrected application filed MAR 13 1963

Map filed FEB 26 1963

The applicant City of Ely

of Ely, County of White Pine,

State of Nevada, hereby make application for permission to appropriate the public waters of the State of Nevada, as hereinafter stated. (If applicant is a corporation, give date and place of incorporation; if a copartnership or association, give names of members.)

---

1. The source of the proposed appropriation is Lackawanna Spring
   Name of stream, lake or other source.

2. The amount of water applied for is 0.20 second-feet
   One second-foot equals 448.83 gals. per min.
   (a) If stored in reservoir give number of acre-feet acre-feet

3. The water to be used for Stock Watering
   Irrigation, power, mining, manufacturing, domestic, or other use.

4. If use is for:
   (a) Irrigation (state number of acres to be irrigated)
   (b) Stockwater (state number and kinds of animals to be watered) 500 cattle---50 horses
   (c) Other use (describe fully under "No. 11. Remarks")
   (d) Power:
   (1) Horsepower developed
   (2) Point of return of water to stream

5. The water is to be diverted from its source at the following point: SE¼ NE¼ Sec. 3, T. 16 N., R. 63 E., M.D.B.&M., or at a point from which the N.E. corner of said Sec. 3 bears N. 29° 43' E., a distance of 2,647 feet.
   Describe as being within a 40-acre subdivision of public survey, and by course and distance to a section corner. If on unsurveyed land, it should be stated.

6. Place of use SE¼ NE¼, NE¼ NE¼ Sec. 3, T. 16 N., R. 63 E., M.D.B.&M.
   Describe by legal subdivision, if on unsurveyed land it should be so stated.

7. Use will begin about January 1st (Month) and end about December 31st (Month), of each year.

8. Description of proposed works. (Under the provisions of NRS 535.010 you may be required to submit plans and specifications of your diversion or storage works.) Water conveyed by open channel. Cattle allowed to water entire ½ mile of channel
   State manner in which water is to be diverted, whether by dam or other works, whether through pipes, ditches, flumes, or other conduits.

9. Estimated cost of works $500.00

10. Estimated time required to construct works one year

11. Remarks

Applicant City of Ely

By s/ J. V. Caselli
City Engineer

Compared hs/lb hs/ns

APPROVAL OF STATE ENGINEER

This is to certify that I have examined the foregoing application, and do hereby grant the same, subject to the following limitations and conditions:

This permit is issued subject to all existing rights on the source. It is understood that the amount of water herein granted is only a temporary allowance and that the final water right obtained under this permit will be dependent upon the period of use and the average number of cattle served from the waters of this source. The State retains the right to regulate the use of the water herein granted at any and all times but does not take responsibility for the use of the Federal range.

The amount of water to be appropriated shall be limited to the amount which can be applied to beneficial use, and not to exceed 0.0172 cubic feet per second, or sufficient water to water 550 head of cattle.

Actual construction work shall begin on or before February 12, 1966

Proof of commencement of work shall be filed before March 12, 1966

Work must be prosecuted with reasonable diligence and be completed on or before February 12, 1967

Proof of completion of work shall be filed before March 12, 1967

Application of water to beneficial use shall be made on or before February 12, 1968

Proof of the application of water to beneficial use shall be filed on or before March 12, 1968

Map in support of proof of beneficial use shall be filed on or before

Commencement of work filed JAN 19 1966
Completion of work filed Mar 9, 1967
Proof of beneficial use filed Mar 9, 1967
Cultural map filed
Certificate No. 6288 Issued 6-8-67
Recorded 6-7-67 Bk. 28 Page 247
White Pine County Recorder
218 (Rev.)

WITNESS MY HAND AND SEAL this 12th day of August, 1965

GEORGE W. HENNEN
State Engineer

By Orland R. Watkins
Assistant State Engineer

ASSIGNED 20813

Serial No.

AMENDED

APPLICATION FOR PERMIT

TO APPROPRIATE THE PUBLIC WATERS OF THE STATE OF NEVADA

Date of filing in State Engineer's Office OCT 23 1962

Returned to applicant for correction MAR 7 1963

Corrected application filed MAR 13 1963

Map filed FEB 26 1963 under 20812

The applicant City of Ely

of Ely, County of White Pine,

State of Nevada, hereby make application for permission to appropriate the public waters of the State of Nevada, as hereinafter stated. (If applicant is a corporation, give date and place of incorporation; if a copartnership or association, give names of members.)

---

1. The source of the proposed appropriation is Lackawanna Spring
   Name of stream, lake or other source.

2. The amount of water applied for is 2.0 second-feet
   One second-foot equals 448.83 gals. per min.
   (a) If stored in reservoir give number of acre-feet acre-feet

3. The water to be used for Milling
   Irrigation, power, mining, manufacturing, domestic, or other use.

4. If use is for:
   (a) Irrigation (state number of acres to be irrigated)
   (b) Stockwater (state number and kinds of animals to be watered)
   (c) Other use (describe fully under "No. 11. Remarks")
   (d) Power:
   (1) Horsepower developed
   (2) Point of return of water to stream

5. The water is to be diverted from its source at the following point: SE¼ NE¼ Sec. 3, T. 16 N., R. 63 E., M.D.B.&M., or at a point from which the N.E. corner of said Sec. 3 bears N. 29° 43' E., a distance of 2,647 feet.
   Describe as being within a 40-acre subdivision of public survey, and by course and distance to a section corner. If on unsurveyed land, it should be stated.

6. Place of use SW¼ NE¼ Sec. 3, T. 16 N., R. 63 E., M.D.B.&M.
   Describe by legal subdivision, if on unsurveyed land it should be so stated.

7. Use will begin about January 1st and end about December 31st, of each year.
   Month Month

8. Description of proposed works. (Under the provisions of NRS 535.010 you may be required to submit plans and specifications of your diversion or storage works.) Opening up of springs and pumping to Mill.
   State manner in which water is to be diverted, whether by dam or other works, whether through pipes, ditches, flumes, or other conduits.

9. Estimated cost of works $5,000.00

10. Estimated time required to construct works one year

11. Remarks Used water to be settled and returned if needed

Applicant s/ City of Ely

By s/ J. V. Caselli

Compared hs/lb hs/ns

APPROVAL OF STATE ENGINEER

This is to certify that I have examined the foregoing application, and do hereby grant the same, subject to the following limitations and conditions:

This permit is issued subject to all existing rights on the source. It is understood that the 2.0 c.f.s., herein granted is only a temporary allowance and that the final water right obtained under this permit will be dependent upon the amount of water actually placed to a beneficial use. A suitable measuring device must be installed and accurate measurements of the water placed to a beneficial use must be included in the proof of such use when filed. The State retains the right to regulate the use of the water herein granted at any and all times.

The amount of water to be appropriated shall be limited to the amount which can be applied to beneficial use, and not to exceed 2.0 cubic feet per second

Actual construction work shall begin on or before January 23, 1966

Proof of commencement of work shall be filed before February 23, 1966

Work must be prosecuted with reasonable diligence and be completed on or before January 23, 1967

Proof of completion of work shall be filed before February 23, 1967

Application of water to beneficial use shall be made on or before January 23, 1969

Proof of the application of water to beneficial use shall be filed on or before Febraury 23, 1969

Map in support of proof of beneficial use shall be filed on or before

Commencement of work filed JAN 10 1968

Completion of work filed Mar. 6, 1967

Proof of beneficial use filed Mar. 6, 1967

Cultural map filed MAR 8 1967

Certificate No. 6261 Issued 4-24-67

Recorded 9-3-67 Bk. 286 Page 237

White Pine County Recorder

218 (Rev.)

WITNESS MY HAND AND SEAL this 23rd day of July, 1965

GEORGE W. HENNEN
State Engineer

By Roland R. Westergard
Assistant State Engineer

Application No. 6059 Certificate Record No. 837 Book 4 Page 837

THE STATE OF NEVADA

CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, John Lusetti has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from Lusetti Spring through pipeline, tank and reservoirs for stockwatering purposes. The point of diversion of water from the source is as follows: SE¼ SE¼ Sec. 28, T. 18 N., R. 63 E., whence the SE cor. T. 18 N., R. 63 E., M.D.B. & M. bears S. 70° 10' E., 17,440 feet, situated in White Pine County, State of Nevada.

NOW KNOW YE, That the State Engineer, under the provisions of Section 72, Chapter 140, Statutes of 1913 has determined the date, source, purpose and amount of such appropriation, together with the place to which such water is appurtenant, as follows:

Name of appropriator John Lusetti

Postoffice address Steptoe, Nevada

Amount of appropriation 0.003 of a cubic foot of water per second

Period of use, from June 1st to October 1st of each year

Date of priority of appropriation April 17, 1920

Description of works of diversion, manner and place of use: Water is diverted from spring through 10 feet of 2 inch pipe to small tank, thence by small ditches to 4 small reservoirs, and there used for watering 200 head of cattle.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place where acquired and to the purpose for which acquired.

IN TESTIMONY WHEREOF, I, Robert A. Allen, State Engineer of Nevada, have hereunto set my hand and the seal of my office, this 30th day of October, A.D. 1923.

Robert A. Allen
State Engineer

Recorded Nov. 1-1923 Bk. Page 551-552 - Miscellaneous Records
White Pine County Records

Compared [illegible]

ASSIGNED

APPLICATION FOR PERMIT Serial No. 6059

TO APPROPRIATE THE PUBLIC WATERS OF THE STATE OF NEVADA

Date of first receipt and filing in State Engineer's office APR 17 1920
Returned to applicant for correction
Corrected application filed

The undersigned John Lusetti,
Name of applicant.
of Steptoe, County of White Pine,
State of Nevada, hereby makes application for permission to appropriate the public waters of the State of Nevada, as hereinafter stated. (If applicant is a corporation give date and place of incorporation.)

1. The source of the proposed appropriation is Lusetti Spring,
Name of stream, lake, or other source.

2. The amount of water applied for is one-eighth second-feet.
One second-foot equals 40 miners' inches.

3. The water to be used for Stock Watering
Irrigation, power, mining, manufacturing, domestic, or other use.

4. The water is to be diverted from its source at the following point: in the SE¼ of the SE¼, Sec. 28, T. 18 N., R. 63 E., unsurveyed,
Describe as being within a 40-acre subdivision of public survey, or by course and distance to a section-corner. If on unsurveyed land it should be so stated.
whence the SE. Cor. T. 18 N., R. 63 E., M.D.B. & M., bears S. 70°10' E., 17,440 feet.

IF THE WATER IS TO BE USED FOR IRRIGATION, SUPPLY THE FOLLOWING INFORMATION:

(a) Number of acres to be irrigated is

(b) Description of land to be irrigated
Describe by legal subdivision, or if on unsurveyed land it should be so stated and a description provided in accordance with special instruction from the State Engineer when application is returned for correction.

(c) Irrigation will begin about (Month) and end about (Month), of each year.

IF WATER IS TO BE USED FOR POWER, MINING, TRANSPORTATION, OR OTHER USE, SUPPLY THE FOLLOWING INFORMATION:

(d) Power to be developed is horsepower.

(e) Works to be located SE¼ of SE¼, Sec. 28, T. 18 N., R. 63 E., M.D.B.&M., unsurveyed.
Give 40-acre subdivision on which works will be located, or locate by course and distance to a section-corner.

(f) Point of return of water to stream about five hundred feet below the spring in the SE¼ of SE¼ Sec. 28, T. 18 N., R. 63 E., Uns.
Describe in same manner as point of diversion.

(g) Remarks It is the intention of the applicant to use the water from Lusetti spring to water about one hundred head of cattle from June 1st to October 1st of each year.

DESCRIPTION OF PROPOSED WORKS

By means of small dams of earth and stone across the channel thence

State manner in which water is to be diverted, whether by dam or other works, whether through pipes, ditches, flumes, or other conduits. If water

by pipe to stock watering troughs near the spring.

is to be stored in reservoirs it should be so stated and the location of the reservoir should be given with reference to the legal subdivisions.

5. Estimated cost of works $100.00

6. Estimated time required to construct works one year.

7. Remarks

For use of applicant.

John Lusetti, Applicant.

By

Compared P.F.Jones.

This sheet inspected

, Engineer.

APPROVAL OF STATE ENGINEER

This is to certify that I have examined the foregoing application, and do hereby grant the same, subject to the following limitations and conditions:

This permit is issued subject to all prior rights on the source.

The State reserves the right to regulate the use of the water herein granted at any and all times. It is distinctly understood that the applicant agrees to the terms herein contained.

The amount of water to be appropriated shall be limited to the amount which can be applied to beneficial use, and not to exceed 0.003 cubic feet per second.

Actual construction work shall begin on or before August 25 1921

Proof of commencement of work shall be filed before September 25 1921

Work must be prosecuted with reasonable diligence and be completed on or before August 25 1922

Proof of completion of work shall be filed before September 25 1922

Application of water to beneficial use shall be made on or before August 25 1923. Proof of the application of water to beneficial use must be filed with State Engineer on or before September 25 1923

WITNESS MY HAND AND SEAL this 25th day of June 1921

J. R. Iverson

State Engineer.

Proof of labor filed JAN 16 1922

Map filed Feb 8, 1922

Proof of completion of work filed JUL -3 1922

Proof of beneficial use filed OCT 27 1923

Certificate No. 837 Book 4 Issued Oct 30 1923 for 0.003 cfs

Compared

ASSIGNED

Application No. 4992 Certificate Record No. 904 Book 4 Page 904

THE STATE OF NEVADA

CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, W. N. McGill, Manager of The Adams-McGill Company has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from McGill Spring through a pipeline and trough for stockwatering purposes. The point of diversion of water from the source is as follows: in the SW¼ NE¼ Sec. 14, T. 17 N., R. 64 E., M.D.B.&M. situated in White Pine County, State of Nevada.

NOW KNOW YE, That the State Engineer, under the provisions of Section 72, Chapter 140, Statutes of 1913 has determined the date, source, purpose and amount of such appropriation, together with the place to which such water is appurtenant, as follows:

Name of appropriator The Adams-McGill Company

Postoffice address Ely, White Pine County, Nevada

Amount of appropriation 0.025 of a cubic foot of water per second

Period of use, from March 1st to October 1st of each year

Date of priority of appropriation April 5th, 1918

Description of works of diversion and use: Water is conveyed from spring through 160 feet of 1¼ inch iron pipe laid in a trench to 150 feet of circular galvanized iron watering troughs, where it is used for watering cattle and sheep.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place where acquired and to the purpose for which acquired.

IN TESTIMONY WHEREOF, I, Robert A. Allen, State Engineer of Nevada, have hereunto set my hand and the seal of my office, this 11th day of December, A.D. 1923

Robert A. Allen
State Engineer

Compared A.M.P.M.

ASSIGNED

Serial No. 4992

AMENDED

APPLICATION FOR PERMIT

TO APPROPRIATE THE PUBLIC WATERS OF THE STATE OF NEVADA

Date of first receipt and filing in State Engineer's office APR-5 1918
Returned to applicant for correction APR-5 1918
Corrected application filed APR 10 1918

The undersigned W.N.McGill,
Name of applicant.
of Ely, County of White Pine,
State of Nevada, hereby makes application for permission to appropriate the public waters of the State of Nevada, as hereinafter stated. (If applicant is a corporation give date and place of incorporation.)

1. The source of the proposed appropriation is Unnamed Spring on
Name of stream, lake, or other source.
West side of Duck Creek,

2. The amount of water applied for is One (1) second-feet.
One second-foot equals 40 miners' inches.

3. The water to be used for Watering stock and domestic use,
Irrigation, power, mining, manufacturing, domestic, or other use.

4. The water is to be diverted from its source at the following point: SW¼ of NE¼, Sec.14, T.17 N., R. 64 E., M.D.B. & M.,
Describe as being within a 40-acre subdivision of public survey, or by course and distance to a section corner. If on unsurveyed land it should be so stated.

IF THE WATER IS TO BE USED FOR IRRIGATION, SUPPLY THE FOLLOWING INFORMATION:

(a) Number of acres to be irrigated is Not for irrigation

(b) Description of land to be irrigated
Describe by legal subdivision, or if on unsurveyed land it should be so stated and a description provided in accordance with special instruction from the State Engineer when application is returned for correction.

(c) Irrigation will begin about
Month.
and end about
Month.
, of each year.

IF WATER IS TO BE USED FOR POWER, MINING, TRANSPORTATION, OR OTHER USE, SUPPLY THE FOLLOWING INFORMATION:

(d) Power to be developed is Not for power horsepower.

(e) Works to be located SW¼ of NE¼, Sec.14, T.17 N., R. 64 E., M.D.B.&M.,
Give 40-acre subdivision on which works will be located, or locate by course and distance to a section corner.

(f) Point of return of water to stream Not to be returned to stream.
Describe in same manner as point of diversion.

(g) Remarks 8000 sheep and 300 cattle watered daily.

DESCRIPTION OF PROPOSED WORKS

Water to be diverted by means of pipes and conveyed into galvanized steel troughs 100 feet long.

State manner in which water is to be diverted, whether by dam or other works, whether through pipes, ditches, flumes, or other conduits. If water is to be stored in reservoirs it should be so stated and the location of the reservoir should be given with reference to the legal subdivisions.

5. Estimated cost of works $350.00

6. Estimated time required to construct works One year.

7. Remarks

For use of applicant.

W.N.McGill, , Applicant.

By

Compared P.P.Jones

This sheet inspected

, Engineer.

APPROVAL OF STATE ENGINEER

This is to certify that I have examined the foregoing application, and do hereby grant the same, subject to the following limitations and conditions:

This permit is issued subject to all prior rights on the source. The State reserves the right to regulate the use of the water herein granted at any and all times. It is distinctly understood that the applicant agrees to the terms herein contained.

The amount of water to be appropriated shall be limited to the amount which can be applied to beneficial use, and not to exceed 0.025 cubic feet per second. (One fortieth)

Actual construction work shall begin on or before November 10, 1918.

Proof of commencement of work shall be filed before December 10, 1918.

Work must be prosecuted with reasonable diligence and be completed on or before May 10, 1919.

Proof of completion of work shall be filed before June 10, 1919.

Application of water to beneficial use shall be made on or before Sept. 10, 1919. Proof of the application of water to beneficial use must be filed with State Engineer on or before Oct. 10, 1919.

WITNESS MY HAND AND SEAL this 10th day of September, 1918.

Proof of labor filed DEC -3 1918

Proof of completion of work filed JUN 26 1919

Map filed JUL -7 1919

Proof of beneficial use filed AUG 18 1919

Seymour Case
State Engineer.

Certificate No. 904 BKA

Dec 11 1923 for 0.025 c.f.s.

ASSIGNED

Application No. 42106 Certificate Record No. 12177 Book 41 Page 12177

THE STATE OF NEVADA
CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, Richard E. Fonger, Agent has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from McGill Spring through a collection pond, pipeline and distribution system for Industrial and Domestic purposes. The point of diversion of water from the source is as follows: SE¼ NW¼ Section 21, T.18N., R.64E., M.D.B.&M., or at a point from which the NE corner of said Section 21 bears N. 49° 37' 22" E., a distance of 3,686.88 feet situated in White Pine County, State of Nevada.

NOW KNOW YE, That the State Engineer, under the provisions of NRS 533.425, has determined the date, source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

Name of appropriator Kennecott Corporation

Post-office address McGill, Nevada

Amount of appropriation 8.0 c.f.s., but not to exceed 1887.25 million gallons annually

Period of use, from January 1st to December 31st of each year

* Date of priority of appropriation July 18, 1911

Description of works of diversion, manner and place of use:

Water is diverted by means of a collection pond (McGill swimming pool, 200 feet x 130 feet x 9 feet deep) via 3 pumps two of which are 600 H.P. and one 300 H.P. via an 8 foot wide and two foot deep ditch, thence conveyed to the place of use for industrial and domestic purposes to serve a copper reduction plant located within portions of the NE¼, SE¼, E½ SW¼, E½ NW¼ of Section 28, and the SE¼ of Section 21, T.18N., R.64E., M.D.B.&M.

*This certificate changes the point of diversion and manner of use of Permit 2147, Certificate No. 144, therefore the date of priority remains the same as Permit 2147, Certificate No. 144.

This certificate is issued subject to the terms of the permit.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place and for the purpose as set forth herein.

IN TESTIMONY WHEREOF, I PETER G. MORROS, State Engineer of Nevada, have hereunto set my hand and the seal of my office, this 21st day of JUNE, A.D. 19 89

Compared bc/bk

Recorded ____ Bk. ____ Page ____

____ County Records

State Engineer

1923

THE STATE OF NEVADA

CERTIFICATE OF APPROPRIATION OF WATER

~ ~ ~ ~ ~

WHEREAS, Richard E. Fonger, Agent has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from McGill Spring through a collection pond, canal and ditches for Irrigation purposes. The point of diversion of water from the source is as follows:

> SE¼ NW¼ Section 21, T.18N., R.64E., M.D.B.&M. or at a point from which the NE corner of said Section 21 bears N. 49° 56' 25" E., a distance of 3,663.86 feet situated in White Pine County, State of Nevada.

NOW KNOW YE, That the State Engineer, under the provisions of NRS 533.425, has determined the date, source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

Name of appropriator:	Kennecott Corporation
Source:	McGill Spring
Manner of Use:	Irrigation
Amount of appropriation:	3.0 c.f.s. but not to exceed 1,359.84 acre-feet per season
Period of use:	April 1st to October 31st of each year
Date of priority of appropriation:	April 20, 1982

Description of land to which the water is appurtenant:

1.21	Acres in the	SW¼ NW¼	Section 16, T.18N.,	R.64E., M.D.B.&M.
35.34	Acres in the	NW¼ SW¼	Section 16, T.18N.,	R.64E., M.D.B.&M.
15.15	Acres in the	NE¼ SW¼	Section 16, T.18N.,	R.64E., M.D.B.&M.
18.52	Acres in the	SW¼ SW¼	Section 16, T.18N.,	R.64E., M.D.B.&M.
31.96	Acres in the	SE¼ SW¼	Section 16, T.18N.,	R.64E., M.D.B.&M.
20.94	Acres in the	NW¼ NW¼	Section 17, T.18N.,	R.64E., M.D.B.&M.
39.26	Acres in the	NE¼ NW¼	Section 17, T.18N.,	R.64E., M.D.B.&M.
7.12	Acres in the	SW¼ NW¼	Section 17, T.18N.,	R.64E., M.D.B.&M.
32.85	Acres in the	SE¼ NW¼	Section 17, T.18N.,	R.64E., M.D.B.&M.
27.20	Acres in the	NW¼ NE¼	Section 17, T.18N.,	R.64E., M.D.B.&M.
39.80	Acres in the	SW¼ NE¼	Section 17, T.18N.,	R.64E., M.D.B.&M.
20.06	Acres in the	SE¼ NE¼	Section 17, T.18N.,	R.64E., M.D.B.&M.
14.18	Acres in the	NW¼ SE¼	Section 17, T.18N.,	R.64E., M.D.B.&M.
34.82	Acres in the	NE¼ SE¼	Section 17, T.18N.,	R.64E., M.D.B.&M.
1.55	Acres in the	SE¼ SE¼	Section 17, T.18N.,	R.64E., M.D.B.&M.
339.96	Acres Total			

The total combined rate of diversion granted under this certificate and Permit 42106, Certificate 12177, is limited to 10.2 c.f.s.

This certificate is issued subject to the terms of the permit and with the understanding that the total duty of water shall not exceed 4.0 acre-feet per acre per season from any/or all sources.

continued

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place and for the purpose as set forth herein.

IN TESTIMONY WHEREOF, I R. MICHAEL TURNIPSEED, State Engineer of Nevada, have hereunto set my hand and the seal of my office, this 7th day of OCTOBER, A.D. 19 92.

R. Michael Turnipseed P.E.
State Engineer

bk/sb

ASSIGNED

AMENDED Serial No. 42106

APPLICATION FOR PERMISSION TO CHANGE POINT OF DIVERSION, MANNER OF USE AND PLACE OF USE OF THE PUBLIC WATERS OF THE STATE OF NEVADA HERETOFORE APPROPRIATED

Date of filing in State Engineer's Office AUG 1 8 1980

Returned to applicant for correction NOV 1 9 1980

Corrected application filed DEC 1 7 1980 Map filed APR 2 3 1981 under 42112

The applicant Kennecott Corporation

of McGill
Street and No. or P.O. Box No. City or Town

Nevada 89318 hereby make application for permission to change the
State and Zip Code No.

point of diversion and manner of use

of water heretofore appropriated under Certificate Record No. 144 - Book 3, Page 144 and Application No. 2147.
(Identify existing right by Permit, Certificate, Proof or Claim Nos. If Decreed, give title of Decree and identify right in Decree.)

1. The source of water is McGill Spring
Name of stream, lake, underground, spring or other source.

2. The amount of water to be changed 8 c.f.s.
Second feet, acre feet. One second foot equals 448.83 gallons per minute.

3. The water to be used for Industrial and Domestic
Irrigation, power, mining, industrial, etc. If for stock state number and kind of animals.

4. The water heretofore used for Milling, Metallurgical and Domestic
Irrigation, power, mining, industrial, etc. If for stock state number and kind of animals.

5. The water is to be diverted at the following point SE¼ NW¼ of Sec. 21, T.18N., R.64E., M.D.B.&M., or at a point from which the NW Corner of said Sec. 21 bears N. 49°37'22"E., 3,686.88 ft. distance.
Describe as being within a 40-acre subdivision of public survey and by course and distance to a section corner. If on unsurveyed land, it should be stated.

6. The existing point of diversion is located within SE¼ NW 1.4 of Sec. 21, T.18N., R.64E., M.D.B.&M.
If point of diversion is not changed, do not answer.

7. Proposed place of use Unchanged
Describe by legal subdivisions. If for irrigation state number of acres to be irrigated.

8. Existing place of use Portions of each of the following land parcels: NE¼, SE¼, E½ SW¼, E½ NW¼ of Sec. 28, T.18N., R.64E., M.D.B.&M.; and ALSO the SE¼ of Sec. 21, T.18N., R.64E., M.D.B.&M.
Describe by legal subdivisions. If presently used for irrigation, state number of acres irrigated.

9. Use will be from 1 January to 31 December of each year.
Month and Day Month and Day

10. Use has been from 1 January to 31 December of each year.
Month and Day Month and Day

11. Description of proposed works. (Under the provisions of NRS 535.010 you may be required to submit plans and specifications of your diversion or storage works.) Water is diverted from the spring through a ditch 8 ft. wide by 2 ft. deep; thence it is pumped through a 26" pipeline 5,100 ft. in length, against a head of 480 ft. to the place of use at the Kennecott Reduction Plant.
State manner in which water is to be diverted, whether by dam or other works, whether through pipes, ditches, flumes, or other conduits.

12. Estimated cost of works N/A

13. Estimated time required to construct works N/A

14. Estimated time required to complete the application of water to beneficial use N/A

15. Remarks: For use other than irrigation or stock watering, state number and type of units to be served or annual consumptive use.

This application is filed to record the survey tie from the current point of diversion to a section corner. This water will be used as heretofore appropriated, but to simplify the application it is changed to Industrial and Domestic Use.

Compared ha/ bl br/ja

Applicant Nevada Mines Division
Kennecott Minerals Company
A Division of Kennecott Corporation

By s/Richard E. Fonger
State Water Rights Surveyor
Kennecott Minerals Company
McGill, Nevada 89318

APPROVAL OF STATE ENGINEER

This is to certify that I have examined the foregoing application, and do hereby grant the same, subject to the following limitations and conditions:

This permit to change the point of diversion and manner of use of the waters of McGill Spring as heretofore granted under Permit 2147, Certificate 144, is issued subject to the terms and conditions imposed in said Permit 2147, Certificate 144, and with the understanding that no other rights on the source will be affected by the change proposed herein. A measuring device must be installed and measurements of water use kept.

This permit is subject to the condition that the permittee must ensure that wildlife which have customarily used such water will have access thereto, NRS 533.367.

The amount of water to be changed shall be limited to the amount which can be applied to beneficial use, and not to exceed 8.0 cubic feet per second

Actual construction work shall begin on or before N/A

Proof of commencement of work shall be filed before N/A

Work must be prosecuted with reasonable diligence and be completed on or before February 10, 1984

Proof of completion of work shall be filed before March 10, 1984

Application of water to beneficial use shall be made on or before February 10, 1986

Proof of the application of water to beneficial use shall be filed on or before March 10, 1986

Map in support of proof of beneficial use shall be filed on or before

Commencement of work filed MAR 19 1984
Completion of work filed
Proof of beneficial use filed FEB 3 1986
Cultural map filed
Certificate No. 12177 Issued JUN 21 1990

IN TESTIMONY WHEREOF, I PETER G. MORROS, State Engineer of Nevada, have hereunto set my hand and the seal of my office, this 10th day of FEBRUARY, A.D. 19 83

s/Peter G. Morros
State Engineer

2407 (Rev. 10-79)

RECEIVED

No 45563

APPLICATION FOR PERMIT
TO APPROPRIATE THE PUBLIC WATERS OF THE STATE OF NEVADA

Date of filing in State Engineer's Office APR 2 0 1982

Returned to applicant for correction

Corrected application filed

Map filed APR 2 3 1982 under 42112

The applicant Kennecott Corporation

, of McGill ,
Street and No. or P.O. Box No. City or Town

Nevada 89318 , hereby make s application for permission to appropriate the public
State and Zip Code No.

waters of the State of Nevada, as hereinafter stated. (If applicant is a corporation, give date and place of incorporation; if a copartnership or association, give names of members.)

April 29, 1915, State of New York

---

1. The source of the proposed appropriation is McGill Spring
Name of stream, lake, spring, underground or other source

2. The amount of water applied for is 3 c.f.s. second-feet
One second-foot equals 448.83 gals. per min.

   (a) If stored in reservoir give number of acre-feet

3. The water to be used for Irrigation
Irrigation, power, mining, manufacturing, domestic, or other use. Must limit to one use.

4. If use is for:

   (a) Irrigation, state number of acres to be irrigated: 345 Acres

   (b) Stockwater, state number and kinds of animals to be watered:

   (c) Other use (describe fully under "No. 12. Remarks"

   (d) Power:

      (1) Horsepower developed

      (2) Point of return of water to stream

5. The water is to be diverted from its source at the following point: SE¼ NW¼ of Section 21, T.18N.,
Describe as being within a 40-acre subdivision of public survey, and by course and distance to a section corner. If on unsurveyed land, it should be so stated.
R.64E., M.D.B.&M., or at a point from which the NE Corner of said Section 21 bears N. 49° 37' 22" E., at 3,686.88 feet distance.

6. Place of use Portions of the following land parcels:
Describe by legal subdivision. If on unsurveyed land, it should be so stated.
SW¼, SW¼ NW¼ of Section 16; N½, N½ SE¼, SE¼ SE¼ Section 17; NE¼ NE¼ of Section 18; all in T.18N., R.64E., M.D.B.&M.

7. Use will begin about January 1 and end about December 31, of each year.
Month and Day Month and Day

8. Description of proposed works. (Under the provisions of NRS 535.010 you may be required to submit plans and specifications of your diversion or storage works.) Water from McGill Spring is diverted at the
State manner in which water is to be diverted, i.e. diversion structure, ditches and flumes, drilled well with pump and motor, etc.
McGill swimming pool and distributed to the place of use by irrigation ditches.

9. Estimated cost of works $15,000.00

10. Estimated time required to construct works 3 Years
If well completed, describe works.

11. Estimated time required to complete the application of water to beneficial use 5 Years

12. Remarks: For use other than irrigation or stock watering, state number and type of units to be served or annual consumptive use.

This application is filed to appropriate 3 additional c.f.s. of water over the 8 c.f.s. previously appropriated for Industrial and Domestic use. Application No. 42106

By s/ Richard E. Fonger
State Water Right Surveyor
Kennecott Minerals Company
McGill, Nevada 89318

Compared lmw/js bc/bl

Protested

APPROVAL OF STATE ENGINEER

This is to certify that I have examined the foregoing application, and do hereby grant the same, subject to the following limitations and conditions:

This permit is issued subject to all existing rights on the source. A substantial headgate and measuring device must be installed and maintained to facilitate the measurement and control of water. The State retains the right to regulate the use of the water herein granted at any and all times.

The total combined duty of water under this permit and Permit 42106 shall not exceed 10.2 c.f.s.

The amount of water to be appropriated shall be limited to the amount which can be applied to beneficial use, and not to exceed 3.0 cubic feet per second, but not to exceed a yearly duty of 4.0 acre-feet per acre of land irrigated from any and/or all sources, and not to exceed 1380 acre-feet annually.

Work must be prosecuted with reasonable diligence and be completed on or before February 10, 1984

Proof of completion of work shall be filed before March 10, 1984

Application of water to beneficial use shall be made on or before February 10, 1986

Proof of the application of water to beneficial use shall be filed on or before March 10, 1986

Map in support of proof of beneficial use shall be filed on or before March 10, 1986

Completion of work filed MAR 19 1984

Proof of beneficial use filed

Cultural map filed

Certificate No. 13471 Issued OCT 07 1992

IN TESTIMONY WHEREOF, I PETER G. MORROS, State Engineer of Nevada, have hereunto set my hand and the seal of my office, this 15th day of JULY, A.D. 19 83

State Engineer

218 (Rev.)

Serial No. 57183

APPLICATION FOR PERMISSION TO CHANGE POINT OF DIVERSION, MANNER OF USE AND PLACE OF USE OF THE PUBLIC WATERS OF THE STATE OF NEVADA HERETOFORE APPROPRIATED

Date of filing in State Engineer's Office FEB 11 1992

Returned to applicant for correction

Corrected application filed Map filed FEB 11 1992

The applicant McGill-Ruth Consolidated Sewer and Water General Improvement District

P.O. Box 1376 (Street and No. or P.O. Box No.) of McGill (City or Town)

Nevada 89318 (State and Zip Code No.) hereby make S application for permission to change the

Point of Diversion (Point of diversion, manner of use, and/or place of use)

of water heretofore appropriated under Permit No. 50636 (Identify existing right by Permit, Certificate, Proof or Claim Nos. If Decreed, give title of Decree and identify right in Decree.)

1. The source of water is Underground Sources (Name of stream, lake, underground spring or other source.)

2. The amount of water to be changed 4.0 cfs (Second feet, acre feet. One second foot equals 448.83 gallons per minute.)

3. The water to be used for Municipal (Irrigation, power, mining, industrial, etc. If for stock state number and kind of animals.)

4. The water heretofore permitted for Municipal (Irrigation, power, mining, industrial, etc. If for stock state number and kind of animals.)

5. The water is to be diverted at the following point in the SE¼ SE¼ of Section 31, T.18 N., R.64 E., M.D.B.& M. whence the Southeast Corner of said Section 31 bears S.87°48'36"E., 740.41 feet distant. (Describe as being within a 40-acre subdivision of public survey and by course and distance to a section corner. If on unsurveyed land, it should be stated.)

6. The existing permitted point of diversion is located within the NW¼ NW¼ of Section 5, T.17N., R. 64 E., M.D.B.& M. whence the Northwest Corner of said Section 5 bears N. 89°35'22"W., 868.19 feet distant. (If point of diversion is not changed, do not answer.)

7. Proposed place of use the S½ NE¼, N½ SE¼, SW¼ SE¼, SE¼ SW¼ of Section 21; W½ E½, E½ W½, SW¼ NW¼, W½ SW¼ of Section 28; SE¼ SE¼ of Section 29; N½ NW¼, SW¼ NW¼, NW¼ SW¼ of Section 33; E½ NE¼, SW¼ NE¼, S½ of Section 32; all in T.18 N., R.64 E., M.D.B.& M. (Describe by legal subdivisions. If for irrigation state number of acres to be irrigated.)

8. Existing place of use the S½ NE¼, N½ SE¼, SW¼ SE¼, SE¼ SW¼ of Section 21; W½ E½, E½ W½, SW¼ NW¼, W½ SW¼ of Section 28; N½ NW¼, SW¼ NW¼, NW¼ SW¼ of Section 33; SE¼ SE¼ of Section 29; E½ NE¼, SW¼ NE¼, S½ of Section 32; all in T.18 N., R.64 E., M.D.B.& M. (Describe by legal subdivisions. If permit is for irrigation, state number of acres irrigated. If changing place of use and/or manner of use of irrigation permit, describe acreage to be removed from irrigation.)

9. Use will be from January 1 (Month and Day) to December 31 (Month and Day) of each year.

10. Use was permitted from January 1 (Month and Day) to December 31 (Month and Day) of each year.

11. Description of proposed works. (Under the provisions of NRS 535.010 you may be required to submit plans and specifications of your diversion or storage works.) The water will be transferred through a pipeline to the tank site and then piped throughout the proposed place of use. (State manner in which water is to be diverted, i.e. diversion structure, ditches, pipes and flumes, or drilled well, etc.)

12. Estimated cost of works $2,054,000.00

13. Estimated time required to construct works ten years

14. Estimated time required to complete the application of water to beneficial use thirty years

15. Remarks: For use other than irrigation or stock watering, state number and type of units to be served or annual consumptive use:

The Applicant proposes to use this application in conjunction with Permit No. 43753 to supply municipal water to the McGill Townsite at the rate of 950,000 gallons per day, 365 days per year, for a total annual consumption of 346.75 millon gallons.

s/ Richard W. Forman
By Richard W. Forman Agent
P.O. Box 150
Ely, Nevada 89301

Compared jv/ nsr ap/se

Protested 4/6/92 by; City of Ely, NV:
Pro. wdr. 5-12 92

APPROVAL OF STATE ENGINEER

This is to certify that I have examined the foregoing application, and do hereby grant the same, subject to the following limitations and conditions:

This permit to change the point of diversion of the waters of an underground source as heretofore granted under Permit 50636 is issued subject to the terms and conditions imposed in said Permit 50636 and with the understanding that no other rights on the source will be affected by the change proposed herein. The well shall be equipped with a 2-inch opening and a totalizing meter must be installed and maintained in the discharge pipeline near the point of diversion and accurate measurements must be kept of water placed to beneficial use. The totalizing meter must be installed before any use of the water begins or before the proof of completion of work is filed. If the well is flowing, a valve must be installed and maintained to prevent waste. This source is located within an area designated by the State Engineer pursuant to NRS 534.030. The State retains the right to regulate the use of the water herein granted at any and all times.

This permit does not extend the permittee the right of ingress and egress on public, private or corporate lands.

The issuance of this permit does not waive the requirements that the permit holder obtain other permits from State, Federal and local agencies.

The total combined duty of water under Permits 43753 and 57183 shall not exceed 524.79 million gallons annually.

The amount of water to be changed shall be limited to the amount which can be applied to beneficial use, and not to exceed 4.0 cubic feet per second, but not to exceed 180.96 million gallons annually.

Work must be prosecuted with reasonable diligence and be completed on or before September 26, 1993

Proof of completion of work shall be filed before October 26, 1993

Application of water to beneficial use shall be made on or before September 26, 1994

Proof of the application of water to beneficial use shall be filed on or before October 26, 1994

Map in support of proof of beneficial use shall be filed on or before N/A

NOV 2 4 1993

Completion of work filed

Proof of beneficial use filed

Cultural map filed

Certificate No. Issued

IN TESTIMONY WHEREOF, I, R. MICHAEL TURNIPSEED, P.E., State Engineer of Nevada, have hereunto set my hand and the seal of my office, this 10th day of July, A.D. 19 92.

State Engineer

(1)-1108 (Rev. 6-81)

ASSIGNED

Application No. 338 Certificate Record No. 1085 Book 5 Page 1085

THE STATE OF NEVADA

CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, Arthur Smith, President of the Ely Water Company has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from Murry Creek and Springs through the Murry Creek Ditches for Irrigation and Domestic purposes. The point of diversion of water from the source is as follows: at points in the E. part NE¼ SW¼ Sec. 10, T. 16 N., R. 63 E., MDB&M. situated in White Pine County, State of Nevada.

NOW KNOW YE, That the State Engineer, under the provisions of Section 27, Chapter 46, Statutes of 1905 has determined the date, source, purpose and amount of such appropriation, together with the place to which such water is appurtenant, as follows:

Name of appropriator Ely Water Company

Postoffice address East Ely, White Pine County, Nevada.

Amount of appropriation 2.298 cubic feet of water per second, or 689.4 acre feet per season.

Period of use, from April 1st to October 1st of each year

Date of priority of appropriation January 19th, 1907.

Description of irrigated land to which water is appurtenant is as follows:

5.7	acres cultivated in the	SW¼	NE¼	Sec.	10	T.	16 N.	R.	63 E. MDB&M.
3.6	"	SE¼	NE¼	"	"	"	"	"	"
6.3	"	NW¼	NE¼	"	"	"	"	"	"
37.7	"	NE¼	NE¼	"	"	"	"	"	"
26.0	"	NW¼	NW¼	"	11	"	"	"	"
13.6	"	SE¼	SW¼	"	2	"	"	"	"
1.1	"	NE¼	SW¼	"	"	"	"	"	"
29.5	"	NW¼	SW¼	"	"	"	"	"	"
31.8	"	SW¼	SW¼	"	"	"	"	"	"
2.9	"	SE¼	NW¼	"	"	"	"	"	"
15.1	"	SW¼	NW¼	"	"	"	"	"	"
4.5	"	NW¼	NW¼	"	"	"	"	"	"
1.7	"	NE¼	NW¼	"	"	"	"	"	"
16.3	"	NE¼	SE¼	"	3	"	"	"	"
34.0	"	SE¼	SE¼	"	"	"	"	"	"

229.8 acres Total

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place where acquired and to the purpose for which acquired.

IN TESTIMONY WHEREOF, I, ROBERT A. ALLEN, State Engineer of Nevada, have hereunto set my hand and the seal of my office, this 16th day of December, A. D. 1924.

Robert Allen
State Engineer.

Compared RMC-RMC

Recorded Jan. 24, 1925 Bk 97 Page 127 & 128
White Pine County Records

ASSIGNED

No. 338

APPLICATION FOR PERMIT

To Appropriate the Public Waters of the State of Nevada

1. Date of receipt of application Jan 19, 1907
2. Name of applicant Ely Townsite Company
   Postoffice address: Ely, Nevada.
   County White Pine.
   I. If applicant is a corporation, give
   (a) Date and place of corporation March, 28, 1906 Maine.
   (b) The amount of capital stock $500,000.00
   (c) The amount paid in $500,000.00
   (d) The names and addresses of Directors W.J. Palmer, A.G. Corbett, Chas. S. Chandler, all of Ely, Nev. and W.B. Thompson, 25 Broad St, New York City.
3. The quantity of water claimed is twelve (12) cubic feet per second.
4. Source of water supply is Murry Creek in White Pine Co. and springs that feed it,
5. Location of point of diversion about 30 feet above the bridge at the point where the county road crosses said stream in the Easterly portion of the town of Ely, being in the
6. To be used for: S.E.¼ of sec. 16, T. 16 N. R. 63 E. M.D.B.M.
   I. Irrigation and domestic use:
   (a) Number of acres to be irrigated 2000 acres.
   (b) In the following legal subdivisions sec. 10, 11, 2 & 3 in said township and (A list of lands to be irrigated may be appended as a part of this application.)
   range and portions of sec. 34, 35, 26 & 27 in T. 17 N. R. 63 E. M.D.B.M.
   (c) Said waters are to be used primarily for the purpose of supplying the towns of Ely and Ely City, in said county, with water by means of a municipal domestic water system; any surplus remaining after such use to be applied to use for irrigation as above specified. This application is in no way intended as an abandonment of the rights already vested in said applicant to use said waters for the irrigation of said lands.
   II. Mining, power, manufacturing or transportation purposes:
   (a) To be used for
   (b) Amount of power to be generated horse power.
   (c) At what point
   (d) Is water to be returned to stream, ("yes" or "no")
   (e) If "yes" at what point
7. Estimated cost of works
8. Description of works for diversion:
   I. Kind of works (reservoir, dam, ditch, flume, pipes or otherwise) Dam, pumping plant, ditch, flume or pipe

II. *Dimensions of works:*

(a) *Height of dam,* ____ *feet; length of dam at top,* ____ *feet; length of dam at bottom,* ____ *feet; material used in construction (wood, earth, stone or concrete)* ____

(b) *Capacity of reservoir* ____ *acre-feet.*

(c) *Size of headgate—width,* ____ *feet; height,* ____ *feet.*

(d) *Ditch (flume or pipe)—width at bottom,* ____ *feet; width at water line,* ____ *feet; depth of water,* ____ *feet. Average grade per mile is* ____ *feet. Length of ditch is* ____ *miles, and crosses the following quarter sections:* ____

to ____ *which is the point of intended use.*

APPROVAL OF STATE ENGINEER

The number of this permit is 338

Date of receipt of first application Jan. 19 , 1907.

Return to applicant for correction ____ 190__.

Corrected application received ____ 190__.

Last notice published Feb. 23 1907.

Recorded in Book B. , *page* 338.

Approved May. 4 , 1907.

This is to certify that I have examined the within application for a permit to appropriate the public waters of the State of Nevada, and hereby grant the same, subject to the following limitations and conditions:

The amount of water to be appropriated not more than 12 *cubic feet per second.*

The construction of the within described works to be commenced not later than Aug. 1-07

One-fifth of the work above specified to be completed on or before Jan. 1-08

The whole of said work to be completed on or before Aug. 1-08

The time for the proof of beneficial use of water appropriated in accordance herewith, to extend to Aug. 1-09

Witness my hand this Fourth. *day of* May. , 1907.

Henry. Thurtell.
State Engineer.

REMARKS

(This space not to be written in by applicants.)

Reinstated SEP 23 1911

W. M. KEARNEY
State Engineer.

Cancelled SEP 14 1911 for failure to file proof of beneficial use.

State Engineer.

Cultural Map Filed June 7, 1924

Proof of beneficial use filed JAN. -6 1919

Certificate No. 1285 Issued Dec. 16 1924 for 2.298 c.f.s. - irrigation dom.

Recorded Jan 24 1925 Bk. 97 Page 1278 128

White Pine County Records

Application No. 11964 Certificate Record No. 3780 Book 11 Page 3780

THE STATE OF NEVADA

CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, D. V. Romeos has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from Billy Goat Spring through pipe lines, channel, troughs, pools for Stockwatering purposes. The point of diversion of water from the source is as follows: SE¼ SE¼ Section 28, T. 18 N., R. 63 E., M.D.B.&M., unsurveyed, or at a point from which the SE Corner of Section 36, T. 18 N., R. 63 E., bears S. 67° 56' E., 16,950.00 feet situated in White Pine County, State of Nevada.

NOW KNOW YE, That the State Engineer, under the provisions of Section 72, Chapter 46, Statutes of 1937 has determined the date, source, purpose and amount of such appropriation, together with the place to which such water is appurtenant, as follows:

Name of appropriator D. V. Romeos

Post-office address P. O. Box 663, Ely, Nevada

Amount of appropriation 0.007 c.f.s. or sufficient to water 1,000 head of sheep and 100 head of goats

Period of use, from August 1 to November 30 of each year

Date of priority of appropriation August 14, 1947

Description of works of diversion, manner and place of use:

Water is conveyed from the spring by means of 18 feet of 1½ inch pipe to a trough 16 feet long and 16 inches in diameter; thence by approximately 40 feet of channel to a pool 6 feet in diameter and 6 inches deep; thence by approximately 10 feet of channel to a pool 4 feet in diameter and 6 inches deep; thence by approximately 20 feet of channel and 10 feet of 1 inch pipe to a trough 16 feet long and 16 inches in diameter; thence by approximately 30 feet of channel to a pool 4 feet in diameter and 6 inches deep; thence by approximately 12 feet of channel to a pool 4 feet in diameter and 6 inches deep; thence by approximately 45 feet of channel and 20 feet of 1½ inch pipe to a trough 16 feet long and 16 inches in diameter; thence by approximately 50 feet of channel to a pool 4 feet in diameter and 6 inches deep, all located in the SE¼ SE¼ Section 28, T. 18 N., R. 63 E.; thence by approximately 75 feet of channel to a pool 6 feet in diameter and 6 inches deep, located in the SW¼ SW¼ Section 27, T. 18 N., R. 63 E., M.D.B.&M.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place where acquired and to the purpose for which acquired.

IN TESTIMONY WHEREOF, I, HUGH A. SHAMBERGER, State Engineer of Nevada, have hereunto set my hand and the seal of my office, this 3rd day of March, A. D. 19 52.

State Engineer.

Recorded Mar. 7, 1952 Bk. 163 Page 429
White Pine County Records

Compared

APPLICATION FOR PERMIT Serial No. **11964**

TO APPROPRIATE THE PUBLIC WATERS OF THE STATE OF NEVADA

Date of first receipt and filing in State Engineer's office AUG 14 1947

Returned to applicant for correction

Corrected application filed

The undersigned D. V. Romeos
Name of applicant

of Ely, County of White Pine,

State of Nevada, hereby make s application for permission to appropriate the public waters of the State of Nevada, as hereinafter stated. (If applicant is a corporation, give date and place of incorporation.)

1. The source of the proposed appropriation is Billy Goat Spring
Name of stream, lake, or other source

2. The amount of water applied for is one-tenth second-feet.
One second-foot equals 40 miners' inches

3. The water to be used for Stockwatering
Irrigation, power, mining, manufacturing, domestic, or other use

4. The water is to be diverted from its source at the following point: in the SE¼ Sec. 28, T.18N., R. 63 E., Unsurveyed, whence the SE. Cor.
Describe as being within a 40-acre subdivision of public survey, or by course and distance to a section corner. If on unsurveyed land, it should be so stated.
Sec.36, T. 18N.,R. 63 E., Unsurveyed, bears S.67° 56' E., 16,950 ft. dist.

IF THE WATER IS TO BE USED FOR IRRIGATION, SUPPLY THE FOLLOWING INFORMATION:

(a) Number of acres to be irrigated is

(b) Description of land to be irrigated
Describe by legal subdivision, or if on unsurveyed land it should be so stated and a description provided in accordance with special instruction from the State Engineer when application is returned for correction.

(c) Use will begin about (Month) and end about (Month), of each year.

IF WATER IS TO BE USED FOR POWER, MINING, STOCK WATERING, OR OTHER USE, SUPPLY THE FOLLOWING INFORMATION:

(d) Power to be developed is horsepower.

(e) Place of use SE¼ Sec. 28 & SW¼, Sec. 27, T. 18 N., R. 63 E., Uns.
Give location of place of use by legal subdivision

(f) Point of return of water to stream in SW.¼, Sec. 27, T. 18 N., R. 63 E., Unsurveyed.
Describe in same manner as point of diversion

(g) State number and kinds of animals to be watered 1000 head of sheep, 100 goats.

(h) Use will begin about Aug. 1 and end about Nov. 30, of each year.
Month Month

(i) Remarks

DESCRIPTION OF PROPOSED WORKS

Water is diverted by 18 ft. of 1½" pipe from the spring to 16 ft. of

State manner in which water is to be diverted, whether by dam or other works, whether through pipes, ditches, flumes, or other conduits. If water

16" iron troughs and by 10 ft. of 1" pipe from the creek channel into

is to be stored in reservoirs, it should be so stated and the location of the reservoir should be given with reference to the legal subdivisions.

16 ft. of 16" diam. iron troughs and by 20 ft. of 1½" pipe from the creek channel into 16 ft. of 16" diam. iron troughs and by several small drinking pools in the creek channel as shown on the map which accompanies this application.

5. Estimated cost of works $300.00

6. Estimated time required to construct works already constructed.

7. Remarks

For use of applicant

D. V. Romeos, Applicant.

By

Compared SH-AT

This sheet inspected

Engineer.

Protested Oct. 29, 1947 by City of Ely.

APPROVAL OF STATE ENGINEER

This is to certify that I have examined the foregoing application, and do hereby grant the same, subject to the following limitations and conditions:

This permit is issued subject to all existing rights on the source and is further subject to the conditions set forth in that certain ruling dated November 3, 1950 in the matter of Application No. 11964 which provides in part that Applicant Romeos is not to range his sheep and goats westerly of Billy Goat Spring to the detriment of existing rights. The State retains the right to regulate the use of the water herein granted at any and all times.

The amount of water to be appropriated shall be limited to the amount which can be applied to beneficial use, and not to exceed 0.007 cubic feet per second, or sufficient to water 1000 sheep and 100 goats.

Actual construction work shall begin on or before May 21, 1951

Proof of commencement of work shall be filed before June 21, 1951

Work must be prosecuted with reasonable diligence and be completed on or before May 21, 1952

Proof of completion of work shall be filed before June 21, 1952

Application of water to beneficial use shall be made on or before May 21, 1953. Proof of the application of water to beneficial use must be filed with State Engineer on or before June 21, 1953

Map Filed AUG 16 1947

Proof of commencement of work filed MAY 7 1951

Proof of Completion of work filed MAY 7 1951

PROOF OF BENEFICIAL USE FILED FEB 11 1952

WITNESS MY HAND AND SEAL this 6th day of December, 1950

Alfred Merritt Smith

State Engineer.

Certificate No. 3280 Issued Mar. 3, 1952 for 0.007 cfs Stock

Recorded Mar. 7, 1952 Bk 1 63 Page 429

White Pine County Records.

Application No. 18836 Certificate Record No. 5854 Book 18 Page 5854

THE STATE OF NEVADA
CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, Pete Pescio has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from Sheep Spring through pipe line and troughs for stock watering purposes. The point of diversion of water from the source is as follows: SE¼ SW¼ Sec. 23, T. 18 N., R. 63 E., M.D.B.&M., or at a point from which the S.E. corner of Sec. 36 T. 18 N., R. 63 E., M.D.B.&M., bears S. 37°33'30"E., 14,541.0 feet. situated in White Pine County, State of Nevada.

NOW KNOW YE, That the State Engineer, under the provisions of NRS 533.425, has determined the date, source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

Name of appropriator Pescio Brothers (John C. and Pete A. Pescio, co-partners)

Post-office address McGill, Nevada

Amount of appropriation 0.00625 c.f.s. or sufficient to water 200 head of cattle

Period of use, from January 1st to December 31st of each year

* Date of priority of appropriation December 30, 1949

Description of works of diversion, manner and place of use: Water is developed from the spring by means of a 4 inch pipe, thence piped through ½ inch plastic pipe to a set of troughs 75 feet from spring, within the same subdivision as the point of diversion, thence piped easterly approximately ½ mile to another set of troughs located within the SW¼ SE¼ Section 23, T. 18 N., R. 63 E., M.D.B.&M., where it is used to water 200 head of cattle.

* This certificate changes the place of use under permit 13218, certificate 3782, hence the priority of appropriation of this certificate is the same as permit 13218.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place and for the purpose as set forth herein.

IN TESTIMONY WHEREOF, I GEORGE W. HENNEN, State Engineer of Nevada, have hereunto set my hand and the seal of my office, this 23rd day of February, A. D. 19 65.

Compared ns/hs

Recorded 2-26-65 Bk. 264 Page 199

White Pine County Records.

Roland D. Westergard
Assistant State Engineer.

1923

Serial No. 18836

AMENDED

APPLICATION FOR PERMISSION TO CHANGE POINT OF DIVERSION, MANNER OF USE AND PLACE OF USE OF THE PUBLIC WATERS OF THE STATE OF NEVADA HERETOFORE APPROPRIATED

Date of filing in State Engineer's Office MAY 12 1960

Returned to applicant for correction SEP 23 1960

Corrected application filed NOV 17 1960 Map filed NOV 17 1960 under 18826

The applicant Pescio Brothers (John C. and Pete A. co-partners)

of P. O. Box 1754, McGill, County of White Pine

State of Nevada, hereby makes application for permission to change the

Place of use

of water heretofore appropriated under Application 13218 and completed as

Certificate #3782 dated March 3, 1952.

(Identify existing right by Permit, Certificate, Proof or Claim Nos. If Decreed, give title of Decree and identify right in Decree.)

1. The source of water is Sheep Spring
(Name of stream, lake or other source.)
2. The amount of water to be changed 0.00625 c.f.s.
(Second feet, acre feet.)
3. The water to be used for Stock Watering (1,000 sheep and goats)
(If for stock state number and kind of animals.)
4. The water heretofore used for Stock Watering (1,000 sheep and goats)
(If for stock state number and kind of animals.)
5. The water is to be diverted at the following point No change

(Describe as being within a 40-acre subdivision of public survey and by course and distance to a section corner. If on unsurveyed land, it should be stated.)

6. The existing point of diversion is located within $SE\frac{1}{4}$ $SW\frac{1}{4}$ Sec. 23, T. 18 N., R. 63 E., M.D.B.&M., or at a point from which the SE Cor. Sec. 36, T. 18 N., R. 63 E., M.D.B.&M., bears S. 37°33'30" E., 14,541 feet.
(If point of diversion is not changed, do not answer.)
7. Proposed place of use $SW\frac{1}{4}$ $SE\frac{1}{4}$ Sec. 23, T. 18 N., R. 63 E., M.D.B.&M., or at a point from which the S.E. Corner of Sec. 24, bears S. 85° 19' 08" E., 7,536.74 feet.
(Describe by legal subdivisions. If for irrigation state number of acres to be irrigated.)
8. Existing place of use Same as Paragraph No. 6
(Describe by legal subdivisions. If presently used for irrigation, state number of acres irrigated.)
9. Use will be from Jan. 1st (Month) to Dec. 31st (Month) of each year.
10. Use has been from Jan. 1st (Month) to Dec. 31st (Month) of each year.

11. Description of proposed works.

Water will be piped easterly 1500 feet from the spring in ½" plastic pipe to 18' of 24" troughs.

(Under the provisions of NRS 535.010 you may be required to submit plans and specifications of your diversion or storage works.)

(State manner in which water is to be diverted, whether by dam or other works, whether through pipes, ditches, flumes, or other conduits.)

12. Estimated cost of works $500.00

13. Estimated time required to construct works 1½ years

14. Remarks The point of diversion is not being changed.

Compared hs/lb hs/lb

Applicant Pescio Brothers

By s/ Robt. W. Millard

APPROVAL OF STATE ENGINEER

This is to certify that I have examined the foregoing application, and do hereby grant the same, subject to the following limitations and conditions:

This permit to change the place of use of the waters of Sheep Spring as heretofore granted under Permit 13218, is issued subject to the terms and conditions imposed in said Permit 13218 and with the understanding that no other rights on the source will be affected by the change proposed herein. A substantial headgate and weir must be installed at or near the point of diversion to facilitate the measurement and control of water. The State reserves the right to regulate the use of the water under this proposed change at any and all times.

The amount of water to be changed shall be limited to the amount which can be applied to beneficial use, and not to exceed 0.00625 cubic feet per second, or sufficient to water 1,000 sheep and goats.

Actual construction work shall begin on or before November 25, 1962

Proof of commencement of work shall be filed before December 25, 1962

Work must be prosecuted with reasonable diligence and be completed on or before November 25, 1963

Proof of completion of work shall be filed before December 25, 1963

Application of water to beneficial use shall be made on or before November 25, 1964

Proof of the application of water to beneficial use shall be filed on or before December 25, 1964

Map in support of proof of beneficial use shall be filed on or before

Commencement of work filed NOV 23 1962

Completion of work filed NOV 23 1962

Proof of beneficial use filed Nov. 27, 1964

Cultural map filed

Certificate No. 5854 Issued July 23, 1965

Recorded Dec. 26, 1965 Bk. 26T Page 199

2407 White Pine County

WITNESS MY HAND AND SEAL this 25th day of May, 1962.

EDMUND A. MUTH
State Engineer

By Elmo F. DeRicco
Assistant State Engineer

ATTACHMENT 3

PROJECT WATER RIGHTS

THE STATE OF NEVADA

PERMIT TO CHANGE THE PUBLIC WATERS OF THE STATE OF NEVADA HERETOFORE APPROPRIATED

Name of Permittee:	**WHITE PINE COUNTY**
Source:	**UNDERGROUND**
Basin:	**STEPTOE VALLEY**
Manner of Use:	**INDUSTRIAL**
Period of Use:	**JANUARY 1ST THROUGH DECEMBER 31ST**
Priority Date:	**06/16/1978**

****

APPROVAL OF STATE ENGINEER

This is to certify that I have examined the foregoing application, and do hereby grant the same, subject to the following limitations and conditions:

This permit, to change the point of diversion and place of use of the waters of an underground source as heretofore granted under Permit 72728, is issued subject to the terms and conditions imposed in said permit and with the understanding that no other rights on the source will be affected by the change proposed herein. This permit must allow for a reasonable lowering of the static water level at the point of diversion by later appropriations. The well shall be equipped with an opening for measuring depth to water that meets the requirements of NAC 534.430. If the well is flowing, a valve must be installed and maintained to prevent waste. A totalizing meter must be installed and maintained in the discharge pipeline near the point of diversion and accurate measurements of water placed to beneficial use must be kept. The totalizing meter must be installed before the Proof of Completion of Work is filed and before any use of water begins. The State retains the right to regulate the use of the water under this proposed change at any and all times.

This source is located within an area designated by the State Engineer pursuant to NRS 534.030.

This permit is issued under the provisions of NRS 534.120(2) as a preferred use.

The total combined duty of water under Permits 91444 and 91445 shall not exceed 5,100 acre-feet annually.

The total combined duty of water under Permits 72730 through 72749, 91444, and 91445 shall not exceed 25,000 acre-feet annually.

This permit is issued with the requirement that a comprehensive monitoring plan be submitted to the State Engineer for approval. The plan shall be submitted to and approved by the State Engineer prior to any pumping from this well.

Monthly records shall be kept of the amount of water pumped from this well and shall be submitted to the State Engineer on an annual basis by February 15 of each year.

(Continued on Page 2)

This permit does not extend the permittee the right of ingress and egress on public, private or corporate lands.

The issuance of this permit does not waive the requirements that the permit holder obtain other permits from State, Federal and local agencies.

Dam Construction associated with the project must meet the applicable requirements of chapter 535 of the NRS and NAC prior to any diversion of water authorized under this permit.

If any portion of this permit is cancelled or if any portion of water is not placed to the intended beneficial use, then that portion of the right will revert to the source and not to the base water right.

The point of diversion and place of use are as described on the submitted application to support this permit.

The amount of water to be appropriated shall be limited to the amount that can be placed to beneficial use and **shall neither exceed a diversion rate of 6.0 cubic feet per second nor exceed an annual duty of 4,344 acre-feet.**

Work must be prosecuted with reasonable diligence and proof of completion of work shall be filed on or before: **September 22 2027**

Water must be placed to beneficial use and proof of the application of water to beneficial use shall be filed on or before: **September 22 2027**

Map in support of proof of beneficial use shall be filed on or before: **N/A**

IN TESTIMONY WHEREOF, I, ADAM SULLIVAN, P.E.,

State Engineer of Nevada, have hereunto set my hand and the seal of my office, this 22nd day of **September, 2022**

Adam Sullivan P.E.

State Engineer

Application No. 91445

APPLICATION FOR PERMISSION TO CHANGE POINT OF DIVERSION, MANNER OF USE AND PLACE OF USE OF THE PUBLIC WATERS OF THE STATE OF NEVADA HERETOFORE APPROPRIATED

THIS SPACE FOR OFFICE USE ONLY

Date of filing in State Engineer's Office JAN 11 2022

Returned to applicant for correction FEB 09 2022

Corrected application filed FEB 10, 2022 Map filed JAN 11 2022 UNDER 91444

The applicant White Pine County

HC 33 Box 33203 (Street Address or PO Box) of Ely (City or Town)

Nevada, 89301 (State and ZIP Code) (E-mail Address)

hereby make(s) application for permission to change the

☑ Point of diversion ☑ Place of use ☐ Manner of use ☐ of a portion

of water heretofore appropriated under (Identify existing rights by Permit, Certificate, Proof or Claim Nos. If Decreed, give title of Decree and identify right in Decree.)

Permit 72728

1. The source of water is Underground
   Name of stream, lake, underground, spring or other sources.

2. The amount of water to be changed 6.0 CFS; 4344 AFA
   Give diversion rate in cubic feet per second (CFS) AND duty in acre-feet annually (AFA).

3. The water to be used for Industrial Purposes
   Irrigation, power, mining, commercial, etc. If for stock, state number and kind of animals. Must limit to one major use

4. The water heretofore used for Industrial Purposes
   If for stock, state number and kind of animals.

5. The water is to be diverted at the following point (Describe as being within a 40-acre subdivision of public survey and by course and distance to a found section corner. If on unsurveyed land, it should be stated.)

in the NW1/4 SW1/4 of Sec. 17, T.17 N., R.64 E., M.D.B.&M., whence the S1/4 of Section 32 bears S. 06°15'06" E., 17,927.73 feet distant.

6. The existing point of diversion is located within (If point of diversion is not changed, do not answer.)

SW1/4 SW1/4 of Sec. 30, T.19 N., R.64 E., M.D.B.&M., whence the NW Corner of Sec. 19, T.19 N., R.64 E., M.D.B.&M., bears N.04° 31' 12" W., 9,989.31 feet distant.

91445

7. Proposed place of use (Describe by legal subdivisions. If for irrigation, state number of acres to be irrigated.)

All of Sec. 17 lying East of U.S. Highway 93, all of the S1/2 of Sec. 8 lying East of U.S. Highway 93, S1/2 Sec. 9, all of Sections 16, 15, 14, 11, and 12, N1/2 of Sec. 13, T. 17 N., R. 64 E., M.D.B.&M.; W1/2 Sec. 7 and the NW1/4 Sec. 18, T. 17 N., R. 65 E., M.D.B.&M.

8. Existing place of use (Describe by legal subdivisions. If changing place of use and/or manner of use of irrigation permit, describe acreage to be removed from irrigation.)

1) Sections 3,4,5,T.19N., R.64 E., M.D.B.&M.; Sections 20,21,22,27,28,29,32,33,34, T.20N., R.64E., M.D.B.&M.; 2) Sections 4,5,6,7,8,9, T.21 N., R.64 E., M.D.B.&M.; Sections 28,29,30,31,32,33, T.22N., R.64E., M.D.B.&M.; or 3) Sections 1,2,3,4,9,10,11,12, T.24 N., R64 E., M.D.B.&M.; Sections 33,34,35,36, T.25N., R.64 E., M.D.B.& M.

9. Proposed use will be from January 1st (Month and Day) to December 31st (Month and Day) of each year.

10. Existing use permitted from January 1st (Month and Day) to December 31st (Month and Day) of each year.

11. Description of proposed works. (Under the provision of NRS 535.010 you may be required to submit plans and specifications of your diversion or storage works.) (State manner in which water is to be diverted, i.e., diversion structure, ditches, pipes and flumes or drilled well, pump and motor, etc.)

The water will be pumped from the well into a reservoir to be used in the generation of electricity.

12. Estimated cost of works $250,000

13. Estimated time required to construct works five (5) years

If well completed, describe well

14. Estimated time required to complete the application of water to beneficial use five (5) years

15. Provide a detailed description of the proposed project and its water usage (use attachments if necessary): (Failure to provide a detailed description may cause a delay in processing.)

This application is proposed to service a 1,000 MW capacity pump storage hydro-electric power plant delivering power to the grid during peak demands

16. Miscellaneous remarks:

The main water use is the initial filling of the reservoir. Once the reservoir is filled, the water use will decline to make up water that is lost through evaporation or infiltration. Once the makeup volume is determined, the excess water will be moved by a future change application.

almberg@basineng.com
E-mail Address

(775) 289-9800
Phone No. Ext.

APPLICATION MUST BE SIGNED BY THE APPLICANT OR AGENT

Emil W. (B.J.) Almberg, Jr., P.E./P.L.S.
Type or print name clearly

Signature, applicant or agent

Basin Engineering Corporation
Company Name

1070 E. Aultman Street
Street Address or PO Box

Ely, NV 89301
City, State, ZIP Code

THE STATE OF NEVADA

PERMIT TO CHANGE THE PUBLIC WATERS OF THE STATE OF NEVADA HERETOFORE APPROPRIATED

Name of Permittee:	**WHITE PINE COUNTY**
Source:	**UNDERGROUND**
Basin:	**STEPTOE VALLEY**
Manner of Use:	**INDUSTRIAL**
Period of Use:	**JANUARY 1ST THROUGH DECEMBER 31ST**
Priority Date:	**06/16/1978**

****

APPROVAL OF STATE ENGINEER

This is to certify that I have examined the foregoing application, and do hereby grant the same, subject to the following limitations and conditions:

This permit, to change the point of diversion and place of use of the waters of an underground source as heretofore granted under Permit 72729, is issued subject to the terms and conditions imposed in said permit and with the understanding that no other rights on the source will be affected by the change proposed herein. This permit must allow for a reasonable lowering of the static water level at the point of diversion by later appropriations. The well shall be equipped with an opening for measuring depth to water that meets the requirements of NAC 534.430. If the well is flowing, a valve must be installed and maintained to prevent waste. A totalizing meter must be installed and maintained in the discharge pipeline near the point of diversion and accurate measurements of water placed to beneficial use must be kept. The totalizing meter must be installed before the Proof of Completion of Work is filed and before any use of water begins. The State retains the right to regulate the use of the water under this proposed change at any and all times.

This source is located within an area designated by the State Engineer pursuant to NRS 534.030.

This permit is issued under the provisions of NRS 534.120(2) as a preferred use.

The total combined duty of water under Permits 91444 and 91445 shall not exceed 5,100 acre-feet annually.

The total combined duty of water under Permits 72730 through 72749, 91444, and 91445 shall not exceed 25,000 acre-feet annually.

This permit is issued with the requirement that a comprehensive monitoring plan be submitted to the State Engineer for approval. The plan shall be submitted to and approved by the State Engineer prior to any pumping from this well.

Monthly records shall be kept of the amount of water pumped from this well and shall be submitted to the State Engineer on an annual basis by February 15 of each year.

(Continued on Page 2)

This permit does not extend the permittee the right of ingress and egress on public, private or corporate lands.

The issuance of this permit does not waive the requirements that the permit holder obtain other permits from State, Federal and local agencies.

Dam Construction associated with the project must meet the applicable requirements of chapter 535 of the NRS and NAC prior to any diversion of water authorized under this permit.

If any portion of this permit is cancelled or if any portion of water is not placed to the intended beneficial use, then that portion of the right will revert to the source and not to the base water right.

The point of diversion and place of use are as described on the submitted application to support this permit.

The amount of water to be appropriated shall be limited to the amount that can be placed to beneficial use and **shall neither exceed a diversion rate of 6.0 cubic feet per second nor exceed an annual duty of 4,344 acre-feet.**

Work must be prosecuted with reasonable diligence and proof of completion of work shall be filed on or before: **September 22 2027**

Water must be placed to beneficial use and proof of the application of water to beneficial use shall be filed on or before: **September 22 2027**

Map in support of proof of beneficial use shall be filed on or before: **N/A**

IN TESTIMONY WHEREOF, I, ADAM SULLIVAN, P.E.,

State Engineer of Nevada, have hereunto set my hand and the seal of my office, this 22nd day of **September, 2022**

Adam Sullivan P.E.

State Engineer

Application No. 91444

APPLICATION FOR PERMISSION TO CHANGE POINT OF DIVERSION, MANNER OF USE AND PLACE OF USE OF THE PUBLIC WATERS OF THE STATE OF NEVADA HERETOFORE APPROPRIATED

THIS SPACE FOR OFFICE USE ONLY

Date of filing in State Engineer's Office JAN 11 2022

Returned to applicant for correction FEB 03 2022

Corrected application filed _____ Map filed JAN 11 2022

The applicant White Pine County

HC 33 Box 33203 (Street Address or PO Box) of Ely (City or Town)

Nevada, 89301 (State and ZIP Code) _____ (E-mail Address)

hereby make(s) application for permission to change the

☑ Point of diversion ☑ Place of use ☐ Manner of use ☐ of a portion

of water heretofore appropriated under (Identify existing rights by Permit, Certificate, Proof or Claim Nos. If Decreed, give title of Decree and identify right in Decree.)

Permit 72729

1. The source of water is Underground
   Name of stream, lake, underground, spring or other sources.

2. The amount of water to be changed 6.0 CFS; 4344 AFA
   Give diversion rate in cubic feet per second (CFS) AND duty in acre-feet annually (AFA).

3. The water to be used for Industrial Purposes
   Irrigation, power, mining, commercial, etc. If for stock, state number and kind of animals. Must limit to one major use

4. The water heretofore used for Industrial Purposes
   If for stock, state number and kind of animals.

5. The water is to be diverted at the following point (Describe as being within a 40-acre subdivision of public survey and by course and distance to a found section corner. If on unsurveyed land, it should be stated.)

in the SW1/4 NE1/4 of Sec. 15, T.17 N., R.64 E., M.D.B.&M., whence the S1/4 of Section 32 bears S. 30°21'39" W., 21,962.66 feet distant.

6. The existing point of diversion is located within (If point of diversion is not changed, do not answer.)

NE1/4 SE1/4 of Sec. 24, T.19 N., R.63 E., M.D.B.&M., whence the NE Corner of said Sec. 24 bears N.10°12'11" E., 3,233.40 feet distant.

10-179 WP

91444

7. Proposed place of use (Describe by legal subdivisions. If for irrigation, state number of acres to be irrigated.)

All of Sec. 17 lying East of U.S. Highway 93, all of the S1/2 of Sec. 8 lying East of U.S. Highway 93, S1/2 Sec. 9, all of Sections 16, 15, 14, 11, and 12, N1/2 of Sec. 13, T. 17 N., R. 64 E., M.D.B.&M.; W1/2 Sec. 7 and the NW1/4 Sec. 18, T. 17 N., R. 65 E., M.D.B.&M.

8. Existing place of use (Describe by legal subdivisions. If changing place of use and/or manner of use of irrigation permit, describe acreage to be removed from irrigation.)

1) Sections 3,4,5,T.19N., R.64 E., M.D.B.&M.; Sections 20,21,22,27,28,29,32,33,34, T.20N., R.64E., M.D.B.&M.; 2) Sections 4,5,6,7,8,9, T.21 N., R.64 E., M.D.B.&M.; Sections 28,29,30,31,32,33, T.22N., R.64E., M.D.B.&M.; or 3) Sections 1,2,3,4,9,10,11,12, T.24 N., R64 E., M.D.B.&M.; Sections 33,34,35,36, T.25N., R.64 E., M.D.B.& M.

9. Proposed use will be from January 1st (Month and Day) to December 31st (Month and Day) of each year.

10. Existing use permitted from January 1st (Month and Day) to December 31st (Month and Day) of each year.

11. Description of proposed works. (Under the provision of NRS 535.010 you may be required to submit plans and specifications of your diversion or storage works.) (State manner in which water is to be diverted, i.e., diversion structure, ditches, pipes and flumes or drilled well, pump and motor, etc.)

The water will be pumped from the well into a reservoir to be used in the generation of electricity.

12. Estimated cost of works $250,000

13. Estimated time required to construct works five (5) years

If well completed, describe well.

14. Estimated time required to complete the application of water to beneficial use five (5) years

15. Provide a detailed description of the proposed project and its water usage (use attachments if necessary): (Failure to provide a detailed description may cause a delay in processing.)

This application is proposed to service a 1,000 MW capacity pump storage hydro-electric power plant delivering power to the grid during peak demands

16. Miscellaneous remarks:

The main water use is the initial filling of the reservoir. Once the reservoir is filled, the water use will decline to make up water that is lost through evaporation or infiltration. Once the makeup volume is determined, the excess water will be moved by a future change application.

almberg@basineng.com
E-mail Address

(775) 289-9800
Phone No. Ext.

APPLICATION MUST BE SIGNED BY THE APPLICANT OR AGENT

Emil W. (B.J.) Almberg, Jr., P.E./P.L.S.
Type or print name clearly

Signature, applicant or agent

Basin Engineering Corporation
Company Name

1070 E. Aultman Street
Street Address or PO Box

Ely, NV 89301
City, State, ZIP Code