MARTIS VALLEY GROUNDWATER BASIN SUSTAINABLE GROUNDWATER MANAGEMENT ACT ALTERNATIVE SUBMITTAL

FINAL November 21, 2016

TRUCKEE DONNER PUBLIC UTILITY DISTRICT

TOWN OF TRUCKEE
Established 1863 Incorporated 1993

Northstar Community Services District
N • C • S • D

COUNTY OF Placer

PCWA
water • energy • stewardship

COUNTY OF NEVADA
CALIFORNIA

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EXECUTIVE SUMMARY:
MARTIS VALLEY GROUNDWATER BASIN SGMA ALTERNATIVE SUBMITTAL

This Martis Valley Groundwater Basin Alternative Submittal (Alternative Submittal) for compliance with the Sustainable Groundwater Management Act (SGMA) is being submitted collaboratively by the Truckee Donner Public Utility District, Northstar Community Services District, Placer County Water Agency, Placer County, Nevada County, and Town of Truckee. These six local public agencies (Local SGMA Agencies) serve water, have the authority to serve water, or have land-use authority in the Martis Valley Groundwater Basin (MVGB) and their overlapping jurisdictions cover 100% of the basin. There are no other water suppliers or land-use agencies in the MVGB eligible to comply with SGMA. The Truckee Donner Public Utility District Staff is serving as the Administering Manager for this Alternative Submittal.

During the course of preparing this Alternative Submittal, various entities were involved in developing, approving, and adopting the Alternative Submittal. The six Local SGMA Agencies have had dozens of staff and legal meetings to explore and understand the implications of SGMA. There have also been numerous meetings with California Department of Water Resources (DWR) staff and other interested parties involved with SGMA. The governing boards/councils of the agencies have held agendized public meetings more than a dozen times and received public input and taken action. A stakeholder outreach process was conducted including a public meeting widely promoted in the community. The six Local SGMA Agencies have collaboratively developed this Alternative Submittal and a Memorandum of Agreement (MOA) to execute this submittal, to provide on-going compliance, and to formalize a process for the public to participate in SGMA compliance.

On September 16, 2014, the Governor Brown signed into law a three-bill legislative package collectively known as the Sustainable Groundwater Management Act of 2014 (SGMA). SGMA defines sustainable groundwater management as the management and use of groundwater in a manner that can be maintained during the planning implementation horizon without causing undesirable results. SGMA applies to all medium and high-priority basins as designated by DWR. The MVGB has been designed a medium-priority basin.

Water Code section 10733.2 directs DWR to develop Groundwater Sustainability Plan (GSP) regulations including Alternative submittals pursuant to Water Code section 10733.6. SGMA allows for a local agency to submit an Alternative submittal based on evidence that a basin has operated within its sustainable yield over a period of at least 10 years. A report prepared by GEI Consultants, registered hydrogeologists licensed by California and submitted under the hydrogeologist's seal, demonstrates that the Martis Valley Groundwater Basin has operated within its sustainable yield for at least 25 years (Spring, 1991 to Spring, 2016).

This Alternative Submittal for the MVGB substantially complies with the intent of SGMA to achieve sustainable groundwater management without causing undesirable results. This evaluation is based on:

- A solid understanding of the geology and hydrology of the MVGB with reasonable interpretations based on the best available information and scientific data;
- The potential for undesirable results is understood, a basin sustainability goal with measureable objectives and thresholds has been developed, and the instances that might give rise to undesirable results are avoidable;
- The MVGB is CASGEM compliant and has a robust monitoring network;

- The MVGB has robust governance and management including the 2013 Martis Valley Groundwater Management Plan (Martis Valley GMP, 2013) and the Federally enacted Truckee River Operating Agreement (TROA) and associated Truckee-Carson-Pyramid Lake Water Rights Settlement Act , Title II Of P.L. 101-618 (Settlement Act);
- The interests of the beneficial uses and users of groundwater in the basin, and the land uses and property interests at buildout potentially affected by the use of groundwater in the basin have been considered;
- A communications plan was developed including a stakeholder outreach effort in additional to over a dozen public meetings at which the Alternative Submittal for the MVGB was discussed;
- The Alternative Submittal will not adversely affect an adjacent basin;
- The Alternative Submittal includes a Memorandum of Agreement (MOA) amongst the six Local SGMA Agencies who have the legal authority and financial resources necessary to comply with SGMA; and
- The Alternative Submittal covers the entire MVGB and the supporting information is detailed and thorough enough to allow DWR to evaluate that the Alternative Submittal is likely to achieve the objectives of SGMA.

The MVGB is located on the eastern slope of the Sierra Nevada in the Truckee-Tahoe region. The MVGB is part of the Truckee River Basin which originates in Lake Tahoe, California/Nevada and terminates in Pyramid Lake, Nevada. The Truckee River Basin is the primary water supply for Northern Nevada with the California portion using only a small fraction of the available supply while serving as the primary watershed.

The MVGB and the Truckee River Basin are amongst the most studied and managed basins in the United States. Under both the Federally-enacted Settlement Act and the Truckee River Operating Agreement (TROA), which took effect in December of 2015, there are provisions regarding groundwater use, including limits on total water use. In particular, the Settlement Act limits the State of California's total water use for the Truckee River basin (which includes the MVGB), to 32,000 acre-feet per year, including use of both surface and groundwater (Settlement Act, Sec. 204(c)(1)). The TROA further provides that diversion and use of water by California pursuant to the interstate allocation of water to California made by the Settlement Act shall not result in a California Truckee River Total Depletion of more than 17,600 acre-feet per year (TROA, Sec. 6.E.). Thus, water use by California for the entire Truckee River Basin, which includes the MVGB, is limited by federal law. The MVGB has been extensively studied over past decades with dozens of scientific studies including the United States Bureau of Reclamation's Truckee River Basin Study and the associated MVGB state-of-the art groundwater model by the Desert Research Institute funded in part by the local water agencies.

There is significant scientific evidence to support sustainable yield estimates including a recent water budget study completed by GEI Consultants. Key findings and conclusions from the completed scientific work on the MVGB include:

- The MVGB has operated within sustainable yield over a period of at least 25 years (Spring, 1991 to Spring, 2016) as defined by SGMA;
- Sustainable yield of the MVGB has been estimated between 22,000 – 25,000 Acre-Feet per Year (AFY) as compared to ~7,000 AFY current production, ~13,000 AFY build out projection, and 17,600 AFY maximum total net depletion as defined in the TROA Settlement Act.

- Groundwater pumping in the MVGB represents less than 2% of the system's total water budget and is closer to 1% when returns to the water system from the regional sewage treatment plan are considered;
- The MVGB had a net increase in storage over the period of 1990 to 2015 during which the region saw significant growth and several multi-year droughts;
- The Local SGMA Agencies did not witness lowering of water levels during the most recent historic California drought; and
- There is no current evidence of undesirable results that are significant or unreasonable due to groundwater use in the MVGB.

To ensure that the MVGB continues to be managed within sustainable yield, the six Local SGMA Agencies collaboratively developed a MVGB sustainability goal along with management objectives and quantifiable minimum thresholds for potential undesirable results that are significant and unreasonable. This effort built upon the work completed in the 2013 Martis Valley Groundwater Management Plan (TDPUD, NCSD, PCWA, 2013), incorporated the Martis Valley GMP Basin Management Objectives, and included recommendations from GEI Consultants, a firm with registered hydrogeologists licensed by the State of California. The SGMA Management Committee will ensure that adaptive management protocols are incorporated into the committee process to address new information as appropriate. The adaptive management protocols will also consider public input as part of the process. All of the above in this Executive Summary demonstrate that the elements of this Alternative Submittal are functionally equivalent to the relevant guidelines of a Groundwater Sustainability Plan (GSP) and substantially compliant with SGMA (23 C.C.R. § 358.2)

The MVGB has existing robust programs and policies that direct basin management to ensure continued operation within sustainable yield as defined by SGMA. This includes the water use limits under the Settlement Act and TROA, the 2013 Martis Valley GMP, the 2015 Truckee Donner Public Utility District Urban Water Management Plan (considers major groundwater users in the MVGB, TDPUD UWMP, 2015), and the overall entitlement and permitting process to vet new projects. To support this existing local governance, the Local SGMA Agencies are proposing to create a SGMA Management Committee which will help communicate with local stakeholders, support SGMA compliance activities, and provide a forum for the public to participate in the Alternative Submittal, provide inputs or address concerns.

The GEI Hydrogeologic Support of Alternative Submittal Report (GEI, 2016b), prepared by a licensed hydrogeologist, demonstrates that the MVGB has operated within sustainable yield for at least 25-years. GEI Consultants also participated in the development of this Alternative Submittal. This robust scientific understanding, along with the significant governance and management that exists today in the MVGB and as documented in this Executive Summary and accompanying report, justifies that DWR find that this Alternative Submittal is substantially compliant with SGMA.

PART ONE: DESCRIPTION OF HYDROGEOLOGY OF MVGB

1. INTRODUCTION/OVERVIEW

The Martis Valley Groundwater Basin (MVGB, No. 6-67, Bulletin 118, DWR, 2006) is located in the central Sierra Nevada Range on the eastern slope near Lake Tahoe and Reno Nevada (**Figures 1 and 2**). The MVGB is part of the Truckee River Basin which originates at Lake Tahoe in California/Nevada and terminate at Pyramid Lake in Nevada. The MGVB is the major source of water for the Town of Truckee, Northstar Ski Resort and community, and numerous other resort developments in the area.

The Martis Valley Groundwater Basin is a 35,600 acre (57 square mile) intermontane, fault-bounded basin east of the Sierra Nevada crest and due north of Lake Tahoe. The Martis Valley is the principal topographic feature within the basin, although the basin also extends to the north and west of the topographically well-defined valley. The floor of Martis Valley is terraced with elevations between 5,700 and 5,900 feet above mean sea level. The valley is punctuated by round hills rising an additional 1,000 feet or more around much of the valley perimeter. Mountains along the southern margin of the valley rise dramatically to elevations in excess of 8,000 feet above mean sea level.

The Truckee River, which serves as the main outflow for both groundwater and surface water from the MVGB, crosses the basin watershed from the southwest to the northeast in a shallow, incised channel. Principal tributaries to the Truckee River within the MVGB are Donner Creek, Martis Creek, and Prosser Creek; as well as discharge from Boca Reservoir slightly before the Truckee River leaves the basin at its northeastern corner. Major surface water storage reservoirs inside MVGB include Martis Creek Lake and Prosser Creek Reservoir. Donner Lake and Boca Reservoir lie just outside the Basin boundaries, but release surface water into MVGB proper. Communities are scattered throughout the MVGB; however, the largest town is Truckee, which is located in the northern portion of the Martis Valley on both sides of the Truckee River.

2. BASIN HYDROGEOLOGY

The basin boundary used for the MVGB conceptual model is identical to that delineated by DWR in Bulletin 118 and shown on **Figure 3**; however, consideration was also given to relevant data outside the basin to better understand water inflows, geology, and surface water management. The MVGB is within a valley in the Sierra Nevada physiographic region. It was etched into low permeability bedrock following uplift along regional faults. The valley has been filled with unconsolidated sediments and volcanic rocks and deposits of many different formations, as shown by the regional distribution of surficial geologic units on **Figure 4**. The edges of the basin are largely well defined and the basin is surrounded by relatively impermeable Tertiary (Miocene) granitic and andesitic volcanic rocks that slope downwards into interior of the basin, forming the bottom of the MVGB. The overlying geologic units comprise the primary Basin aquifers. Given current borehole data, the depth of the basin is estimated to range from ground surface near the edges of the basin to depths approaching or exceeding 1,500 feet below land surface (bls) in the central portions of the basin.

2.1. Soils and Geology

Surficial distribution and classification of soil types, as specified by the Natural Resources Conservation Soil Service (NRCS), have been delineated by the potential infiltration rate of surface water in the GEI Hydrogeologic Support for Alternative Submittal (GEI, 2016b). Generally, higher permeability soils are located along the major surface water drainages in the basin.

Figure 1: Martis Valley Groundwater Basin

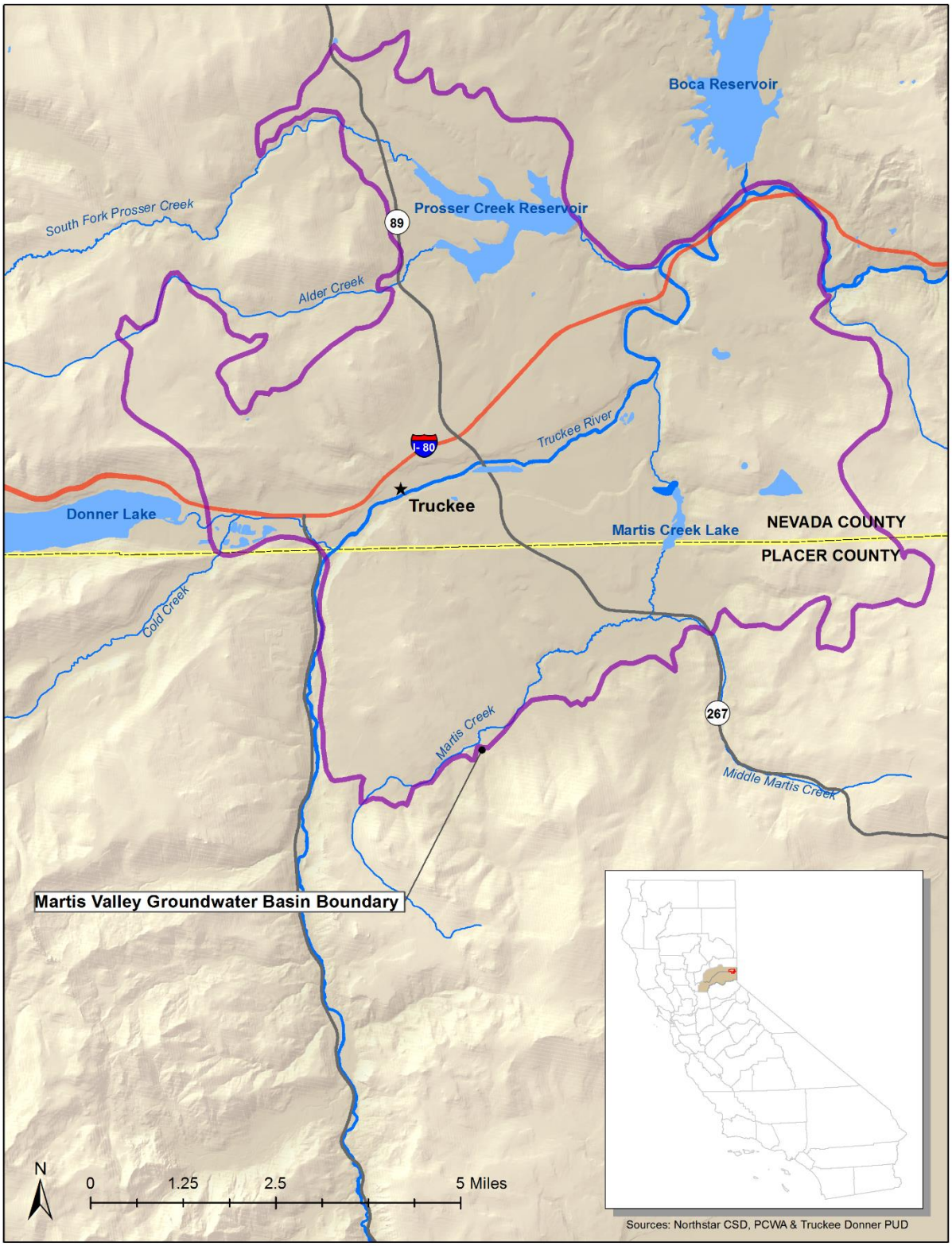


Figure 2: Martis Valley Groundwater Basin Watershed

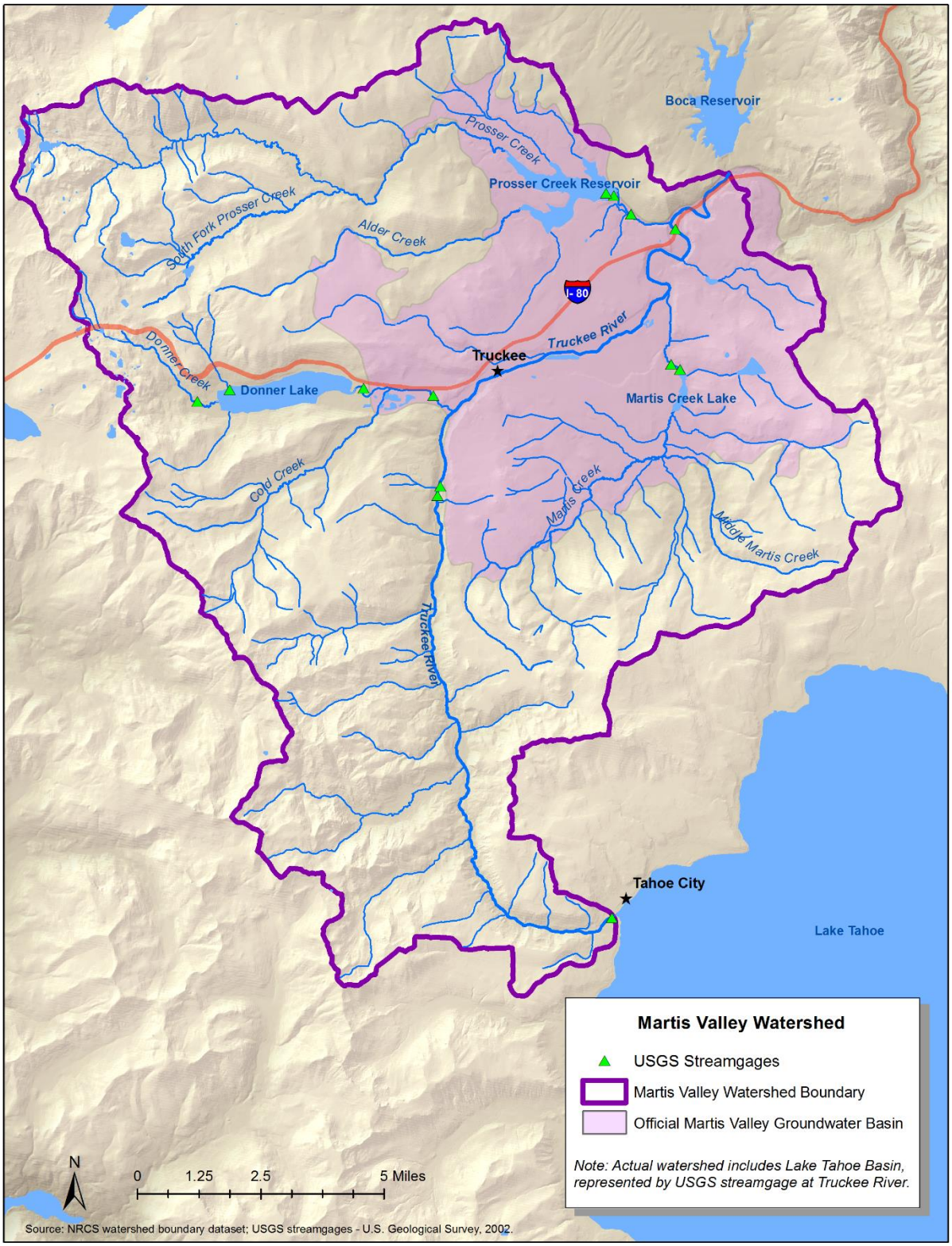


Figure 3: Martis Valley Groundwater Basin Well Locations

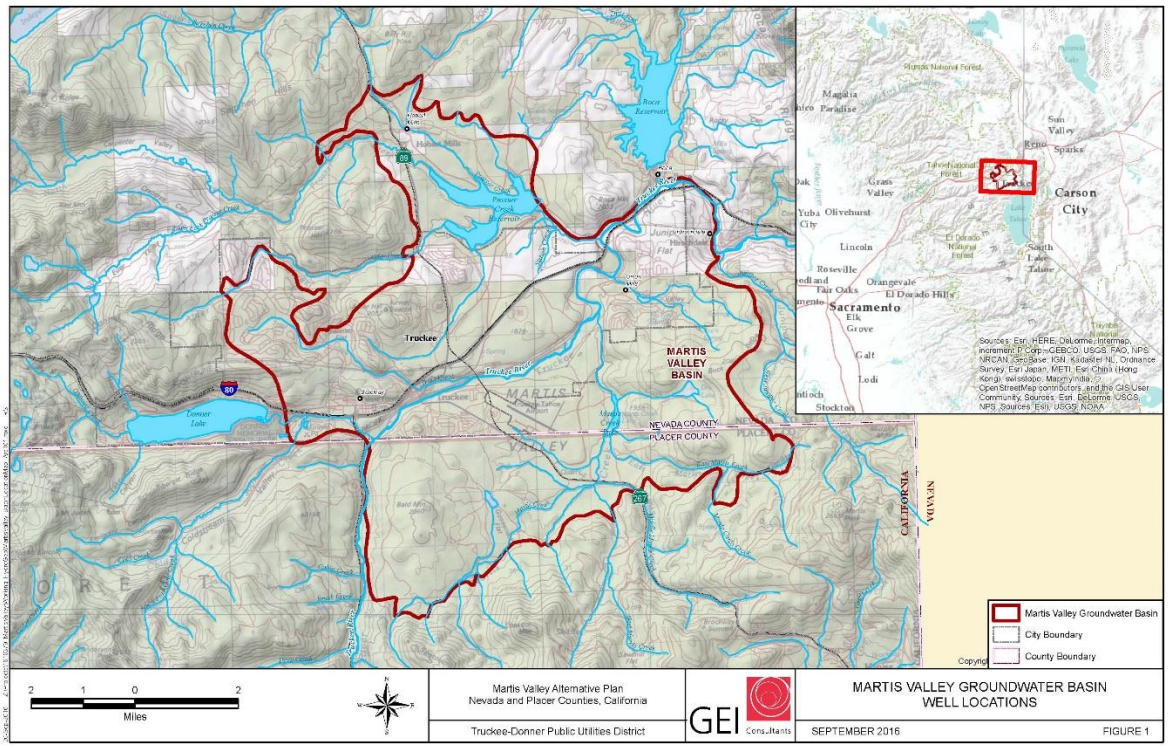
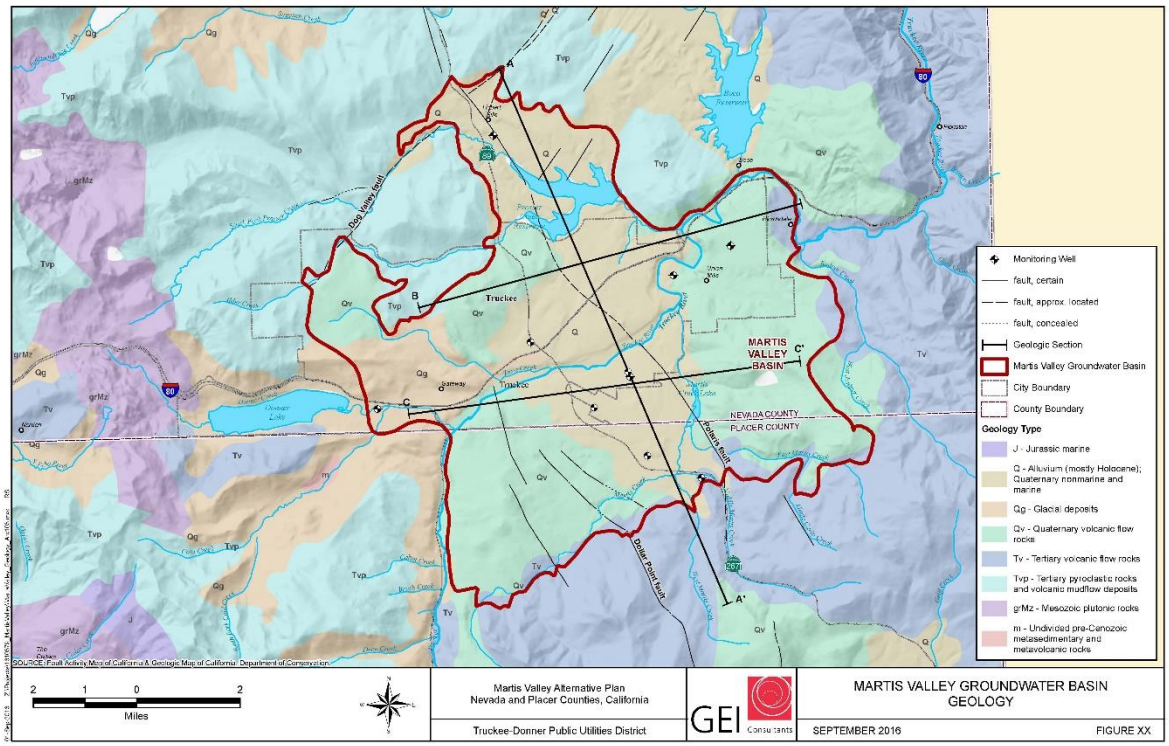


Figure 4: Martis Valley Groundwater Basin Geology



Lower infiltration rate soils typically reflect higher elevation areas that are distal to streams or creeks. Due to the geology of the basin, less permeable volcanics are often either exposed or present at shallow depths beneath the soil profile. Therefore, recharge rates through soils are limited in higher elevation areas not immediately adjacent to surface water drainage features. Thus, it is important to also consider subsurface geology as a limiting constraint on actual deep percolation to the MVGB aquifer (DRI Rajagopal and others, 2015; GEI, 2016b).

The distribution of geologic units within the basin is complex and has been formed by multiple processes, including: volcanism, glaciation, faulting, sedimentary deposit and erosion. These processes occurred in various orders, occasionally producing locally varying stratigraphic sequences. The basin is surrounded and underlain by non-water bearing Cretaceous granitic and Tertiary volcanic rocks (andesite) (TDPUD, NCSD, PCWA, 2013).

Although, the geologic history and stratigraphy of the MVGB is complex, generalized interpretations have been developed that adequately describe the primary geologic formations. **Figure 5** provides the stratigraphic relationships for these primary geologic formations (TDPUD, NCSD, PCWA, 2013). The basement granites and volcanic rocks are overlain by (in generally descending depth) Quaternary Glacial Till and Outwash, Juniper Flats Alluvium, Prosser Creek Alluvium, Lousetown Volcanics and Sediments and Truckee Formation. Note that in some units, interfingered sediments, both fine grained and coarse, are present as a result of the previously mentioned sequence of geologic processes. These interbeds can locally affect well production and groundwater conditions.

Figure 4 shows the trends of three geologic cross sections that were also developed as part of the MVGB GMP. The cross sections are shown in **Figures 6 through 8** and provide an interpretive view of the complex distribution of geologic units and structural features in the subsurface (TDPUD, NCSD, PCWA, 2013).

There are multiple faults in the basin; the surficial trends of which are presented in the MVGB GMP as well as in the attached Hydrogeologic Alternative Plan Support document (GEI, 2016b) Vertical interpretations of the fault offsets are also shown on **Figures 6 through 8**. Most of the faults are unnamed but trend generally northwest-southeast, and can be the source of laterally confining conditions, compartmentalization of the MVGB aquifer, or a conduit for flow for groundwater from upgradient portions of the aquifer or higher elevation recharge zones. Faults have also been theorized to influence the locations of artesian groundwater conditions, springs, and seeps (Hunter and others, 2011; GEI, 2016b).

2.2. Groundwater Recharge and Discharge

Groundwater recharge sources for the basin were defined as part of watershed scale modeling effort model by Desert Research Institute (DRI) (DRI Rajagopal and others; 2015). The model estimated recharge consists of the sum of shallow infiltrated water that discharges into the Truckee River and its tributaries as well as deep percolation to the MVGB aquifer. This study also noted that groundwater recharge typically occurs through coarse alluvium associated with fluvial deposits, along mountain fronts, and across exposures of Quaternary alluvium in the central portions of the basin. Additional recharge also occurs at higher elevations in weathered and fractured volcanic upland areas; however, recharge rates are very limited by the low permeability of these volcanic units (DRI Rajagopal and others, 2015).

Figure 5: Geological Stratigraphic Description

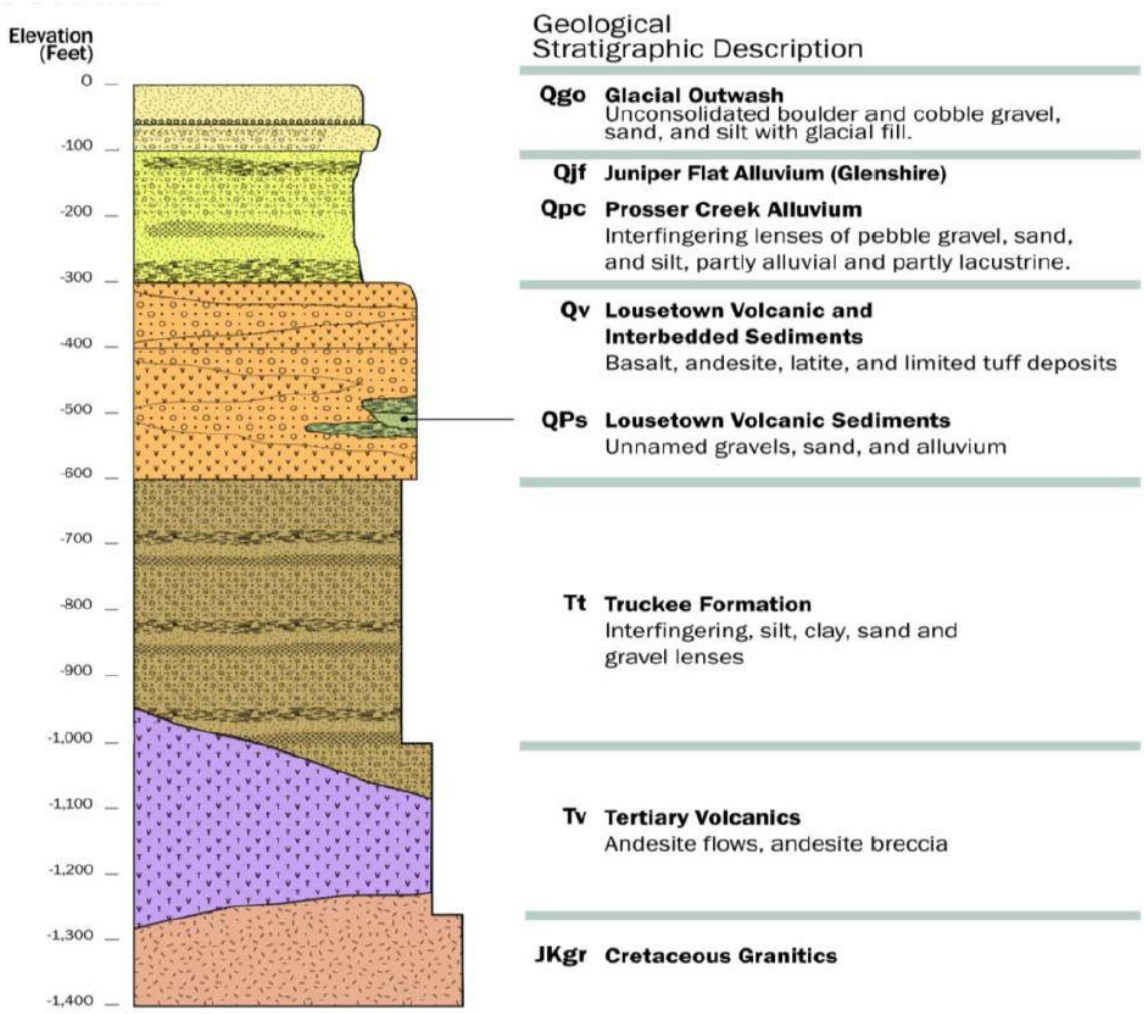


Figure 6: Cross Section A-A

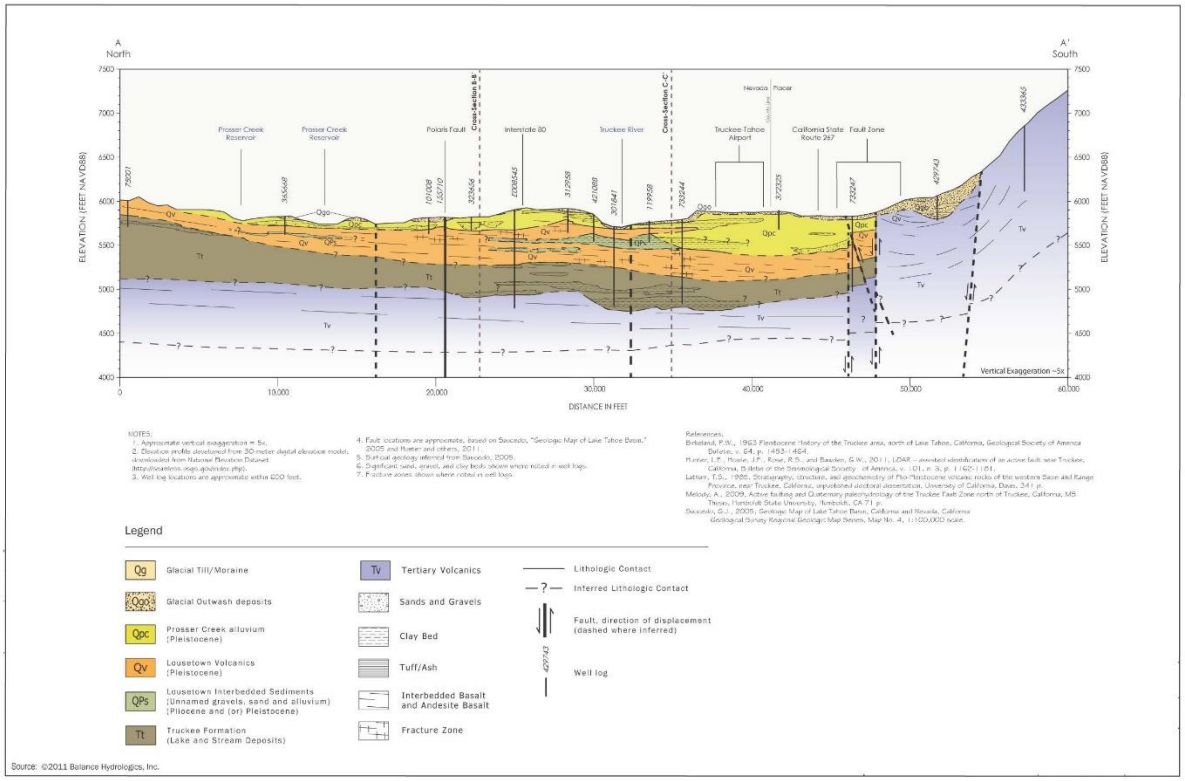


Figure 7: Cross Section B-B

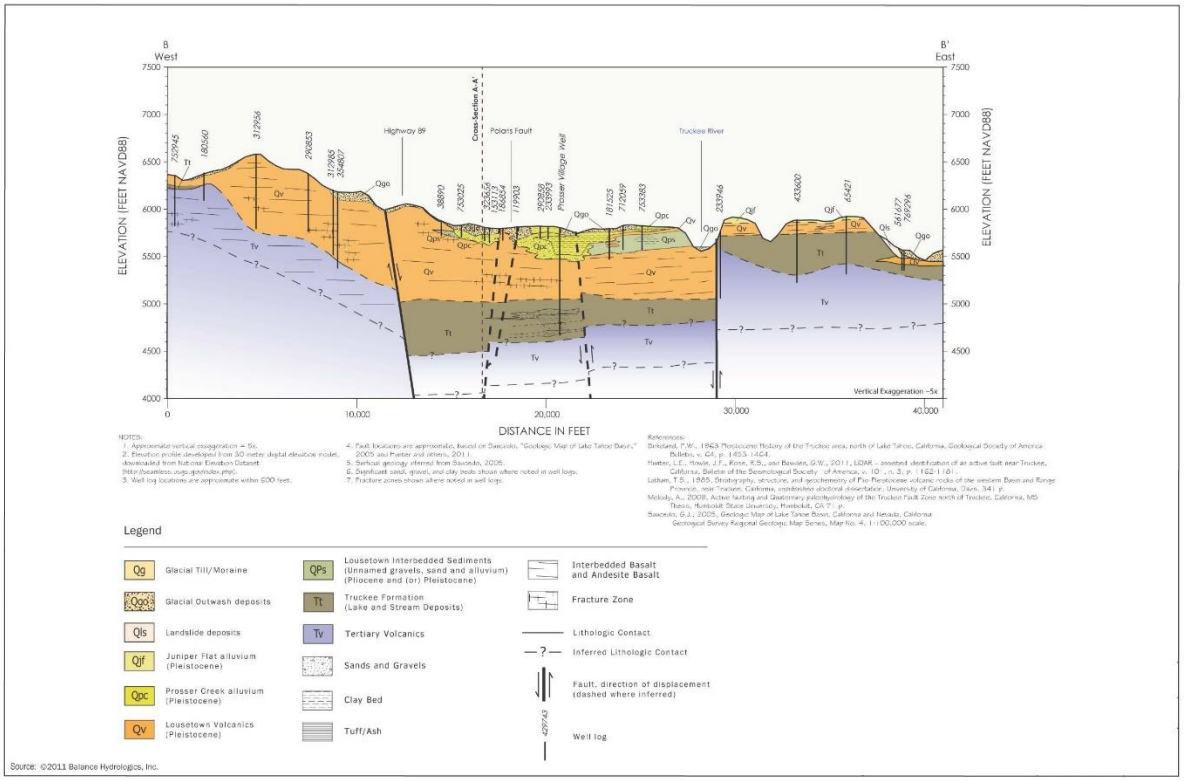
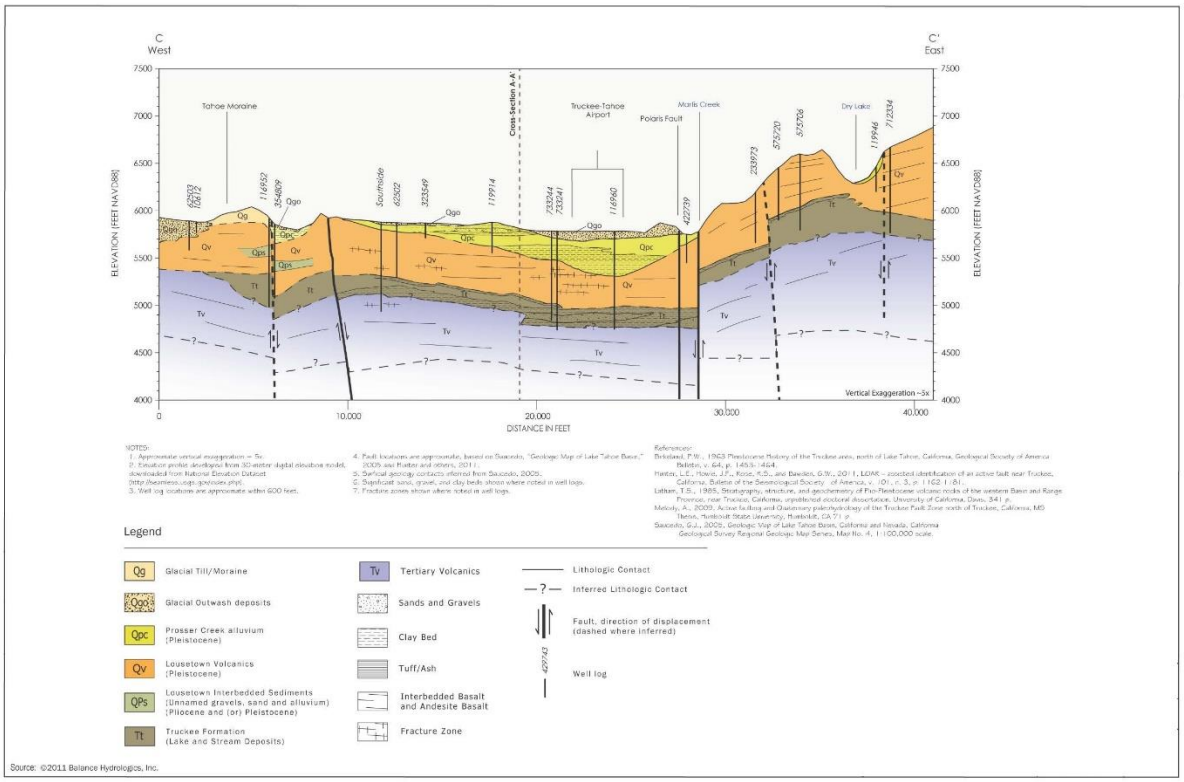


Figure 8: Cross Section C-C



Groundwater recharge also occurs along creeks and rivers (Interflow, 2003). In particular groundwater recharge is interpreted to occur along short segments of the Middle and West Martis Creeks at higher elevations and Prosser Creek above Prosser Reservoir. These losing reaches provide groundwater recharge, although they are located along the periphery of the basin and only extend a short distance.

Groundwater discharge generally occurs along the courses of creeks and the Truckee River as well as at springs and seeps that feed both surface water flow and wetlands (Interflow, 2003). Several such springs are located along the Martis Creek Fault, suggesting that it is a barrier to groundwater flow.

The majority of the groundwater discharge, although not quantified, is into the Truckee River between Glenshire and Boca bridges; near the eastern end of the basin where the alluvium abuts onto shallow bedrock (Interflow, 2003). Therefore, the USGS river gaging station located at the northeastern edge of the MVGB can reasonably be used to measure most of the groundwater outflow from the basin.

2.3. Groundwater in Storage

In 1975 HSI estimated the groundwater storage in the basin to be 1,000,000 AF. They used a surface area of the Basin of approximately 37,600 acres with an average depth of 400 feet and a specific yield of 0.07 (HIS, 1975). In 2001, Nimbus Engineers calculated the volume of the MVGB materials to be 9,680,000 AF and estimated 484,000 AF of groundwater in storage based on an unconfined storativity (specific yield) of 0.05 (Nimbus, 2001). This volume was based on a smaller surface area of the deep basin and a greater basin thickness in the northern Martis Valley than used by HSI (1975). However, these groundwater storage estimates are conservative given that the basin is estimated to extend to a total depth of at least 1,500 feet and groundwater production wells have been installed as deep as 900 feet below ground surface (compared to 400 feet of assumed aquifer).

Additional information regarding the Hydrogeologic Conceptual Model for the MVGB is provided in the Alternative Submittal Hydrogeologic Support document in Sections 3 and 4 of that report (GEI, 2016b).

3. DESCRIPTION OF BENEFICIAL USES

Beneficial uses consist primarily of Municipal and Industrial (M&I), snowmaking, irrigation, and environmental water. The MVGB and surrounding areas are largely residential and/or resort communities including Northstar and Tahoe Donner Ski resorts. The area is very popular with visitors accessing the Truckee-North Tahoe region.

The overall watershed consists of the Truckee River and numerous tributaries and ephemeral creeks from the Martis Valley Watershed. Environment beneficial uses include wide-spread high-alpine meadows, wetlands, and riparian areas along with a variety of wildlife and aquatic species. It should be noted that the vast majority of surface water flows in the Truckee River and all of the major tributaries are regulated by the Truckee River Operating Agreement (primarily State of Nevada interests with a very small amount of influence by DWR) along with the United States Army Corps of Engineers (primarily for flood control).

The MVGB is regulated by Lahontan Water Quality Control Boards Basin Plan which further describes beneficial uses and is included here by reference.

PART TWO: BASIN MANAGEMENT ORGANIZATION AND PLAN

1. GENERAL INFORMATION

This Alternative Submittal collaboratively proposes one Management Area (See **Figure 9**) that covers the entire MVGB. There are six local public agencies (Local SGMA Agencies) that serve water, have the authority to serve water, or have land-use authority in the MVGB and their overlapping jurisdictions cover the entire basin (See Table 1 and **Figure 10**). There are no other water suppliers or land-use agencies in the MVGB eligible to comply with SGMA. Truckee Donner Public Utility District Staff is serving as the Administering Manager for this Alternative Submittal.

Table 1: Local SGMA Agencies

Name	Address	Contact	Phone	Email
Truckee Donner Public Utility District	11570 Donner Pass Rd Truckee, CA 96161	Steven Poncelet, Public Information & Conservation Manager	(530) 582-3951	stevenponcelet@tdpudl.org
Northstar Community Services District	900 Northstar Drive Truckee, CA 96161	Mike Staudenmayer, General Manager	(530) 550-6128	mikes@northstarcsd.org
Placer County Water Agency	144 Ferguson Road Auburn, CA 95603	Tony Firenzi, Deputy Director of Technical Services	(530) 823-4886	tfirenzi@pcwa.net
Town of Truckee	10183 Truckee Airport Truckee, CA 96161	Tony Lashbrook, Town Manager	(530) 582-7700	tlashbrook@townoftruckee.com
Nevada County	950 Maidu Avenue Nevada City, CA 95959	Amy Irani, Environmental Health Director	(530) 265-1464	amy.irani@co.nevada.ca.us
Placer County	175 Fulweiler Avenue Auburn, CA 95603	Brett Storey, Principal Management Analyst	(530) 745-3011	bstorey@placer.ca.gov

1.1. Summary of Management Approach, Organization of Partners, and General Conditions in the MVGB

The Local SGMA Agencies have jointly adopted a Memorandum of Agreement (MOA) for preparing and submitting this Alternative Submittal, for on-going SGMA compliance, and for formalizing a process for the public to participate in SGMA compliance (the MOA is Appendix D). This MOA includes the formation of a SGMA Management Committee, comprised of appointed Local SGMA Agencies staff, to coordinate compliance activities, oversee the work of the SGMA Administering Manager, help communicate with local stakeholders, and provide a forum for the public to participate in the Alternative Submittal and provide inputs or address concerns.

Figure 9: MVGB Management Area

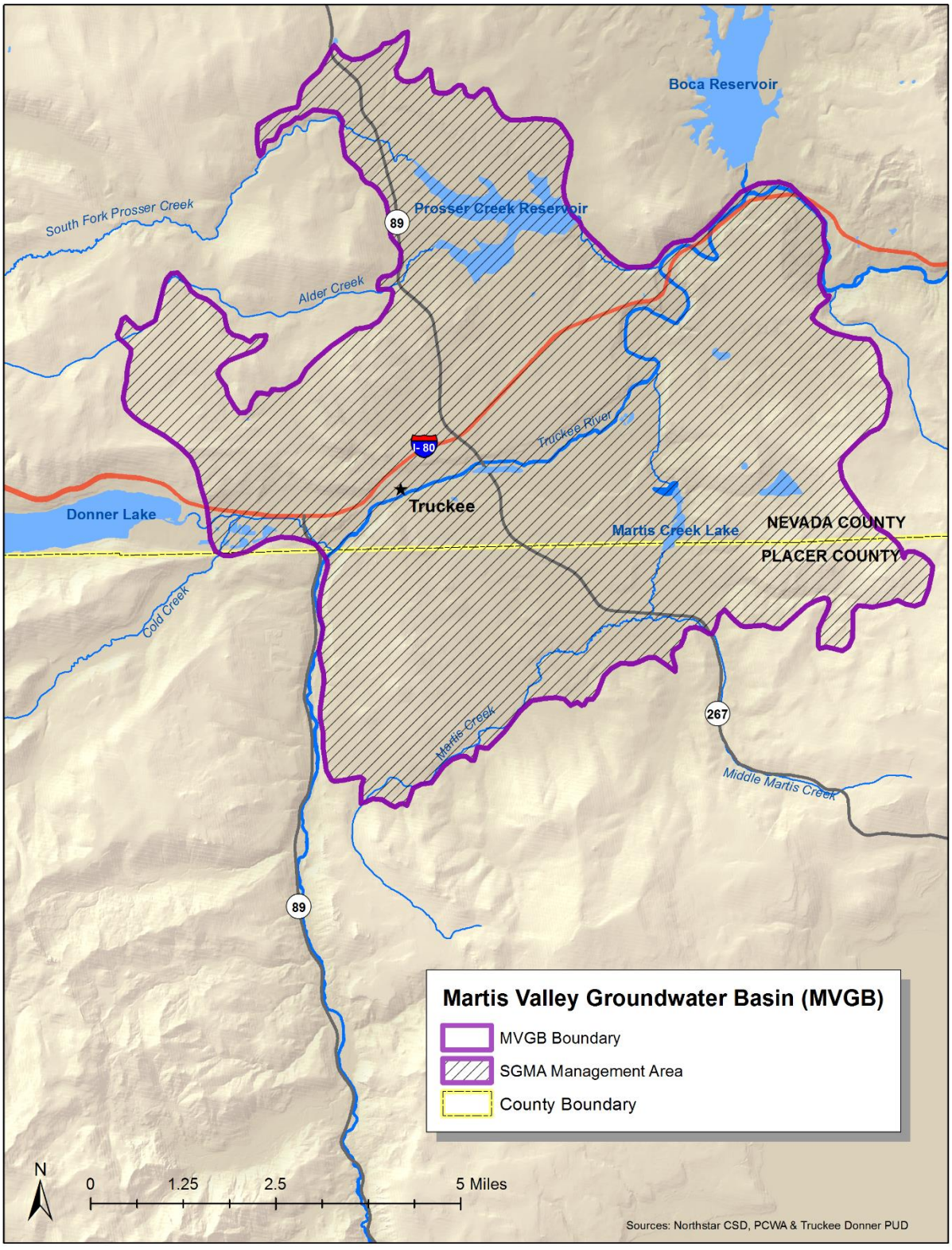
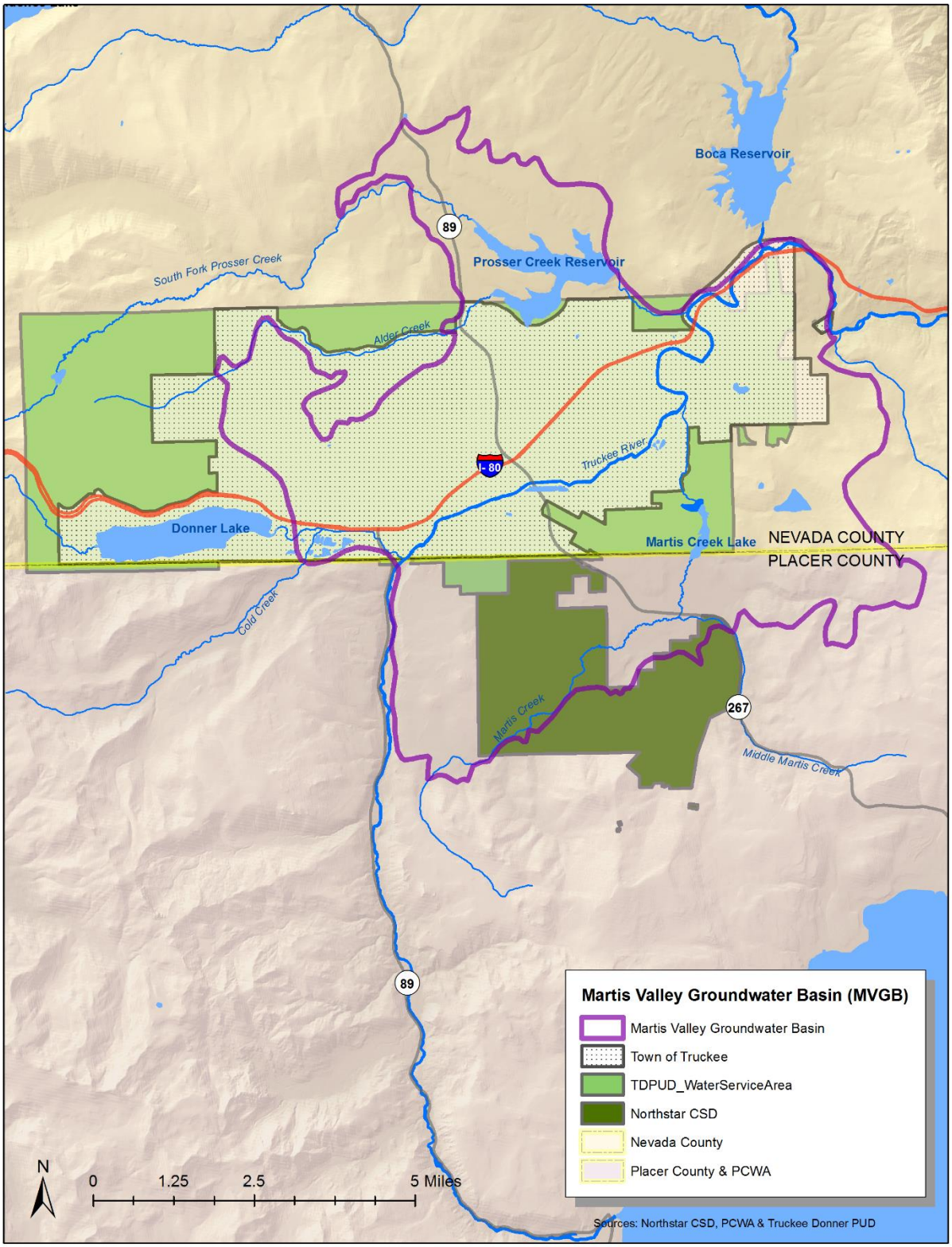


Figure 10: MVGB Local SGMA Agencies Jurisdictional Boundaries



The MVGB has existing robust programs and policies that direct basin management to ensure continued operation within sustainable yield as defined by SGMA. This includes the Truckee River Operating Agreement and associated Settlement Act, the 2013 Martis Valley GMP, the 2015 Truckee Donner Public Utility District Urban Water Management Plan (considers all major groundwater users in the MVGB), and the overall entitlement and permitting process to vet new projects relative to potential impacts.

The MVGB is a healthy, well-managed basin with adequate governance, extensive State and Federal regulation, an educated local community, and a collaborative local approach to stewardship with wide-spread stakeholder involvement.

1.2. List of References and Technical Studies

2016 GEI Assessment of Sustainable Yield (GEI, 2016a)
2016 GEI Hydrogeologic Support for Alternative Submittal (GEI, 2016b)
2016 DWR Well Investigation (Stantec, 2016)
2015 Truckee Donner PUD Urban Water Management Plan (TDPUD UWMP, 2015)
2015 DRI Martis Valley Model Report (DRI Rajagopal and other, 2015)
2015 Truckee Donner PUD Consumer Confidence Report (TDPUD CCR, 2015)
2015 Northstar CSD Consumer Confidence Report (NCSD CCR, 2015)
2013 Martis Valley Groundwater Management Plan (TDPUD, NCSD, PCWA, 2013)
2011 USGS Polaris Fault Report (Hunter et. all, 2011)
2008 Truckee River Operating Agreement (TROA)
2003 Martis Valley Groundwater Basin Report (Interflow, 2003)
2002 Kennedy Jenks Appraisal of MV Groundwater Availability (Kennedy Jenks, 2002)
2001 Nimbus Groundwater Availability in the MVGB (Nimbus, 2001)
1990 Truckee-Carson-Pyramid Lake Water Rights Settlement Act,Title II Of P.L. 101-618
1995 Lahontan Regional Water Quality Control Board Basin Plan

2. AGENCY INFORMATION

Below is agency information for each of the six local SGMA agencies.

2.1. Truckee Donner Public Utility District (TDPUD)

TDPUD History

The TDPUD is the primary water supplier for the greater Truckee, California region including portions of both Nevada and Placer Counties serving 12,500 customers. The TDPUD carries out a broad range of responsibilities related to serving electricity and water to its customers. The TDPUD was created in 1927 under California's Public Utility District Act (California Public Utilities Code Sections 15501, et seq.) and began providing water service in about 1937. TDPUD is self-governed with policy, legislative and regulatory decisions determined by an independently elected five-member Board of Directors. Day to day operations of the TDPUD are guided by a General Manager that is hired by the Board of Directors.

The TDPUD has managed groundwater in the Martis Valley since 1950's when the District installed the first production well in the basin. TDPUD has both surface water and groundwater rights with the main supply coming from groundwater from the MVGB. TDPUD now operates 11 wells in the MVGB and the District is the largest extractor in the basin. TDPUD's main production wells have capacity ranging from 200 to 2,000 gallons per minute (gpm).

Currently, Placer County Water Agency is the California Statewide Groundwater Elevation Monitoring (CASGEM) Monitoring Entity for the MVGB with TDPUD operating three production wells that are part of the CASGEM program. TDPUD has worked closely with the sister water agencies in the MVGB – Placer County Water Agency (PCWA) and Northstar Community Services District (NSCSD) –in coordinating stewardship of the basin and watershed, including the collaborative development of the 2013 Martis Valley Groundwater Management Plan (TDPUD, NCSD, PCWA, 2013).

TDPUD, as an Urban Water Supplier in the MVGB, has completed the 2015 Urban Water Management Plan (TDPUD UWMP, 2015) that considers availability of water supply, current demand, and future demand for the major groundwater users in the MVGB. TDPUD has worked closely with the Town of Truckee, Nevada County, and Placer County in providing information regarding the impacts of proposed developments and water supply and quality. TDPUD, in partnership with PCWA and NSCSD, has been very active in supporting state-of-the-art science regarding the MVGB; including direct participation and funding of the United States Bureau of Reclamation's Truckee River Basin Study and associated DRI Martis Valley Integrated Watershed Groundwater Model (DRI Rajagopal and others, 2015), along with other studies.

TDPUD is also a signatory to the Truckee River Operating Agreement (TROA) which is an agreement between California and State of Nevada interests, enacted by an act of the United States Congress, and which sets limits on use of surface and groundwater within the Truckee River Basin.

Governance of TDPUD

The TDPUD is governed by a five-member Board of Directors, elected to staggered, four-year terms by eligible public voters. The Board meets on the first and third Wednesdays of each month at 6:00 PM, at the TDPUD Board room at 11570 Donner Pass Road. All meetings are open to the public and published in accordance with the Brown Act. The website (www.tdpud.org) provides a portal for meeting agendas, meeting minutes, newsletters and news releases.

The TDPUD's Board sets policy and delegates authority through TDPUD's District Code. TDPUD Board, as the governing agency overseeing TDPUD's activities in the MVGB, is responsible for stewardship of the basin, compliance with State/Federal regulations, and overall policy on water issues.

Legal Authorities of TDPUD

The California Public Utility District Act gives TDPUD the power, as limited by the Act, to do any and every lawful act necessary to provide that sufficient water may be available for any present or future beneficial use or uses of the lands or inhabitants within the TDPUD's service territory, including, but not limited to, irrigation, domestic, fire protection, municipal, commercial, industrial, recreational, and all other beneficial uses and purposes. The TDPUD is an authorized groundwater management agency within the meaning of California Water Code 10753 (a).

Additionally, the Public Utility District Act gives the TDPUD the power to appropriate and acquire water and water rights, to defend any action or proceeding involving or affecting the ownership or use of waters or water rights or involving the wasteful use of water. The TDPUD

also has the power to prevent contamination, pollution or otherwise rendering surface or subsurface water unfit for beneficial use by the TDPUD.

Budget Related to Cost of Sustainable Basin Management

The TDPUD has spent considerable amounts of money over the years in sustainably managing the MVGB. The active management duties have increased over the years through the planning and preparation of groundwater management plans and related activities and updates, groundwater elevation monitoring and developing groundwater models to better understand the sustainability of the groundwater basin.

TDPUD adopted its first groundwater management plan in 1998. Additional groundwater management activities in management and monitoring of groundwater elevations to ensure there is an adequate supply for backup, emergency and peak demands without adversely impacting adjacent areas. The TDPUD was a partner in development of the 2013 Martis Valley Groundwater Management Plan, the 2015 DRI Martis Valley Integrated Watershed Groundwater Model (DRI Rajagopal and others, 2015), the CASGEM monitoring program, and the determination of sustainable yield. Additionally, the TDPUD has participated in other related groundwater studies.

The TDPUD spent well over $200,000 on the development of the 2013 Martis Valley GMP and in support of the 2015 Martis Valley Integrated Watershed Groundwater Model. TDPUD budgets and spends more than $50,000 annually for groundwater management.

2.2. Northstar *C*ommunity Services District (NCSD)

NCSD History

The Northstar Community Services District (NCSD) serves the resort communities of Northstar, Lahontan, Martis Camp and Schaffer's Mill located to the south and west of Highway 267 in the Martis Valley. NCSD covers approximately 5,700 acres and currently serves a population that fluctuates between a couple of hundred permanent residents and a weekend/seasonal population of 15,000 during peak recreation periods. The District services residences, a commercial area, one golf course and a ski area.

The NCSD was formed and assumed water, wastewater collection, and fire protection services from Placer County in 1990. Since that time, there have been three annexations: 1.1 acres in 2006, 7.6 acres in 2011, and 3,827 in 2015 (for water service only). Current District boundaries encompass 5,727 acres.

On November 5, 1990, LAFCO adopted Resolution No. 8-90 thereby approving the formation of the NCSD to provide services to the Northstar resort community. Prior to its formation, the area was served by Placer County. The Northstar Fire Department was formed in 1972 under a Placer County Community Services Area (CSA) governed by the Placer County Board of Supervisors. It was absorbed into the NCSD in 1990, as a division.

District operations are organized into three divisions – Operations/Utilities (which include water, wastewater, solid waste and recycling, snow removal, road maintenance, and trails), the Fire Department (fire/life/safety and forest fuels management) and Administration.

The NCSD has managed groundwater in the Martis Valley since the 2006 when the District installed its first production well in the basin. Prior to this, all water was sourced by surface water. Currently, the District operates five wells in the Martis Valley Groundwater Basin. The District is one of two public water purveyors in the basin (TDPUD as the other) with the main production wells having capacities ranging from 220 to 850 gallons per minute (gpm).

NCSD has worked closely with the sister water agencies in the Martis Valley Groundwater Basin – Placer County Water Agency (PCWA) and Truckee Donner Public Utility District (TDPUD) –in coordinating stewardship of the basin and watershed; including the collaborative development of the 2013 Martis Valley Groundwater Management Plan (TDPUD, NCSD, PCWA, 2013).

NCSD, in partnership with PCWA and TDPUD, has been very active in supporting state-of-the-art science regarding the Martis Valley Groundwater Basin; including direct participation and funding of the United States Bureau of Reclamation's Truckee River Basin Study and associated 2015 DRI Martis Valley Integrated Watershed Groundwater Model (DRI Rajagopal and others, 2015) along with other studies.

Governance of NCSD

The NCSD is governed by a five-member Board of Directors, elected to staggered, four-year terms by eligible public voters. The Board typically meets on the third Wednesdays of each month at 9:00 AM, in the NCSD Board room at 900 Northstar Drive. All meetings are open to the public and notices are posted at least 72 hours prior to the meetings, in accordance with the Brown Act. Agendas are distributed via the NCSD's website, email, and in hard copy. The website (www.northstarcsd.org) provides a portal for meeting agendas, meeting minutes, newsletters and news releases.

The NCSD's Board sets policy and delegate's authority through NCSD's District Ordinance and through decisions made at public board meetings. The NCSD Board, as the governing agency overseeing NCSD's activities in the Martis Valley Groundwater Basin, is responsible for stewardship of the basin, compliance with State/Federal regulations, and overall policy on water issues.

Legal Authorities of NCSD

NCSD is a community services district formed under the provisions of California Government Code sections 61000 and following. Section 61100 provides:

Within its boundaries, a district may do any of the following:
Supply water for any beneficial uses, in the same manner as a municipal water district, formed pursuant to the Municipal Water District Law of 1911, Division 20 (commencing with Section 71000) of the Water Code. In the case of any conflict between that division and this division, the provisions of this division shall prevail.

Therefore, because the District clearly has water supply responsibilities (and has provided water service to its customers since 1991), under Water Code section 10721(n), the District is a "local agency." Thus it has the legal authority to submit an Alternative Submittal under section 10733.6 and related regulations.

Budget Related to Cost of Sustainable Basin Management

The NCSD has expended significant resources over the years in sustainably managing the Martis Valley Groundwater Basin. The active management duties have increased over the years through the planning and preparation of groundwater management plans and related activities and updates, groundwater elevation monitoring and developing groundwater models to better understand the sustainability of the groundwater basin.

NCSD adopted the latest groundwater management plan in 2013. Additional groundwater management activities include management and monitoring of groundwater elevations to ensure there is an adequate supply for backup, emergency and peak demands without adversely impacting adjacent areas. The NCSD was a partner in development of the Martis Valley Integrated Watershed Groundwater Model (2015), the CASGEM monitoring program, and the determination of sustainable yield based on more than ten years of sustainably managing the groundwater basin. Additionally, the NCSD has participated in other related groundwater studies.

The NCSD has spent well over $100,000 on the development of the 2013 Martis Valley GMP and in support of the 2015 Martis Valley Integrated Watershed Groundwater Model. NCSD budgets and spends more than $50,000 annually for groundwater management.

2.3. Placer County Water Agency (PCWA)

Agency History

The Placer County Water Agency (PCWA, Agency) is the only county-wide water resource agency within Placer County, California. The Agency carries out a broad range of responsibilities, including water resources planning and management, retail and wholesale supply of irrigation water and drinking water and production of hydroelectric energy in Placer County's 1,500 square mile area. The Agency was created in 1957 under its own state legislative Act entitled the "Placer County Water Agency Act." PCWA is self-governed with policy and regulatory decisions determined by an independently elected five member Board of Directors. Day to day operation of the Agency are guided by a General Manager that is hired by the Board of Directors.

The Agency has managed groundwater in western Placer County since the mid 1960's when the Sunset Whitney Development began. The original source of water for this development was the Agency's Sunset Industrial Well. Later, treated surface water was brought in to provide water service to the area and the well was repurposed as an emergency backup. Recently, the Agency has updated the Sunset Industrial well and constructed a new Tinker Road Well. Each of these wells has a production capacity of 1,000 acre-feet per year. These wells are used for backup and dry-year supplies and, therefore, are an important part of the Agency's conjunctive use program. Additional wells are planned in the future to more fully develop the Agency's conjunctive use program.

In the eastern portion of the County, the Agency became the water supplier for the development of lands in Martis Valley starting in 1997. The only source of water available for development in the Martis Valley is groundwater and the planning and development of the Agency's Zone 4 Martis Valley water system was wholly based on groundwater. Three groundwater wells were developed during the 18 year period that the Agency managed the system. Two of the wells have a capacity of 1,000 gallons per minute (gpm) and one has a capacity of approximately 250

gpm. There were four major developments that were constructed in the Agency's Zone 4 system. The developments were Lahontan, Shaffer's Mill, Hopkins Ranch and Martis Camp. The Agency developed and managed the Martis Valley Zone 4 Water System from 1997 until October of 2015, when it was turned over to the adjacent Northstar Community Services District.

Currently, the Agency is the CASGEM Monitoring Entity for the Martis Valley Groundwater Basin and has continued to be active in the groundwater basin through its stewardship role as a county-wide water agency.

Governance of Agency

The Agency is governed by a five-member Board of Directors, elected to four-year terms by geographic areas, which coincide with the County's supervisorial districts. The Board meets on the first and third Thursdays of each month at 2:00 PM, usually at the PCWA Business Center at 144 Ferguson Road, in Auburn. Meetings are occasionally held in other areas of the County (such as east slope of Placer County) to encourage more public participation. All meetings are open to the public and notices are publicly posted at least 72 hours prior to the meetings, in accordance with the Brown Act. Agendas are distributed via the Agency's website, fax, email and postal mail. The media is notified via e-mail. The local newspaper also publishes meeting notices. The website (www.pcwa.net) provides a portal for meeting agendas, meeting minutes, newsletters and news releases.

Legal Authorities of Agency

The Agency's Act (PCWA Act) gives it the power, as limited by the act, to do any and every lawful act necessary to provide that sufficient water may be available for any present or future beneficial use or uses of the lands or inhabitants within the Agency, including, but not limited to, irrigation, domestic, fire protection, municipal, commercial, industrial, recreational, and all other beneficial uses and purposes.

Additionally, the PCWA Act gives the Agency the power to store water in surface or underground reservoirs within or outside of the agency for the common benefit of the agency; to conserve and reclaim water for present and future use within the agency; to appropriate and acquire water and water rights, and to import water into the agency and to conserve and utilize water, within or outside of the agency, for any purpose useful to the agency. Power is also granted to the Agency to defend any action or proceeding involving or affecting the ownership or use of waters or water rights or involving the wasteful use of water. The Agency also has the power to prevent interference with or diminution of rights in the natural flow of any stream or surface or subterranean supply of waters. The Agency has the power to prevent unlawful exportation of water from the Agency, to prevent contamination, pollution or otherwise rendering surface or subsurface water unfit for beneficial use by the Agency.

Budget Related to Cost of Sustainable Basin Management

The Agency has spent considerable amounts of money over the years in sustainably managing the groundwater basins in western and eastern Placer County. In western Placer County the Agency has been involved in groundwater management since the 1960's. The active management duties have increased over the years through the planning and preparation of groundwater management plans and related activities and updates, groundwater elevation

monitoring and developing groundwater models to better understand the sustainability of the groundwater basin.

PCWA adopted its first groundwater management plan, the Western Placer Groundwater Management Plan, in 1998. This plan was AB 3030 compliant. In November of 2007, this plan was updated to achieve compliance with SB 1938.

In Martis Valley, the Agency was a partner in development of the 2013 Martis Valley Groundwater Management Plan (TDPUD, NCSD, PCWA, 2013), the 2015 DRI Martis Valley Integrated Watershed Groundwater Model (DRI Rajagopal and others, 2015), the CASGEM monitoring program, and the determination of sustainable yield based on more than ten years of sustainably managing the groundwater basin. Additionally, the Agency has participated in other related groundwater studies.

The Agency budgets and spends more than $50,000 annually for groundwater management.

2.4. Town of Truckee

Agency History

The Town of Truckee (See link to www.townoftruckee.com) was incorporated as a municipality by a vote of the people in 1992. In 1995, Truckee voters elected to become a charter city under the "home-rule" provision in California's state constitution (article XI sec. 3a). Enabling legislation is founded in the Town of Truckee Municipal Code.

Truckee is located in the Sierra Nevada Mountains of California, just west of the Nevada state line. The community itself has existed for over 150 years. The incorporated boundaries have a current areal extent of approximately 34 square miles and range in elevation from 5500 feet at the Town's eastern boundary to 7500 feet in the northwestern corner. The total population within the Town boundaries is recorded as 16,211 as of January 1, 2015. Truckee contains approximately 13,000 housing units.

History related to groundwater management: The Town has played an active role in consulting with the TDPUD in the creation of the 2015 Urban Water Management Plan (TDPUD UWMP, 2015), adopted in 2016 and has provided comment regarding sustainable yield calculations for the service area. The Town has integrated the UWMP water availability and sustainable yield estimates into the Town's General Plan by using the estimates to project acceptable buildout of service area and Master Plan implementation impact (TDPUD UWMP, 2015 and associated Water System Master Plan).

Authority related to groundwater management: The Town does not directly manage groundwater resources. However, through the Town's General Plan, and Specific Plans the Town plays a significant partnering role in managing demand and ensuring continued sustainability of the regional groundwater resource. The Town is the planning authority for areas within the Town. CA WC sec 10755.2 (c)encourages coordinated plans and the ability to enter into a joint powers agreement or memorandum of understanding with public agencies or private parties for the purpose of implementing a coordinated groundwater management plan.

Governance of Agency

The Town of Truckee is a "charter city" (approved by vote in 1995). As a charter city the elected five-person Town Council has the authority, given by the voters, to act independently of the state on purely local issues. The Town Council appoints the Town Manager and the Town Attorney. The Council's primary responsibility is to set Town policy and enact laws that are carried out by Town staff. Policies set by the Council include land use and zoning on all properties in Town. It can also include speed limits, leash laws, building codes, boating restrictions, trash rates, transit routes, and other topics. The Council also adopts the Town Budget. Additionally, the Council does significant long range planning for land use (through the General Plan) and financial planning (through 5 and 20 Year Capital Plans, Road Maintenance Plans, and Equipment Replacement Plans).

All Council decisions require a majority vote, so members must work together, and sometimes compromise, to achieve community goals. With few exceptions authorized by state law, Council decisions must be made in public meetings so that citizens can see and participate in the public decision making process. The Town of Truckee follows Roberts Rules of Order for the procedures and conduct of meetings and the Brown Act to ensure that an open and public decision-making process is followed.

The Council also serves as the Redevelopment Successor Agency Board. The Town is the planning authority, within the Town of Truckee Town boundaries, for areas overlying the MVGB.

Key policies related to groundwater from the Truckee General Plan:

Goal COS-11 Protect water quality and quantity in creeks, lakes, natural drainages and groundwater basins.

Policies

P11.1 Minimize excessive paving that negatively impacts surface water runoff and groundwater recharge rates.

P11.2 Protect surface and groundwater resources from contamination from runoff containing pollutants and sediment, through implementation of the Regional Water Quality Control Board's (RWQCB) Lahontan Region's, Best Management Practices.

P11.3 Cooperate with State and local agencies in efforts to identify and eliminate all sources of existing and potential point and non-point sources of pollution to ground and surface waters, including leaking fuel tanks, discharges from storm drains, auto dismantling, dump sites, sanitary waste systems, parking lots, roadways, and logging and mining operations.

P11.7 Ensure that all proposed developments can be adequately served by available water supplies.

P11.8 Support all efforts to encourage water conservation by Truckee residents and businesses, and public agencies, including working with the Truckee Donner Public Utility District, to implement water conservation programs and incentives that facilitate conservation efforts.

P11.9 Recognize the importance of stormwater management in protecting all water resources in Truckee, for example, flood control, surface and ground water quality, and river, stream and lake health.

Legal Authorities of Agency

The Town is designated as a "local agency" under section 10721(n) of the Water Code and may participate in an Alternative submittal under Water Code section 10733.6. The Town is the designated land-use permitting authority within the Town boundaries.

Budget Related to Cost of Sustainable Basin Management

The Town budgets staff resources to track land use and water availability as well as to conduct required storm water management.

2.5. Nevada County

Agency History

Nevada County, California, was incorporated on April 25, 1851 from portions of Yuba County. The County was named Nevada after the mining town of Nevada City which drew its origins from the term "Sierra Nevada" and is one of the most historic and scenic areas of the State of California.

Nevada County is a rural county comprising 978 square miles in northern California, with a population of approximately 99,000. The three incorporated cities are Grass Valley, Nevada City and the Town of Truckee. Most of the population (approximately 65,000) live in the unincorporated areas. The Grass Valley/Nevada City area is located in the west end of the county and the Truckee area is located in the east end of the county. The west end of the county is separated by approximately 45 miles of Tahoe National Forest, and the Donner Summit mountain pass at an elevation of 7,000 feet, from the east end of the county.

Nevada County Community Development Agency (CDA) is comprised of five (5) departments and two (2) divisions. Nevada County Environmental Health (NCDEH) is one of the Departments within the Community Development Agency. NCDEH is made up of three (3) specialized units; Consumer Protection, Land Use, and Hazardous Materials. As a regulatory agency, the department is charged with administering various programs within these specialized units. Among other duties, NCDEH addresses the protection of groundwater and surface-water; monitoring the quality and safety of water served by small public water supply systems; review of the construction and destruction of private and public wells; review of land use changes for potential health threats involving adequate potable water supply and sewage disposal resources; safe storage and disposal of hazardous materials and waste; safe sewage and solid waste disposal; protection of the consumer food supply through the inspection of retail food service facilities; ensure the safety of public beaches, swimming pools and spas; protection from vector borne diseases; and the health and safety of body art facilities, organized camps and detention facilities.

The Nevada County General Plan was approved by the Board of Supervisors in 1996 and subsequently amended in 2008, 2010, and in 2014. The Nevada County General Plan is the long-term policy guide for the physical, economic and environmental future of the County. It is comprised of goals, objectives, policies, and implementation measures, which are based upon assessments of current and future needs and available resources, and which are intended to carry out the four central themes which are critical to the future of Nevada County and its quality of life. Chapter 11 of the General Plan contains the Water Element for Nevada County.

Through our Land Use Development Ordinance, and our Local Primacy Agency agreement with the State Water Resources Control Board, NCDEH has been regulating the construction and locations of private wells since 1991 and the water supply of Small Public Water Systems since 1993.

Governance of Agency

Nevada County's governing body is a five (5) member Board of District Supervisors, elected for four-year staggered terms on a nonpartisan ballot. The Board typically meets two Tuesdays a month in the Board of Supervisors Chambers at the Eric Rood Center in Nevada City and once a year in Truckee at the Truckee Town Hall. All meetings are open to the public and the agendas are posted the Thursday prior to the meeting in accordance with the Brown Act. Agendas are available for public review on bulletin boards located at the Eric Rood Center (outside the Board office, outside the Board Chambers, and outside the main entrance), at the Madelyn Helling Library, at Truckee Town Hall, at the District V Board of Supervisors Conference Room and on the County's website. Among other duties, the Board enacts ordinances, adopts the annual budget, approves contracts, appropriates funds, determines land use zoning for the unincorporated area, and appoints certain county officers, including the CEO and members of various boards and commissions.

The Supervisor Districts were incorporated in 1851 and the first District Supervisors began their tenure in 1856. Each District has assigned City, Town and unincorporated County areas of responsibility and representation. District I encompasses Nevada City and the unincorporated areas of Banner Mountain, Cascade Shores, Deer Creek and the Highway 174 corridor. District II encompasses the communities of Alta Sierra, Lake of the Pines, and unincorporated areas along Highway 49. District III encompasses the City of Grass Valley, Cedar Ridge, the Brunswick Basin, Squirrel Creek, and unincorporated areas along Highways 49 and 20. District IV encompasses the communities of Penn Valley, North San Juan, Rough & Ready, Lake Wildwood, Spenceville, and unincorporated areas along Highways 20 and 49 and District V encompasses the Town of Truckee, and the communities of Soda Springs, Washington, Graniteville, Hirschdale, Boca, Floriston, and unincorporated areas along Highways 49, 20, 89, and Interstate 80 and includes the Martis Valley Ground Water Basin.

Legal Authorities of Agency

Nevada County began the regulation of ground water supply to residential and commercial operations in 1991 with the Board of Supervisors approved Land Use Development Ordinance. Subsequently in 1993, and signed again in 2013, Nevada County entered into a Local Primacy Agency (LPA) agreement with the State of California (originally California Department of Public Health and later with the State Water Resources Control Board) to oversee the small public water systems in Nevada County. The ordinance and LPA agreement provided specific guidelines, regulatory authority and standards for the design, construction and operation of individual, small private and small public water supplies in Nevada County.

The purpose of the ordinance was to ensure the following: (1) that every well is constructed so as not to pollute groundwater, (2) that potable water is provided in every building for which a plumbing permit is issued, and (3) that potable water resources are determined and made available for every parcel of land. The LPA agreement required that small public water supply systems be approved, overseen and permitted by NCDEH, as defined by the California Safe

Drinking Water Act (California Health and Safety Code Sections 4010-4039.5) and through our Local Primacy Agency Agreement with the State Water Resources Control Board.

Budget Related to Cost of Sustainable Basin Management

Nevada County will join with the members of the MVGB Local SGMA Agencies in sharing the financial expenses related to the Alternative Submittal for the SGMA requirements. Initial expenses include annual expenditure of $5,000 along with a one-time contingency expenditure of $5,000 upon approval of the Memorandum of Agreement by the County of Nevada Board of Supervisors.

2.6. Placer County

Agency History

Placer County's 150-year history began with the discovery of gold in 1848. In fact, the County took its name from the Spanish word for sand or gravel deposits that contain gold. Gold was discovered on the American River in 1848 by James W. Marshall at Sutter's Mill in Coloma. One of the first parties to capitalize on Marshall's success was organized by Claude Chana who panned three large gold nuggets from a stream at the Auburn Ravine on May 16, 1848. This discovery warranted the establishment of a new mining settlement, which was named Auburn in 1849. By April 25, 1851, the County of Placer was formed, and Auburn was designated as the County seat. The railroad has also been a major part of Placer.

Once a small agricultural center, Roseville became a major railroad center and grew to be Placer County's most populous city after Southern Pacific Railroad moved its railroad switching yards there in 1908. Between 1864 and 1865, Central Pacific Railroad laid track from Sacramento to reach various parts of Placer County, including Roseville, Rocklin, Newcastle, Auburn, and Colfax.

In 1956, construction on Interstate 80 was completed, linking Placer County towns and cities to points East and West. Today's Placer County represents a rapidly growing and prosperous community characterized by a healthy and mature economy, attractive business environment, and residents who benefit from a developed educational, safety, and health care infrastructure, in addition to abundant recreational opportunities.

History related to groundwater management:

Generally, Placer County has participated in the groundwater management of the MVGB by attending meetings and commenting on plans of the region. Placer County up until the enactment of SGMA had no specific management responsibility and provided support to those agencies that managed the MVGB.

Authority related to groundwater management:

The Placer County General Plan adopted in 1994 and updated in 2013, contains explicit statements of goals, policies, standards, implementation programs, and quantified objectives in ten sections, which include several goal statements relating to different sub-issues or different aspects of the issue addressed in the section. For each goal statement there are several policies which amplify the goal statement and a set of related implementation programs briefly

describing the proposed action, the agencies or departments with primary responsibility for carrying out the program, the time frame for accomplishing the program, and the funding source.

Section 6 (Natural Resources) is divided into seven sub issues.

The Water Resources sub-issue's Goal (6.A) is to protect and enhance the natural qualities of Placer County's rivers, streams, creeks and groundwater.

Policy 6.A.13 states that the County shall protect groundwater resources from contamination and further overdraft by pursuing the following efforts:

- Identifying and controlling sources of potential contamination;
- Protecting important groundwater recharge areas;
- Encouraging the use of surface water to supply major municipal and industrial consumptive demands;
- Encouraging the use of treated wastewater for groundwater recharge.

Policy 6.A.15 states that the County shall encourage the protection of floodplain lands and, where appropriate, acquire public easements for purposes of flood protection, public safety, wildlife preservation, groundwater recharge, access and recreation.

Implementation Program 6.4 states that the County shall prepare, adopt, and implement a comprehensive surface and groundwater management program to ensure the long-term protection and maintenance of surface and groundwater resources. This water management program requires several elements. Element 6.4.b. requires coordination and cooperation with other public and private agencies, organizations, and groups that have an interest in water resources management in the County or surrounding areas. This should include, but not be limited to (among others) the California Groundwater Association and other private, professional groups interested in water supply protection (6.4.b.14). Element 6.4.c. requires the application of sound water resources management principles, including (among others) groundwater recharge and aquifer protection. Finally, the sub-issue Vegetation also includes Policy 6.D.7, which requires the County to support the management of wetland and riparian plant communities for, among other benefits, groundwater recharge.

Governance of Agency

The Board of Supervisors is the governing body of Placer County and certain special districts.

The Board enacts ordinances and resolutions, adopts the annual budget, approves contracts, appropriates funds, determines land use zoning for the unincorporated area, and appoints certain County officers, including the CEO and members of various boards and commissions.

Legal Authorities of Agency

Placer County has accepted its responsibility to work with all eligible agencies via the SGMA regulations to be responsible for the groundwater/basin management of a sustainable basin. In addition, Placer County will also supply comments during land use project review that provide for the appropriate management of the groundwater resources within the MVGB.

Budget Related to Cost of Sustainable Basin Management

Placer County agrees to participate along with all of the eligible agencies in the expenditures of funding to support the MVGB to ensure that is stays a sustainable basin. Placer County will participate in funding it fair share to any agreement while a member of the responsible agencies that implement the Alternative Submittal.

3. DESCRIPTON of MANAGEMENT PLAN

3.1. Description of Area

A location map for the MVGB and MGVB watershed were provided earlier on **Figures 1 and 2**. The proposed single Management Area for the MVGB was shown earlier in **Figure 9**. Jurisdictional boundaries within the MVGB of State or Federal land, tribal land, cities, counties agencies with water management responsibilities was provided earlier in **Figure 10**. Areas in the MVGB covered by relevant general plans are shown in **Figure 11**.

Existing land use designations are identified in the respective general plans for the Town of Truckee, Nevada County, and Placer County. Again, the primary uses of groundwater are for M&I, snowmaking, and irrigation. The MVGB and surrounding areas are largely residential and/or resort communities including Northstar and Tahoe Donner Ski resorts and numerous golf courses. The area is very popular with visitors accessing the Truckee-North Tahoe region. Land ownership in the MVGB and surrounding areas is shown in **Figure 12**.

3.2. Management Area Groundwater Conditions

Groundwater Levels and Flow Patterns

The groundwater management area is defined as the entire MVGB. **Figure 13** shows the locations of 14 CASGEM monitoring wells that have groundwater elevations recorded through spring 2016. Municipal pumping wells are identified on this map for frame of reference. The wells are scattered throughout the basin and include areas with negligible or no pumping influences as well as areas with several production wells within a few miles. Estimated groundwater elevation contours are also shown on **Figure 14**; no cones of depression caused by groundwater withdrawals are apparent. It is apparent that groundwater gradients generally steepen approaching the gaining reaches of the Truckee River and Martis Creek. Flatter groundwater gradients have been interpreted in areas further away from major groundwater discharge areas, including tributary creeks and wetlands/meadows. Although there are areas of the basin that have limited monitoring data, the resolution of monitoring is suitable to constrain groundwater elevations and flow directions in the vicinity of most municipal wells.

Figure 11: MVGB General and Community Plans

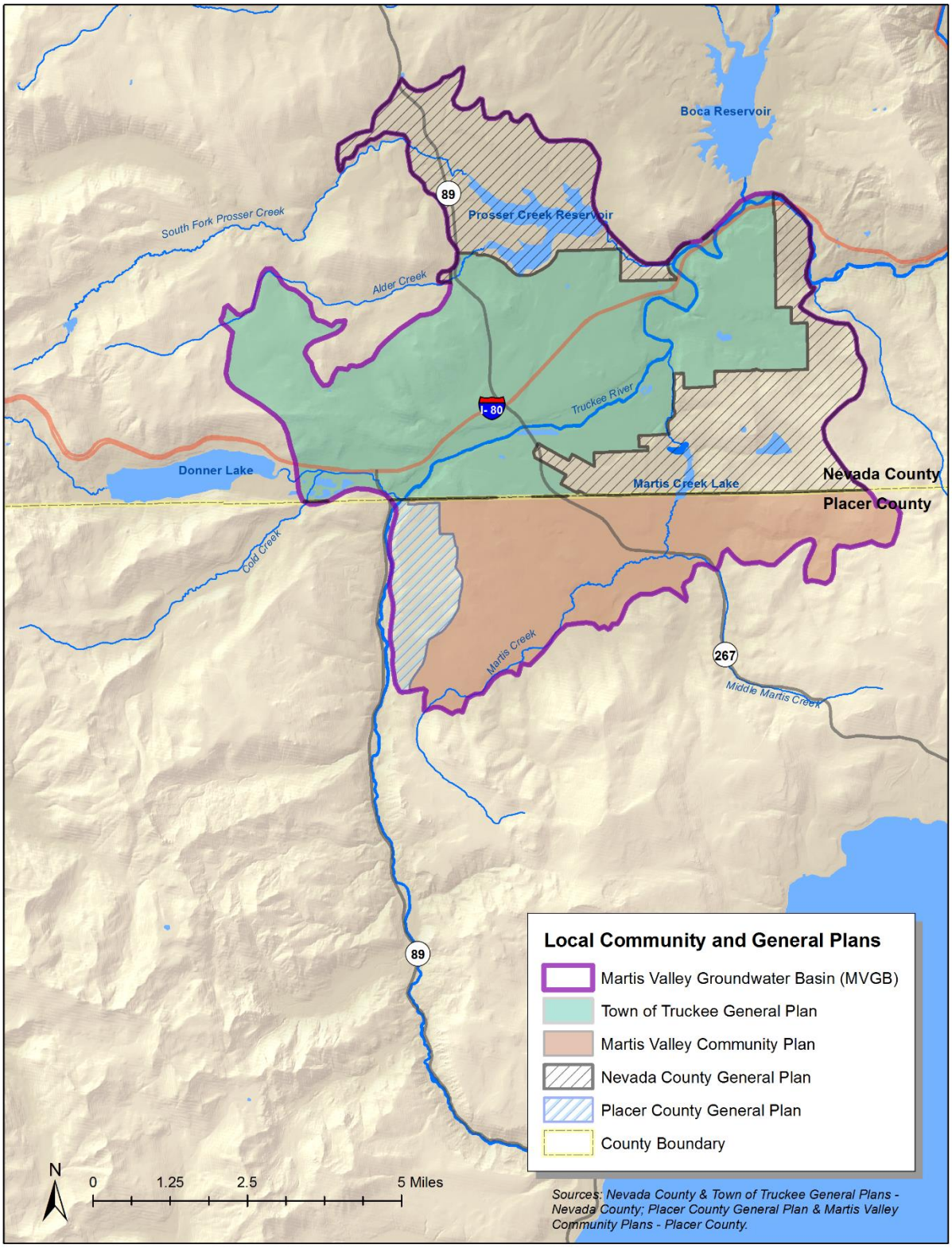


Figure 12: MVGB Land Ownership

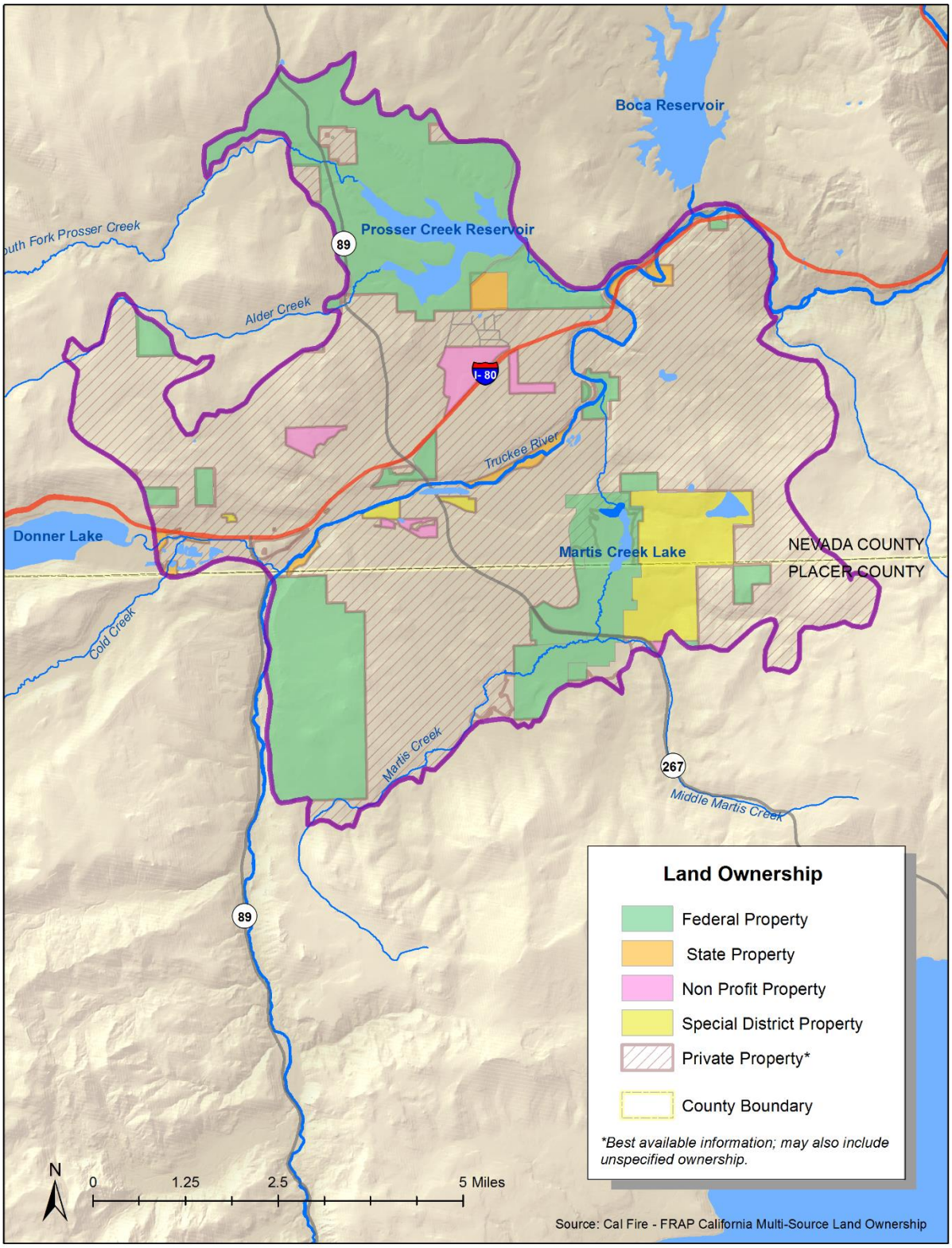


Figure 13: MVGB Well Locations

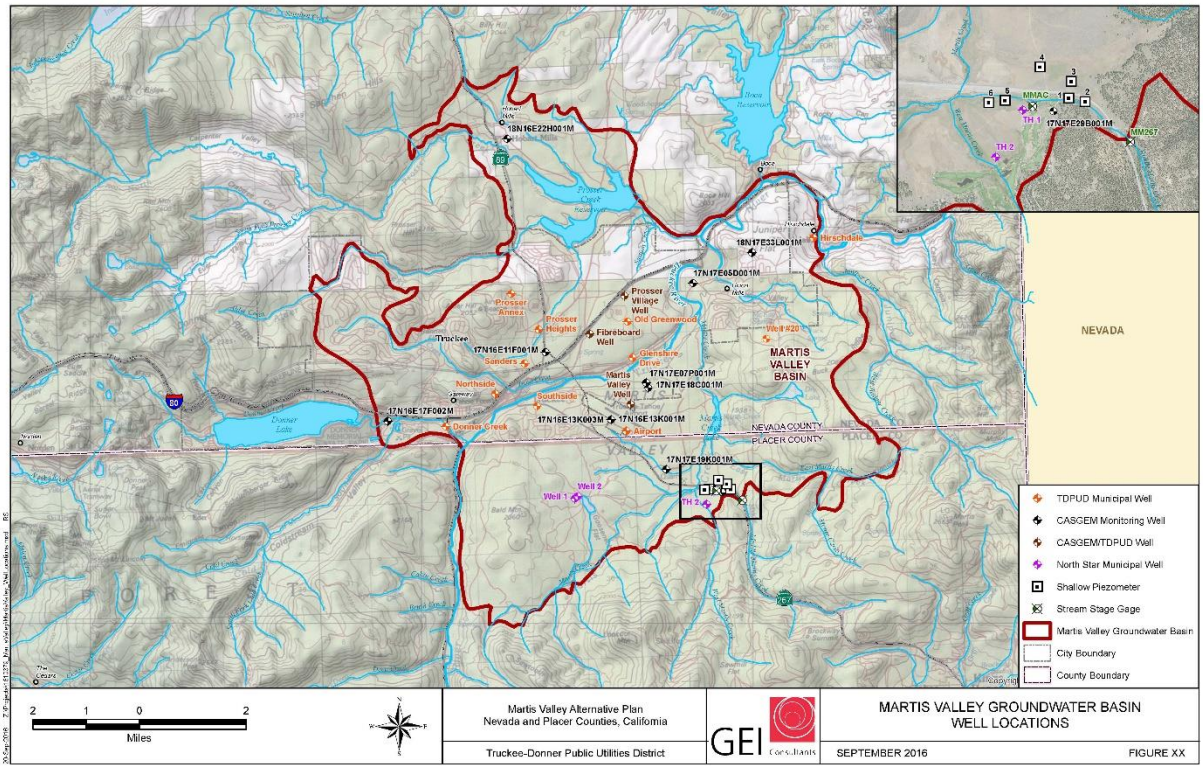
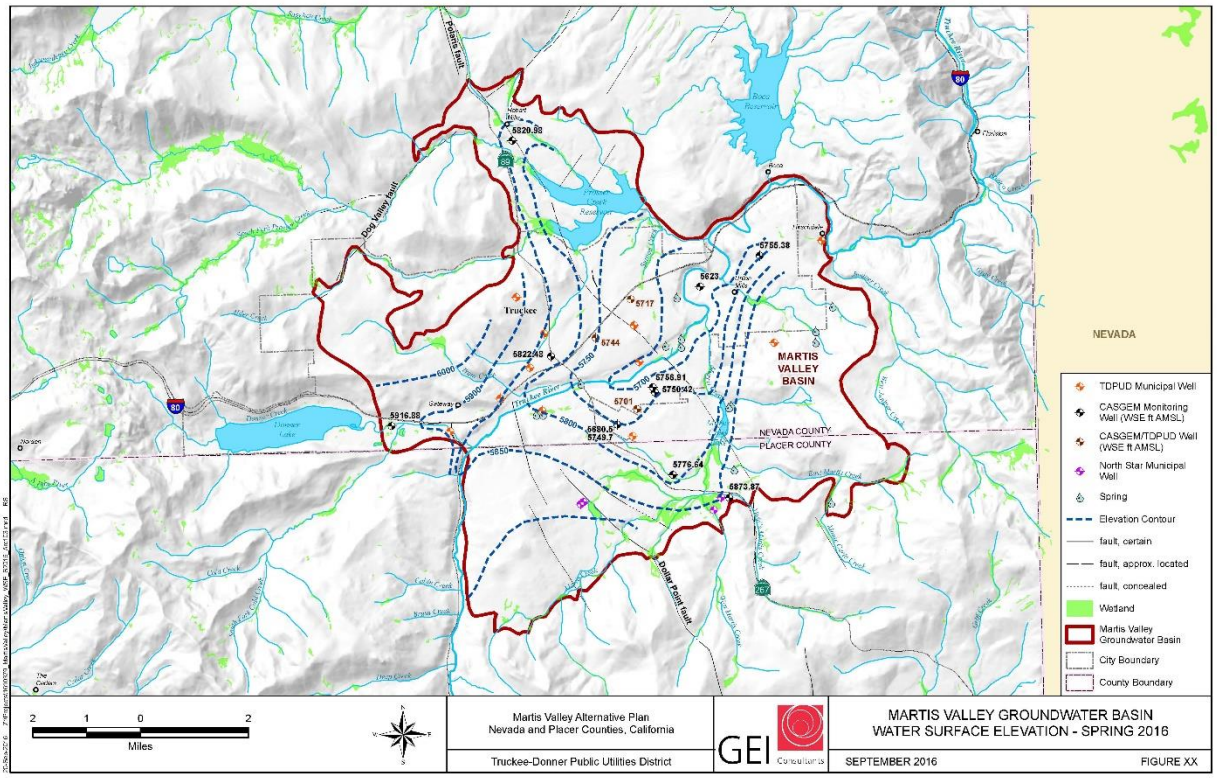


Figure 14: MVGB Water Surface Elevation – spring 2016



Individual hydrographs and supporting analyses for the 14 CASGEM monitoring wells are presented in the GEI Alternative Submittal Hydrogeologic Support document for both fall and spring seasons (GEI, 2016b). **Figure 15** shows long-term groundwater elevation hydrographs for the 14 CASGEM monitoring wells in the MVGB. Groundwater elevations are locally variable in the MVGB both temporally and spatially. These data suggest that local pumping (increases or decreases) or recharge influences likely impact short term groundwater elevation trends. Seasonally, the monitoring wells reflect higher water levels in the spring and lower levels in the fall.

Overall, groundwater levels have been relatively stable in the MVGB, even during the drought of the early 1990s, the wet years of the late 1990s, and recent drought conditions over the past 5 to 9 years. Water levels generally range in elevation from just above 5600 feet above mean sea level (amsl) to just over 6100 feet amsl. Changes in historical pumping and climate (wet and dry years) have affected water level trends in specific time periods, although at the basin scale quantifiable changes appear to be localized. It has been demonstrated in recent reports (GEI 2016a) that gross pumping represents less than 2% of the flows out of the system and closer to 1% when returns from the regional sewage treatment plant are considered.

Groundwater Quality

Groundwater quality in the MVGB is generally of good quality and is monitored as part of the water provider agencies' agreements with the California Department of Public Health. Each agency releases an annual water quality report for their service areas in the MVGB. The USGS carried out groundwater monitoring activities in the MVGB in cooperation with the California State Water Resources Control Board (SWRCB) as part of the California Groundwater Ambient Monitoring and Assessment (GAMA) Program (Fram and others, 2007) and sampled 14 wells in the MVGB for a wide range of constituents during summer 2007. The concentrations of most constituents detected in these samples were below drinking-water thresholds, with two exceptions: a) concentrations of naturally occurring arsenic were above the Maximum Contaminant Level (MCL) in 4 of the 14 wells sampled, and b) manganese concentrations were elevated above the MCL in one well. Arsenic levels above the MCL have also been reported by the TDPUD; however, this issue has been addressed operationally by the TDPUD and drinking water standards are currently being satisfied. Details on MVGB water quality and be found in the TDPUD and NCSD Consumer Confidence Reports (TDPUD CCR, 2015; NCSD CCR, 2015).

Only highly localized areas of contamination above relevant regulatory standards are present at any of the sites where documentation was available by the SWRCB's GeoTracker database or DWR records in the MVGB. None have impacted or are anticipated to impact drinking water supplies. A summary of these locations is presented in GEI's Hydrogeologic Support for Alternative Submittal (2016b).

Change in Groundwater Storage

GEI recently completed an analysis of the water budget of the MVGB and refined the estimate of sustainable yield for the basin (GEI, 2016a). This work was performed to assess the historic and current sustainable management of the basin and also to functionally comply with SGMA regulations addressing responsible governance of the MVGB. **Figure 16** depicts estimates of the annual and cumulative change in groundwater in storage, based on the best available data between approximately 1991 through 2014. The analyses and data used to generate this figure

are further detailed in the above referenced report. The time period included in the study includes both wet periods as well as dry periods and droughts. **Figure 17** presents the interpolated change in water level throughout the bulk of the MVGB from spring 1996 through spring 2016 and shows that groundwater levels have generally risen over the past 20 years throughout the majority of the basin. There is a small area of decrease in groundwater storage in the extreme southern portion of the basin on the order of about 10 feet; however, this reduction has occurred during a period of dry climatic conditions coinciding with pumping at relatively new municipal well locations (**Figure 17**). This area of storage change has already been further investigated by NCSD with a project designed to assess any potential impacts of local pumping on sustainability indicators (Stantec, 2016). The impact of this quantifiable change in storage is limited to the southern edge of the MVGB in a confined portion of the aquifer and does not violate proposed sustainability criteria. The spatial and temporal results of the change in groundwater storage analysis presented in **Figures 15 and 16** are mutually consistent with each other as well as with a basin where pumping has recently declined and the hydrologic water balance is sustainable with respect to groundwater resources.

Land Subsidence

Limited data on land subsidence within the MVGB is available, but no indications of land subsidence have been reported in the documents reviewed as part of the 2013 Martis Valley Groundwater Management Plan (TDPUD, NCSD, PCWA, 2013). There has been no evidence of a magnitude of drawdown that would create significant subsidence locally or regionally. Additionally, there is no evidence of regionally extensive, thick clay or fine-grained units that would be considered compressible if depressurized. Thus, given the basin geology, lack of groundwater depletion and lack of empirical subsidence, this undesirable result is not relevant to the MVGB.

Interconnected Surface Water and Groundwater

Figure 18 identifies the gaining and losing reaches along the major creeks and Truckee River within the MVGB. It is apparent from the figure that the majority of the reaches of the Truckee River and Martis Creek are receiving inflows from groundwater. Groundwater discharges at springs also support perennial flows in Martis Creek tributaries to the east and inflows directly to Martis Reservoir (TDPUD, NCSD, PCWA, 2013). Other Truckee River tributaries, including Cold Creek, Donner Creek, and Trout Creek have also been concluded to be supported by groundwater inflows. These findings are documented in both the GMP and in a study performed by Interflow (Interflow, 2003). During recent drought conditions baseflow in the Truckee River continues to be supported by groundwater inflows in conjunction with releases from other tributary reservoirs when recent discharges from upstream tributary reservoirs are curtailed or shut off (USGS stream gaging Station No. 10338000).

Although the MVGB aquifer and surface water features are interconnected, there has not been evidence of streamflow depletions that have produced undesirable results that are significant and unreasonable. Even during the recent prolonged drought, a substantial quantity of water was contributed to the Truckee River and its tributaries (GEI, 2016b). It is unlikely that groundwater pumping, which comprises less than 2% of the basin water budget, would have any impact on interconnected surface water flows regionally.

Figure 15: Martis Valley Historic Water Surface Elevation

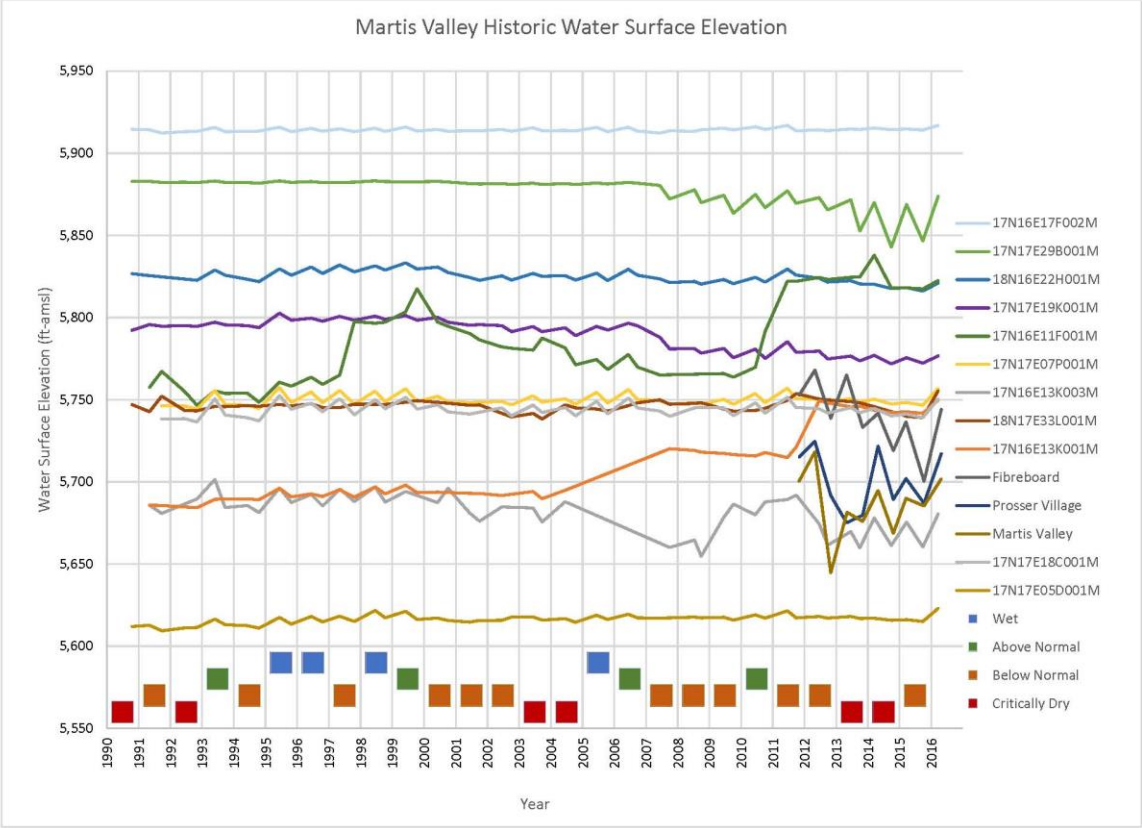


Figure 16: Average Groundwater Levels vs Cumulative Water Budget Change-in-Storage

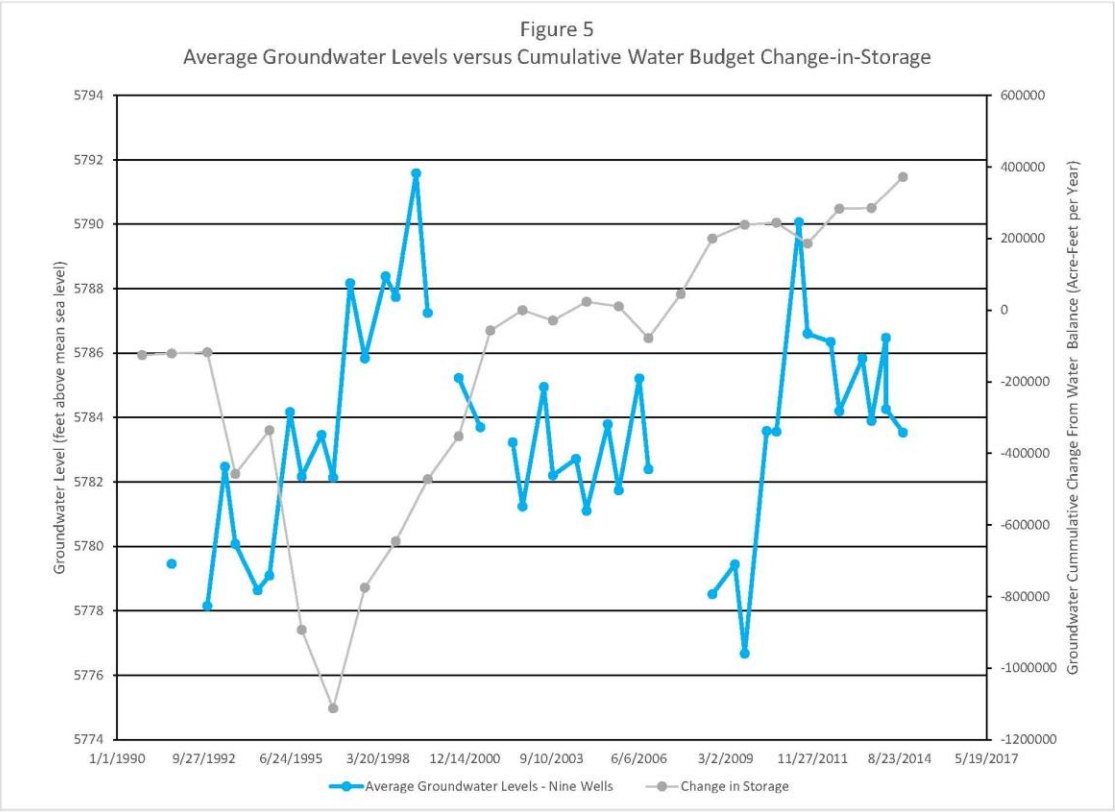


Figure 17: MVGB Change in Groundwater Elevation 1996-2016

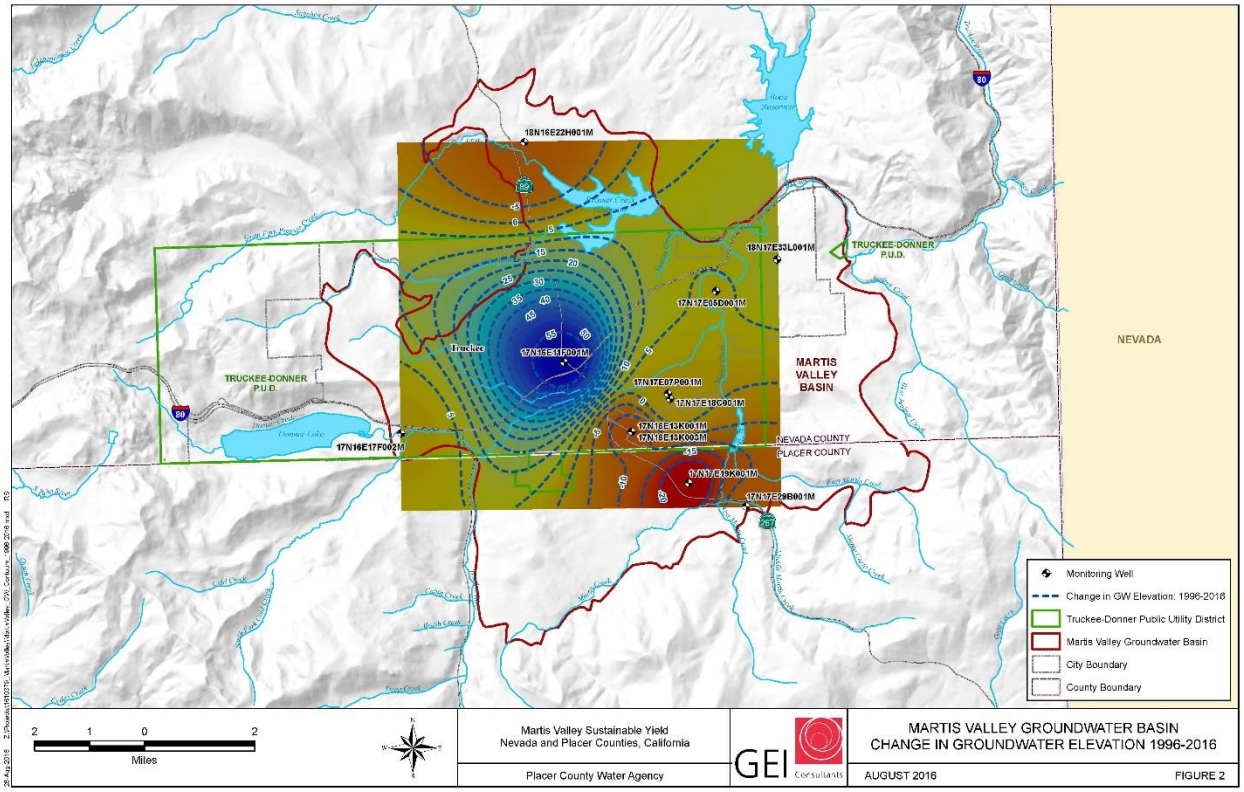
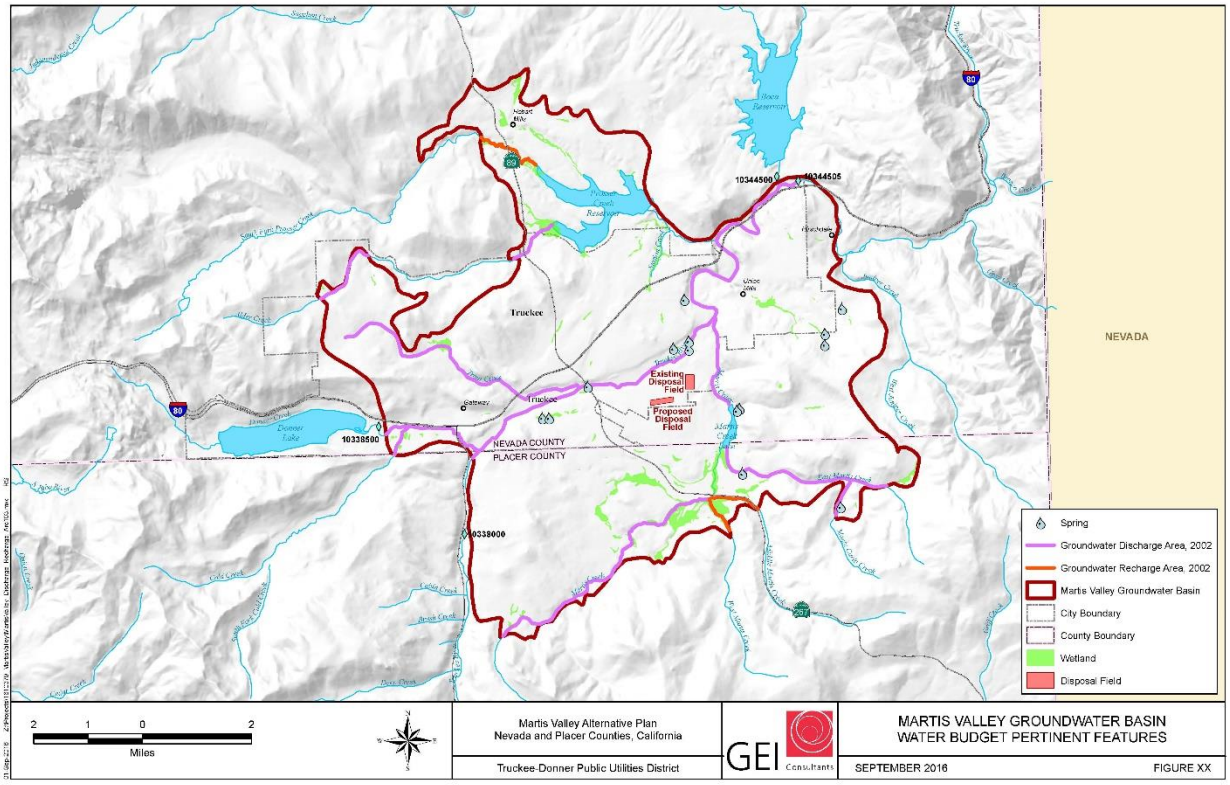


Figure 18: MVGB Water Budget Pertinent Features



4. WATER BUDGET

A water budget analysis was performed for the period 1990 through 2014 to further refine previous estimates of groundwater sustainable yield and to support SGMA compliance (GEI, 2016a). This analysis leveraged previous work, including the 2013 Martis Valley Groundwater Management Plan (TDPUD, NCSD, PCWA, 2013), the 2015 watershed-scale integrated surface water and groundwater flow model by DRI (DRI Rajagopal and other, 2015), additional review of 2015 conditions (GEI, 2016b) and review of numerous previous groundwater studies focusing upon on sustainable yield and recharge within the basin. Each of the calendar years was compared with deviations from mean annual precipitation, allowing assessment of impacts from wet and dry years. The most recent work provides an improved degree of confidence in the estimated MVGB sustainable yield. A more extensive description of the basin water budget and sustainable yield can be found in the two recent reports by GEI (GEI, 2016a; GEI, 2016b)

4.1. Summary of Components

The water budget shows the largest inflow component (about 53 percent) is from the Truckee River, Donner Creek, and Boca Reservoir. The next highest component of inflow is precipitation which was derived from the modeling performed by the Desert Research Institute (DRI Rajagopal and other, 2015). The third largest component is inflow from Prosser Creek, which is not gaged and was only measured once since 1990 (Nimbus, 2001). These five sources account for 92 percent of the total hydrologic inflows to the MVGB.

The water budget shows the largest outflow component (about 80 percent) is along the Truckee River, which is gaged. The next highest component is evapotranspiration (18 percent), which has a higher degree of uncertainty due to using average reference ETo values and rough estimates of acreage. Municipal groundwater pumping averaged about 7,000 AFY and represents less than 2 percent of the total average annual outflow from the basin.

The water budget inflow components are 74 percent quantified with high quality gaging data with respect to the average annual water budget volume. Water budget outflow components are over 80 percent quantified with high quality gaging and metered flows from municipal water supplies. The quantifiable understanding of the average annual hydrologic water budget for the MVGB is high; in part due to the impact of the large fraction of Truckee River flows as well as the fact that the MVGB does not share a boundary with a neighboring groundwater basin and does not have the uncertainty associated with groundwater underflow estimates along basin boundaries.

4.2. Change in Annual Storage

The average annual groundwater change in storage based on the water balance is about 15,000 acre-feet per year (AFY). The annual range in estimates has some uncertainty regarding evapotranspiration and impacts from reservoir releases on groundwater. Future refinements of the water balance will continue to improve the balance between storage and evapotranspiration estimates, which are anticipated to increase this estimate of available water.

4.3. Estimated Sustainable Yield

The average annual groundwater extractions through the water budget study period is on the order of 7,000 AFY. The water budget shows the basin has an average surplus of about 15,000 AFY. Adding the surplus to the existing pumping would suggest the sustainable yield is about 22,000 AFY, well above the estimated future pumping at basin buildout (~13,000 AFY).

4.4. Projected Water Budget

The historic stability of groundwater conditions and extensive previous studies support the use of the sustainable yield estimate as reasonable guidance for assessing future, regional, sustainable groundwater conditions. Future groundwater demands for major groundwater users are estimated in the 2015 TDPUD Urban Water Management Plan (TDPUD UWMP, 2015) to be approximately 13,000 AFY of demand by the end of their planning period; well below the sustainable yield of 22,000 AFY. The terms of TROA also limits total net depletion to 17,600 AFY for the Truckee River basin (as calculated under TROA), also in excess of total projected groundwater demand. DRI's integrated surface water and groundwater modeling study considered the impacts of various future climatic conditions, and they noted that climatic changes likely have a much larger impact on surface water resources than groundwater resources.

5. WATER RESOURCE MONITORING PROGRAMS

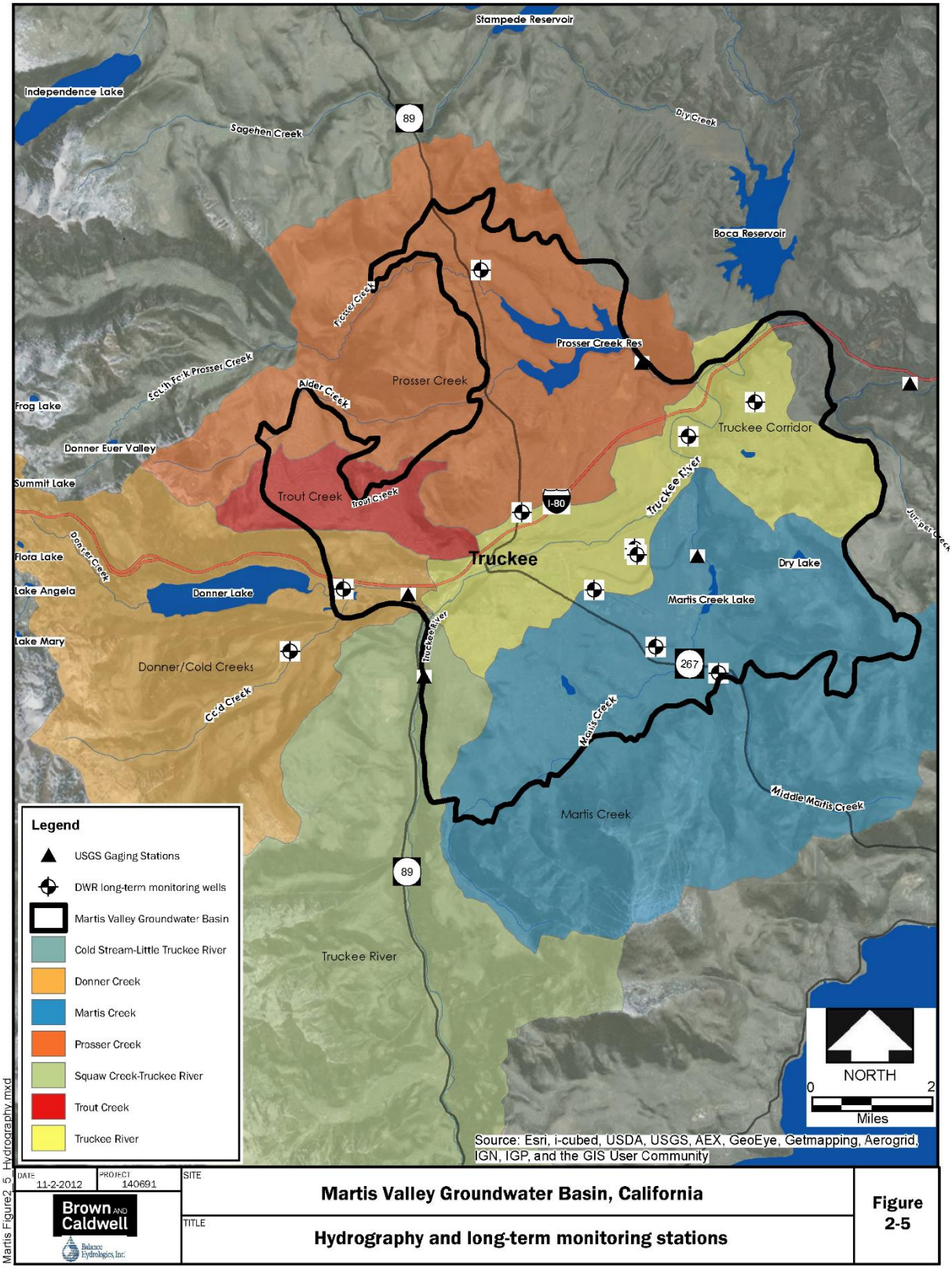
The MVGB is CASGEM compliant and a description of the program is provided in the 2013 Martis Valley Groundwater Management Plan, Appendix D (CASGEM report, revised July 12, 2012; Martis Valley GMP, 2013). **Figure 13** shows the locations of current CASGEM monitoring well locations, as well as an array of shallow piezometers that monitor groundwater conditions at the southern border of the MVGB. Municipal production wells are also shown for reference. Most of the CASGEM wells monitor water levels in the deeper aquifer units, although a few are screened in the overlying alluvium. Additional information regarding monitoring wells in the basin is provided in the Alternative Submittal supporting document by GEI (GEI, 2016b).

A map showing the distribution of groundwater agency and major private production wells was showed previously in **Figure 13** and additional monitoring is also shown in **Figure 14 and 19**. Water supplied by TDPUD and NCSD is routinely tested for water quality and complies with California regulations (TDPUD CCR, 2015; NCSD CCR, 2015). There are no known contamination plumes or special groundwater monitoring programs.

It should be noted that there are a few official and unofficial DWR monitoring wells that have shown some irregular readings. Specifically, there is one monitoring well near Northstar Community Services District and a set of monitoring wells in one location near the Truckee Airport in Truckee Donner Public Utility District's territory. Investigations were performed on both of these monitoring wells and in both cases the irregularities were determined to not be caused by groundwater pumping (Stantec, 2016; GEI, 2016b).

Surface water monitoring consists mostly of stream flow gages on the Truckee River and most of the major or significant tributaries. The array of gages is used to allocate water per TROA. **Figure 19** which was taken from the 2013 Martis Valley Groundwater Management Plan (TDPUD, NCSD, PCWA, 2013) shows some of this monitoring network. Note that the four major tributaries to Martis Creek Lake have continuously operating streamflow gaging stations as part of Placer County's Truckee River Water Quality Monitoring Program (https://www.placer.ca.gov/departments/works/strmwtr/stmwtrmonitoring). **Figure 13**, shown previously, also shows some surface water monitoring in the MVGB. There is also some shallow (5-10 feet deep) groundwater monitoring and streamflow data that has been carried out for the Truckee River Watershed Council as part of their Middle Martis Wetland Restoration Project. These monitoring points are not shown on **Figure 13**.

Figure 19: MVGB Hydrography and Long-Term Monitoring Stations



The only recycled or imported water into the MVGB occurs with the regional sewage treatment plant (Tahoe Truckee Sanitation Agency). The impacts of this operation on groundwater resources is detailed in the water budget prepared by GEI (GEI 2006a).

6. WATER RESOURCE MANAGEMENT PROGRAMS

As stated previously, the MVGB has existing robust programs and policies that direct basin management to ensure continued operation within sustainable yield as defined by SGMA. This includes TROA and the Settlement Act, the 2013 Martis Valley GMP, the 2015 Truckee Donner Public Utility District Urban Water Management Plan (considers all major groundwater users in the MVGB), and the overall entitlement and permitting process to vet new projects. To support this existing local governance, the Local SGMA Agencies are proposing to create a SGMA Management Committee (Appendix D) which will help communicate with local stakeholders, support SGMA compliance activities, provide a forum for the public to participate in the Alternative Submittal, and provide inputs or address concerns.

The MVGB is a healthy, well-managed basin with adequate governance, extensive State and Federal regulation, an educated local community, and a collaborative local approach to stewardship with wide-spread stakeholder involvement.

6.1. Land-Use Elements Related to Basin Management

Town of Truckee

Description of area: The Town of Truckee is located in the central and northern portions of the MVGB. Please see hyperlink to the General Plan (map Pg. 2-9). http://www.townoftruckee.com/home/showdocument?id=1206 Summary of general plan elements above under "role."

Integrated Regional Water Management Plans: The Town of Truckee is an active participant in the Integrated Regional Water Management (IRWM) process by attendance in partnership meetings, as a MOU signatory, and as a participant in subcommittees.

Stormwater Program: http://www.townoftruckee.com/departments/engineering/clean-water-program. The Town of Truckee is a permittee under the Phase II Small Municipal Separate Storm Sewer System (MS4) General Permit (Order No. 2013-0001-DWQ NPDES General Permit No. CAS000004). The Program's goal is to enhance Truckee's quality of life while ensuring that the Town meets or exceeds State legislated mandates involving storm water management and water pollution prevention.

Relationship between land use development and water demands and supply: The Town of Truckee's guiding principles are included in the General Plan (link provided above), which includes our management of projected growth within the planning period (2005 to 2025). The Town of Truckee worked closely with Truckee Donner Public Utility District in their development of the 2015 Urban Water Management Plan (adopted in 2016) for projecting and managing future water demands and comparing this to sustainable supply. As documented in GEI's water budget (GEI 2016a), sustainable yield for the MVGB is estimated at 22,000 AFY (~25,000 AFY when considering returns from the regional sewage treatment plant) as compared to total production in the MVGB as documented in the TDPUD 2015 UWMP) of ~7,000 AFY and build out projection of less than ~13,000 AFY (TDPUD UWMP, 2015).

Well development, management and closure programs: The Town of Truckee does not exercise regulatory authority over private wells in the Town. However, the Town General Plan does discourage the use of private wells to serve new development. Well permits are issued by Nevada County and subject to the provisions of the Truckee River Operating Agreement (TROA).

Nevada County

Description of area: Nevada County is characterized by a large and diverse hydrologic system. Surface water drainage is comprised of three watersheds: The Truckee River basin in the eastern part of the County; and the Yuba River and Bear River basins in the western part of the County. These watersheds supply water to serve portions of both northern California and western Nevada, and many of the creeks and rivers produce hydroelectricity as well.

The MVGB encompasses Nevada and Placer Counties and over 40 percent of the total MVGB acreage is located in Nevada County. The County of Nevada extends from the Sacramento Valley at an elevation of 300 feet to the crest of the Sierra Nevada Mountains at an elevation of 9,143 feet which is the peak of Mount Lola.

The terrain provides a significant watershed which drains into the Bear, Middle and South Yuba and Truckee Rivers. The snow and water which accumulate in the watershed provide significant recreational resources for winter and summer activities such as skiing, boating and fishing.

Integrated Regional Water Management Plans: The County of Nevada works cooperatively with Placer County, Town of Truckee and Truckee Donner Public Utility District in the shared use of the MVGB per the existing Martis Valley Groundwater Management Plan. The 2013 Martis Valley Groundwater Management Plan (TDPUD, PCWA, NCSD, 2013) is the only integrated water management plan for eastern Nevada County.

Western Nevada County Regional water management group (CABY) includes the Consumnes, American, Bear and Yuba Water sheds. CABY is a cooperative agreement between Nevada Irrigation District, Washington County Water District, City of Grass Valley and City of Nevada City, which represents four of the five water service providers for western Nevada County.

Stormwater Program: The County of Nevada General Plan is to preserve the natural environment to include preservation of natural habitats, water resources, forests, mineral resources and scenic qualities of the County. Based upon these principles, the General Plan follows the guidelines set forth in the National Pollution Discharge Elimination System (NPDES) Storm Water Permitting Requirements.

Well development, management and closure programs: The County of Nevada Land Use and Development Code Well Ordinance provides standards for design, construction and operation of individual, small private and public water supplies in Nevada County. The purpose of the Ordinance is to ensure that every well is constructed to not pollute groundwater, ensure that potable water is provided in every building that is issued a plumbing permit and that potable water resources are determined and made available for every developed parcel in Nevada County.

The Ordinance provides the requirements for permitting, construction, repair, and destruction of water wells, monitoring wells and cathodic protection wells.

Placer County

Description of area: The MVGB covers portions of both Nevada and Placer Counties, encompassing approximately 36,500 total acres. Land use patterns consist of a wide range of urban and commercial areas, forest lands, public and private recreational areas and facilities, as well as areas designated for airport use.

Natural features located within the Martis Valley area include the Truckee River, Martis Creek, Dry Lake, Gooseneck Lake, and steep terrain along with forested areas. The 20,000 acre-foot capacity Martis Reservoir, located within the Martis Creek Lake National Recreation Area, was completed in 1971 by the U.S. Army Corps of Engineers to provide flood protection for the Reno-Sparks area. The recreation area extends up the Martis Creek corridor and consists of approximately 1,800 acres. This area provides important environmental values of aesthetic, ground water recharge, and habitat areas that warrant the high level of protection afforded the area in this plan.

The United States Forest Service presently manages approximately 3,093 acres (12 percent of the Plan area) within the Placer County portion of Martis Valley. These areas consist of several small divided land parcels of various sizes, all of which lie within the Tahoe National Forest. These areas offer a wide variety of year round recreational uses, including camping, hiking, biking, fishing, and skiing.

In addition any project plan or other land development activity will be reviewed as to the groundwater issues that relate to the County General Plan and the regional usage to maintain the sustainability of the groundwater basin.

Integrated Regional Water Management Plans: In 1998, the County adopted the Martis Valley Groundwater Management Plan. The goal of this plan is to manage the groundwater resources for the benefit of current and future Martis Valley residents and businesses. The plan facilitates cooperation between Placer and Nevada Counties in the shared use of the aquifers in the Valley. The plan consists of three components: Monitoring of groundwater quality and levels; determination of safe yields; and maximizing groundwater management coordination.

Stormwater Program: Goals 6.E and 6.F of the MVCP (relating to Stormwater Drainage and Flood Protection, respectively) contain several policies that guide the implementation of these goals, requiring conformity with the Placer County Flood Control and Water Conservation District's Stormwater Management Manual and the County's Land Development Manual, Grading Ordinance, and Flood Damage Prevention Ordinance.

Well Development, Management and Closure Programs: The purpose of the *Placer County Well Ordinance* is to protect the health, safety, and general welfare of the people of the County of Placer by ensuring that the groundwater of the County will not be polluted or contaminated. The minimum requirements for construction, repair, and destruction of water wells, cathodic protection wells, and monitoring wells can be found in this document.

To summarize, the general requirements and responsibilities include:
Individual wells are required when wells are the proposed domestic water supply, requiring each lot or parcel to have its own individually drilled well located on the lot or parcel. This does not apply when a County approved public water supply exists.

Water supply is required before construction:

- As to any lot of less than 100,000 square feet no person shall commence construction of a single family residential building thereon until water adequate for domestic use is provided on such lot from a well constructed in compliance with Chapter 19 of the Well Ordinance.
- Water shall be adequate for domestic use if the water, the source, and any storage facility meet all applicable State and County public health standards and meets current requirements of Chapter 19 of the Well Ordinance.
- Abandoned wells: As a condition of a construction or modification permit, any abandoned wells on the property shall be destroyed in accordance with standards provided in the Placer County Well Ordinance.

Groundwater Quality Protection and Management

The two public agencies that serve water in the MVGB (Truckee Donner Public Utility District and Northstar Community Services District) are fully compliant with all State and Federal water quality regulations. There are no know human caused contaminants and the only naturally occurring contaminants are magnesium and arsenic. More detailed information regarding groundwater quality can be found in the annual Consumer Confidence Reports (TDPUD CCR, 2015; NCSD CCR, 2015).

6.2. Recycled Water Production

There is no formal recycled water production in the MVGB other than the regional wastewater treatment plant, Truckee Tahoe Sanitation Agency, which processes sewage from the Martis Valley and surrounding areas along with sewage imported from North Lake Tahoe and the communities of Kings Beach, Tahoe City, Alpine Meadows, and Olympic Valley. This plant was completed in 2009 and employs state of the art technology.

6.3. Conjunctive Use Program

There are no conjunction use programs in the MVGB. MVGB recharge is from natural sources augmented by the Truckee Tahoe Sanitation Agency wastewater treatment plant discharge.

7. NOTICE AND COMMUNICATION

7.1. Description of Groundwater Users

The MVGB is the primary water supply for the Town of Truckee, Northstar Ski Area, and the surrounding areas of the Martis Valley. Groundwater pumping is covered in detail in the Truckee Donner Public Utility District's 2015 Urban Water Management Plan (TDPUD UWMP, 2015) but is dominated by M&I use for the customers of the two public water agencies who operate in the MVGB (Truckee Donner Public Utility District and Northstar Community Services District). There are a small number of large, private wells which use groundwater, primarily, for snowmaking and golf course irrigation along with one aggregate mining operation in the MVGB as well. There are private residential wells in the outlying areas of the MVGB that also use groundwater.

Land ownership consists of a combination of Federal, local agency, non-profit, and private holdings (See previous **Figure 12**). The MVGB and surrounding areas consists of numerous reservoirs constructed and operated by the United State Army Corps of Engineers for flood control but which serve as a major source of water for Reno and the State of Nevada. There are no formally owned Tribal lands in the MVGB.

Beneficial uses consist primarily of M&I, snowmaking, irrigation, and environmental water. The MVGB and surrounding areas are largely residential and/or resort communities including Northstar and Tahoe Donner Ski resorts. The area is very popular with visitors accessing the Truckee-North Tahoe region. The overall watershed consists of the Truckee River and numerous tributaries and ephemeral creeks from the Martis Valley Watershed.

Environmental beneficial uses includes wide-spread meadows, wetlands, and riparian areas along with a variety of wildlife and aquatic species. It should be noted that surface water flows in the Truckee River and all of the major tributaries are not naturally occurring as the flows are regulated by TROA (primarily State of Nevada interests with a very small amount influenced by DWR) and other legal requirements and agreements, along with the United States Army Corps of Engineers (primarily for flood control).

7.2. Public Participation

Decision making process and opportunities for stakeholder input: During the course of preparing this Alternative Submittal, various entities were involved in developing, approving, and adopting the Alternative Submittal. The six Local SGMA Agencies have had dozens of staff meetings to explore and understand the implications of SGMA. This includes numerous meetings with California Department of Water Resources (DWR) staff and other interests involved with SGMA. The governing boards/councils have held over a dozen agendized public meetings and received public input and taken action. A stakeholder outreach process was conducted including a public meeting widely promoted in the community. The six Local SGMA Agencies have collaboratively developed this Alternative Submittal and a Memorandum of Agreement (MOA) to execute this submittal, for on-going compliance, and to formalize a process for the public to participate in SGMA compliance.

List of public meetings related to development of Alternative Submittal in compliance with Sustainable Groundwater Management Act: A list of formally noticed and/or agendized public meetings related to SGMA and the development of an Alternative Submittal is shown in Appendix A.

Comments received:

The key stakeholders and public that are active in the MVGB were generally favorable towards the Alternative Submittal to comply with SGMA. Many of the interested parties participated in the very robust stakeholder process associated with the development of the 2013 Martis Valley Groundwater Management Plan (TDPUD, NCSD, PCWA, 2013) and/or are active in compliance with TROA. It should be noted that, given the very short time-line to develop an Alternative Submittal including formal actions by six public agencies, there will be an on-going process to address all public comments and concerns regarding compliance with SGMA. Local interests will have the opportunity to address DWR directly during the Alternative Submittal review. In addition, the creation of the SGMA Management Committee will allow for an on-going dialog and ability to receive and respond to comments.

7.3. Communications Plan

A communication plan, along with a stakeholder list, was developed to ensure public participation during the development of the Alternative Submittal and following approval. The plan is included in Appendix A.

8. INTRODUCTION TO SUSTAINABLE MANAGEMENT APPROACH

As stated previously, the MVGB has existing robust programs and policies that direct basin management to ensure continued operation within sustainable yield as defined by SGMA. This includes the water use limits under the Truckee River Operating Agreement (TROA) and Settlement Act, the 2013 Martis Valley GMP (TDPUD, NCSD, PCWA, 2013), the 2015 Truckee Donner Public Utility District Urban Water Management Plan (TDPUD UWMP, 2015; considers all major groundwater users in the MVGB), and the overall entitlement and permitting process to vet new projects. To support this existing local governance, the Local SGMA Agencies are proposing to create a SGMA Management Committee (Appendix D) which will help communicate with local stakeholders, support SGMA compliance activities, and provide a forum for the public to participate in the Alternative Submittal and provide inputs or address concerns.

The sustainability goal for the MVGB, as it relates to groundwater management, is to ensure long term quality and availability of groundwater in the MVGB (TDPUD, NCSD, PCWA, 2013). Additionally, the groundwater basin is to be managed in such a manner that no pervasive, significant and unreasonable effects are observed for SGMA related sustainability indicators; in particular, 1) no chronic and unreasonable lowering of groundwater levels and associated reduction in storage and 2) no significant depletions of surface water features that would adversely impact flows or their dependent ecosystems. Although there is currently no evidence of undesirable results related to water quality, seawater intrusion, or land subsidence; these sustainability indicators (SI's) will be tracked via ongoing groundwater and water quality monitoring programs.

The following management objectives have been previously defined for the MVGB and are intended to continue to maintain sustainable groundwater conditions for the next 20 years and beyond.

Basin Management Objectives (BMO's) were developed for the MVGB as a part of the 2013 Martis Valley GMP (TDPUD, NCSD, PCWA, 2013), and are intended to continue to support sustainable groundwater resources, and also address many of the sustainability goal guidelines provided in the SGMA regulations. The previously defined BMO's, which serve as a precursor to SGMA sustainability objectives, are listed below:

- Manage groundwater to maintain established and planned uses.
- Manage groundwater use within the provisions of the Truckee River Operating Agreement (TROA).
- Collaborate and cooperate with groundwater users and stakeholders in the MVGB.
- Protect groundwater quantity and quality.
- Pursue the best available science and technology to inform the decision making process.
- Consider the environment and participate in the stewardship of groundwater resources.

9. MANAGING GROUNDWATER LEVELS

9.1. Groundwater Level Conditions

Figure 15 presents groundwater level monitoring data over time throughout the MVGB as measured at CASGEM wells. This graph shows that overall, groundwater levels have been stable in the MVGB, including during the drought of the early 1990s, the wet years of the late 1990s, and recent drought conditions over the past 5 to 9 years. Water levels generally range in elevation from just above 5600 feet above mean sea level (amsl) to just over 6100 feet amsl. Changes in historical pumping and climate (wet and dry years) have affected water level trends in specific time periods, although at the basin scale any quantifiable changes in water levels appear to be localized.

A groundwater elevation contour map depicting the groundwater table or potentiometric surface associated with spring 2016 for the MVGB aquifer was prepared using data from the CASGEM well monitoring array (**Figure 14**). The groundwater contours reflect flow conditions influenced by regional geology as well as local groundwater recharge and discharge locations such as streams, springs, and wetland areas. Although it is difficult to discern specific pumping centers in the MVGB, it is apparent that groundwater gradients generally steepen approaching the gaining reaches of the Truckee River and Martis Creek. Smaller groundwater gradients have been interpreted in areas further away from major groundwater discharge areas. Although there are areas of the basin that have limited monitoring data, the resolution of monitoring is suitable to constrain groundwater elevations and flow directions in the vicinity of most municipal wells.

Additional information pertaining to groundwater conditions and monitored water levels in the MVGB is provided in the attached report by GEI (2016b) as well as in the 2013 Martis Valley Groundwater Management Plan (TDPUD, NCSD, PCWA, 2013).

9.2. Description of Management Programs

The description of current and proposed management programs has been detailed in previous sections of this report and in the Executive Summary. As stated previously, the MVGB is CASGEM compliant and more details on groundwater monitoring were provided in Section 5 of this report.

9.3. Summary of Chronic Water Level Decline Sustainable Management Criteria

The 14 CASGEM monitoring wells exhibit stable and sustainable groundwater conditions for a time period extending from 1991 to spring 2016 (more than twice the 10-year sustainable timeframe SGMA requirement), with 9 wells exhibiting no significant fluctuation over time, two wells exhibiting substantial increases in water levels, two wells maintaining stable spring water level conditions as well as rebound from drought conditions, and one well trending back towards its historic average water level value in 2016. The 14 monitoring wells cover a significant portion of the basin and include areas both adjacent and distal to surface water features.

The process used to assess potential chronic lowering of groundwater levels involved the direct assessment of CASGEM monitoring well data. Both absolute elevations of groundwater as well as temporal trends were reviewed. Spatial trends and the groundwater flow regime were also analyzed with respect to groundwater recharge and discharge features. Future pumping in the basin at buildout (approximately 13,000 AFY) was also considered relative to average pumping (approximately 7,000 AFY) and the sustainable yield estimate (22,000 AFY).

The qualitative criteria used to define undesirable results for chronic lowering of water levels include:

- Wells either going dry or losing functional pumping capacity;
- Significant and unreasonable effort being required to maintain or deepen production wells;
- Groundwater drawdown sufficient to impact surface water features or groundwater dependent ecosystems to a significant and unreasonable extent; and
- Creation of undesirable results for other sustainability indicators that are directly related to water level elevations.

Minimum threshold and measurable objectives have been established as:

- For wells not immediately adjacent to a primary surface water feature or groundwater dependent ecosystem:
- A Minimum Threshold of spring water levels no more than 20 feet below fall 2015 (baseline) water levels;
- An Interim Threshold of spring water levels no more than 15 feet below fall 2015 (baseline) water levels; and
- A Measureable Objective of spring water levels no more than 10 feet below fall 2015 (baseline) water levels;

For wells adjacent to a primary surface water feature:

- A Minimum Threshold and Measurable Objective of spring water levels no more than 10 feet below fall 2015 (baseline) water levels.

These sustainability criteria are all currently satisfied in the MVGB. They consider previous groundwater seasonal and climate related (multi-year) groundwater fluctuations observed in the MVGB, which range from +/- 10 feet to changes of over +/- 20 feet over longer periods of time at some well locations. They reflect the fact that groundwater level data and sustainable yield estimates reflect that current and past basin management has maintained sustainable conditions.

Additionally, these criteria consider potential impacts of future pumping, variations in groundwater recharge (drought), and potential future changes in spatial pumping distributions. Projected future pumping will also only comprise approximately 3% of the total basin water budget and will not exceed the estimated sustainable yield or water use limits established under the Settlement Act and TROA. All but three DWR monitoring wells must meet minimum thresholds in a given year (or 75% of monitoring wells); allowing for basin groundwater management activities to be performed to address any localized exceedances. An exceedance of the interim threshold will prompt additional study, monitoring, and operational changes to proactively address any conditions that may be managed to prevent further approaching of minimum thresholds. Because these criteria consider the other sustainability indicators, groundwater level measurements can also be used as a proxy for monitoring and preventing other potential other undesirable results (with the exception of water quality).

10. MANAGING BASIN STORAGE

10.1. Basin Storage Conditions

As documented in GEI's Assessment of Sustainable Yield report (GEI, 2016a), the MVGB had a net positive change in storage over the period of 1990-2015; a time period where the region experienced significant growth as well as several multi-year droughts. This Alternative Submittal proposes to use groundwater levels as a proxy for basin storage.

10.2. Description of Management Programs

See Section 9.2.

10.3. Summary of Reduction in Groundwater Storage Sustainable Management Criteria

There is no direct evidence of a significant regional reduction in storage with respect to historic water level trends. Both the water budget and water level assessments show an increase in cumulative basin groundwater storage over time (GEI, 2016b).

The qualitative criteria used to define undesirable results for reduction in groundwater storage include:

- The issues presented for chronic lowering of water levels; and
- Depletion of the aquifer to the extent that other components of the water budget are unreasonably affected.

Measureable objectives and minimum thresholds relate to using water level monitoring data as a proxy, and are identical to those established for potential chronic lowering of groundwater levels. If groundwater levels are maintained at sustainable levels, there should be no adverse conditions related to groundwater storage because the two are directly related.

Additionally the average annual storage depletion over the SGMA review timeframe of 5-years will not exceed the currently estimated annual sustainable yield of approximately 22,000 AFY (GEI, 2016a). Should this sustainable yield value change, it can be updated at the next regulatory review period. The minimum threshold for reduction of groundwater storage should also not violate the TROA maximum total net depletion of 17,600 AFY. This federally mandated constraint includes both groundwater and surface water components; thus, it also covers storage change that may impact surface water features.

11. MANAGING BASIN WATER QUALITY

11.1. Basin Water Quality Conditions

The two public agencies that provide water in the MVGB (Truckee Donner Public Utility District and Northstar Community Services District) are fully compliant with all State and Federal water quality regulations. There are no known human caused contaminants and the only naturally occurring contaminants are magnesium and arsenic. More detailed information regarding groundwater quality can be found in the annual Consumer Confidence Reports (TDPUD CCR, 2015; NCSD CCR, 2015).

11.2. Description of Management Programs

The description of current and proposed management programs has been detailed in previous sections of this report and in the Executive Summary and more details on groundwater monitoring were provided in Section 6 of this report. In addition to the rigorous drinking water quality monitoring programs conducted by Truckee Donner Public Utility District and Northstar Community Services District, there is routine testing of surface water quality by a variety of local, State, and Federal organizations.

11.3. Summary of Degraded Water Quality Sustainable Management Criteria

The qualitative criteria used to define undesirable results from degraded water quality include:

- Drinking water quality violating relevant State and Federal drinking water standards;
- Emerging threats to human health via consumption or contact with contaminated groundwater.

Water quality in the MVGB is generally very good; a discussion of basin water quality is provided in in the supporting report by GEI (GEI, 2016b). There are no contaminant plumes identified within the basin, and naturally occurring constituents of concern, such as arsenic and manganese are being successfully managed. The sustainability criteria established for sustainable groundwater levels and storage depletion also makes it less likely that new groundwater quality undesirable results will be induced by future pumping. The measurable objective and minimum objective for the MVGB is to produce groundwater that meets State and Federal drinking water standards. Water from municipal production wells will continue to be tested for drinking water quality standards (for the purposes of SGMA). Locations are shown on **Figure's 13, 14, and 19**.

12. MANAGING SEAWATER INTRUSION

There are currently no undesirable results from seawater intrusion. None are considered to be likely in the future (GEI, 2016b). Thus, because negative impacts for this sustainability indicator are not present nor are able to occur in the MVGB, the minimum and measurable objective is that seawater is not to be detected in basin production wells. The water supply produced from municipal production wells will continue to be routinely monitored to meet drinking water standards.

13. MANAGING LAND SUBSIDENCE

13.1. Basin Land Subsidence Conditions

There is no evidence or scientific expectation that there has been any land subsidence in the MVGB. This Alternative Submittal proposes to use groundwater levels as a proxy for basin land subsidence. See Section 9.1.

13.2. Description of Management Programs

See Section 9.2

13.3. Summary of Land Subsidence Sustainable Management Criteria

The qualitative criteria used to define undesirable results from land subsidence include any related damage to infrastructure within the MVGB, such as: roadways, canals, pipes, or buildings.

Currently there is no evidence of land surface subsidence in the MVGB. No thick, regionally extensive, compressible, fine grained units exist in the basin. There are only limited and localized areas of limited drawdown that have occurred in the vicinity of municipal pumping wells (in the southern portion of the basin) during a drought period. Thus, no conditions that would cause subsidence have been identified. If established water level and storage sustainability criteria are maintained, it is highly unlikely that impacts from subsidence will be observed in the future. Compliance with the minimum thresholds and measurable objectives for groundwater levels, which will limit aquifer depressurization, is the proxy measurable indicator for subsidence. Additional information regarding basin geology and water level trends is provided by GEI (GEI, 2016b).

14. MANAGING GROUNDWATER DEPLETIONS IMPACTING SURFACE WATER

14.1. Basin Groundwater Depletions Impacting Surface Water Conditions

There is no evidence of significant or unreasonable groundwater depletions impacting surface water. This Alternative Submittal proposes to use groundwater levels as a proxy for impacts to surface water. See Section 9.1.

14.2. Description of Management Programs

See Section 9.2. In addition, the federally-enacted Settlement Act and TROA contain provisions to protect against reductions in surface streamflows from groundwater pumping within the Truckee River Basin, which includes the MVGB. The Settlement Act provides: "all new wells drilled [within the Truckee River basin] after the date of enactment of this title shall be designed to minimize any short-term reductions of surface streamflows to the maximum extent feasible" (Settlement Act, Sec. 204(c)(1)(B).) The TROA identifies well-siting criteria designed to satisfy the Settlement Act, including specified minimum distances from particular surface water bodies and new wells (TROA, Sec. 10.B.2(c).) This Federal program is designed to prevent reductions in surface streamflows from groundwater pumping.

14.3. Summary of Depletions Impacting Surface Water Management Criteria

The qualitative criteria used to define undesirable results from depletions of interconnected surface water include:

- Reduction in flows in the Truckee River, not caused by reservoir operations or drought, such that they violate the conditions of TROA or the Settlement Act;
- Unreasonable harm to local ecosystems due to groundwater pumping; and
- Drying up of creeks or streams that are groundwater dependent due to groundwater pumping (excluding influences of drought or retention of water in reservoirs, which is not within the jurisdiction of the Local SGMA Agencies).

Chronic declines in water levels have not been observed adjacent to the Truckee River or the majority of other gaining surface water reaches in the MVGB (**Figure 17**) (GEI, 2016b). As shown on **Figure 18** groundwater contributes to surface water flows for the majority of surface water reaches in the basin. This contribution continued even through the recent drought conditions and severe reduction in flows to the Truckee River at the Lake Tahoe Dam. Estimated average annual pumping in the basin comprises less than 2% of the total basin water budget and has decreased in recent years (GEI, 2016a). Even at full buildout, total pumping will

only comprise approximately 3% of the average historic water budget. Thus, sufficient water will continue to be available to feed surface water features in the MVGB from a regional perspective. Any localized impacts to interconnected surface water will be detected and monitored via both groundwater monitoring wells (shallow and deep wells) adjacent to gaining reaches, springs, and associated ecosystems. Streamflow measurements at USGS and local streamgages in the basin will continue to be assessed to ensure that groundwater withdrawals are not producing significant and unreasonable impacts in immediately adjacent reaches or regionally.

A recent study by Stantec (Stantec, 2016) assessed potential impacts of local pumping and drought on water levels and surface water flows along the southern boundary of the basin, where modest declines in confined water levels have been observed. The study concluded that it is likely that both drought and pumping have produced a new equilibrium in the local piezometric surface; however, no impacts to surface water have been quantified. Water levels in the southern portion of the basin have rebounded in 2016, but additional monitoring study will be performed to determine if there is any impact from pumping adjacent to interconnected surface water.

Measurable objectives and minimum thresholds for depletions of interconnected surface water include criteria to address both regional and local scale potential impacts. Compliance with the minimum thresholds and measurable objectives for groundwater levels, which allow substantially less water level decline in monitoring wells near key surface water features, will be used as a proxy measurable indicator to prevent both regional and localized impacts (see Summary of Chronic Water Level Decline Sustainable Management Criteria). These criteria are intended to allow for some variation due to drought conditions and changes in pumping rates or spatial distribution while also limiting future declines that could decrease groundwater discharges to surface water. These criteria were set so that future changes in water levels have less risk of turning a gaining reach (groundwater discharge) into a losing reach (groundwater recharge).

Groundwater pumping should also remain below the threshold of the most recent estimate of sustainable yield (~22,000 AFY). The analysis that quantified this estimate considered both surface water and groundwater conditions, and future pumping is not projected to exceed it.

Data from USGS streamgaging stations located where the Truckee River enters and exits the MVGB as well as from tributaries to the Truckee River in the interior of the basin, will be used in conjunction with other components of the basin water budget to estimate the annual contribution of groundwater flow to Truckee River flow leaving the basin (GEI, 2016a). The estimate of groundwater contribution to the flow exiting the basin in the Truckee River should remain positive.

Recently installed shallow monitoring wells along the southern portion of the basin or adjacent to other surface water features in the basin should show no evidence of groundwater pumping causing a change of conditions from gaining to losing conditions. This analysis is to be performed where evidence exists of the potential of groundwater impacts due to declines in water levels of monitoring wells screened in the deeper portions of the aquifer (which reflect any impacts due to groundwater pumping at depth). A change in gaining or losing surface water conditions can be quantified by shallow water levels dropping below the measured stage of surface water flow or land surface elevation (in the case of springs, seeps, or wetlands), and remaining below that level even during spring conditions. If drought conditions or other changes in basin hydrology (such as curtailed releases from reservoirs) are deemed to cause the

change in surface water depletion, then the sustainability criteria is not violated for that localized area. Additionally, the area where depletions are occurring that causes a change from gaining to losing conditions must be found to be sensitive and directly experiencing significant and unreasonable negative impacts to the local ecosystem due to pumping.

15. CONCLUSION

GEI Consultant's Hydrogeologic Support for Alternative Submittal stamped report (GEI, 2016b) demonstrates that the MVGB has operated within sustainable yield for at least 25-years (Spring, 1991 to Spring, 2016). GEI Consultants also participated in the development of this Alternative Submittal. This robust scientific understanding, along with the significant governance and management that exists today in the MVGB and as documented in this Alternative Submittal, justifies that DWR find that the elements of this Alternative Submittal are functionally equivalent to the relevant elements of a GSP under the SGMA regulations and is substantially compliant with SGMA.

PART THREE: APPENDICES

Appendix A – SGMA Outreach Plan
Appendix B - GEI Hydrogeologic Support for Alternative Submittal Report (GEI, 2016b)
Appendix C - GEI Seal page
Appendix D – Local SGMA Agencies MOA
Appendix E – Local SGMA Agencies Adopted Resolutions for Alternative Submittal

Appendix A – SGMA Outreach Plan

APPENDIX A: OUTREACH PLAN

ATERNATIVE SUBMITTAL FOR SGMA COMPLIANCE

MARTIS VALLEY GROUNDWATER BASIN LOCAL SGMA AGENCIES

INTRODUCTION

The partnership of Placer County, Nevada County, Town of Truckee, Northstar Community Services District, Truckee Donner Public Utility District and Placer County Water Agency, referred to as Local SGMA Agencies, are working together on an Alternative Submittal to the California Department of Water Resources (DWR) for the Martis Valley Groundwater Basin (MVGB) in accordance with the Sustainable Groundwater Management Act (SGMA) that was signed into law by the Governor of the State of California on September 16, 2014 and went into effect on January 1, 2015. The main reasons for Alternative Submittal to DWR are:

- Comply with the SGMA by demonstrating at least 10 years of sustainable operation of the MVGB;
- Continue stewardship of the MVGB to ensure operation within sustainable yield and appropriate governance and management;
- Minimize costs by efficient and effective local management of the MVGB while avoiding unnecessary and expensive regulatory cost; and
- Continue to manage the groundwater basin at a local level.

PUBLIC OUTREACH OBJECTIVE

The objectives of the public outreach plan are to increase stakeholders' and public awareness of the intent comply with SGMA with an Alternative Submittal, to educate them about the requirements of SGMA, to encourage participation, and promote public acceptance and support.

GENERAL OUTREACH

Outreach to the stakeholders and public will be accomplished as outlined below:

- **Stakeholder Meetings** – A list of potential stakeholders has been developed (See Attachment A). The stakeholders on the list were identified because of their past interest in the groundwater basin management activities and the guidelines implementing SGMA. The stakeholder outreach will cover a brief review of the past development of the Martis Valley Groundwater Management Plan, the requirements of SGMA, and the intent to comply with SGMA with an Alternative Submittal.
- **SGMA Alternative Submittal Public Meeting** – The SGMA Local Agencies held a publically noticed meeting to educate the general public about the requirements of SGMA and the intent to comply with an Alternative Submittal on Monday, November

14th at 5:30PM at the Truckee Donner Public Utility District at 11570 Donner Pass Road. This meeting was attended by GEI Consultants, registered geologist licensed by California, who reviewed the extensive scientific data on the MVGB and certified that it has operated within sustainable yield for at least 25-years.

- **Local SGMA Agencies Public Board/Council Meetings** – The Local SGMA Agencies have had over a dozen agendized public meetings in preparation of the Alternative Submittal. A list of these meetings can be found in Appendix B. Each of the six Local SGMA Agencies will individually take a joint-resolution to their governing agency for approval of the Alternative Submittal along with approving a Memorandum of Agreement (MOA) amongst the six Local SGMA Agencies to comply with SGMA with an Alternative Submittal and for on-going regulatory compliance should the submittal be approved by DWR. All of the meetings will be open to the public and promoted per standard Board/Council public meeting protocols.
- **Other Meetings** – The partnership agencies will schedule and attend other meetings on an as needed basis of parties that have an interest in the beneficial uses and users of the groundwater basin to provide an opportunity to educate them on SGMA and submittal of an Alternate Plan. An example of this type of meetings would be the presentation to the Truckee River Basin Working Group – a long-time stakeholder group of California and Nevada interests in the Truckee River Basin - which meets monthly to discuss issues related to the Truckee River Operating Agreement (TROA).
- **General Outreach** – Each of the six SGMA Local Agencies will use their normal communications and outreach protocols to educate their Board/Council, staff, and constituents regarding the requirements of SGMA and the intent to us an Alternative Submittal to comply.

Stakeholder Organization:	Description:
United States Bureau of Reclamation	Federal agency active in the Truckee River Basin study and Truckee River Operating Agreement (TROA)
United States Department of Agriculture Forest Service, Truckee District	Federal agency with local land interest and active in TROA
United States Army Core of Engineers	Federal agency who owns and operates numerous reservoirs and flood control dams in an around the MVGB
Truckee River Operating Agreement	Federal settlement agreement and act of the U.S. Congress that allocated water rights from the Truckee River Basin for both California and Nevada interests
California Department of Water Resources – TROA Division	State agency with responsibility for implementing TROA and scheduling water releases of reservoirs
California Department of Water Resource – Central Region	State agency with regulatory responsibility
California Department of Fish and Game	State agency with regulatory responsibilities and active in TROA
Lahontan Regional Water Quality Control Board	Regional board for state agency with primary responsibility for protection of water quality
Truckee River Basin Working Group	Local stakeholder group containing stakeholders from the Truckee River Basin from both California and Nevada
Tahoe Truckee Sanitation Agency	Regional sewage treatment plant located in the MVGB
Truckee Donner Recreation and Park District	Local Special District with land ownership and who operates a golf course and private irrigation well in the MVGB
Tahoe Donner Home Owners Association	Local HOA and land owner who operates a golf course and private irrigation well plus a ski resort in the Martis Valley watershed
Schaffer's Mill Home Owners Association	Local HOA and land owner who operates a golf course and private irrigation well in the MVGB
Martis Camp Home Owners Association	Local HOA and land owner who operates a golf course and private irrigation well in the MVGB
Lahontan Community Association	Local HOA and land owner who operates a golf course and private irrigation well in the MVGB
Vail Resorts	Owner and operator of Northstar Ski Resort in the Martis Valley watershed
Mountain Area Preservation	Local environmental non-profit active in environmental stewardship and land-use planning
Truckee River Watershed Council	Local environmental non-profit active in Martis Valley watershed protection and restoration
Truckee Donner Land Trust	Local environmental non-profit and land owner active in land preservation in the Martis Valley watershed

Attachment A: MVGB Stakeholder List

Agency or Group:	Meeting Date:	Description:
Truckee Donner Public Utility District	August 3, 2016	Board meeting Action Item to award GEI Consultants contract
Truckee Donner Public Utility District	November 2, 2016	Board meeting Information Item with update on SGMA
Truckee Donner Public Utility District	December 7, 2016	Board meeting Action Item to approve MOA and Alternative Submittal
Northstar Community Services District	November 16, 2016	Board meeting Action Item to approve MOA and review draft Alternative Submittal
Northstar Community Services District	December 21, 2016	Board meeting Action Item to approve Alternative Submittal
Placer County Water Agency	September 15, 2016	Board meeting Information Item with update on SGMA
Placer County Water Agency	November 17, 2016	Board meeting Action Item to approve MOA and Alternative Submittal
Town of Truckee	October 11, 2016	Council meeting Information Item with update on SGMA
Town of Truckee	December 13, 2016	Council meeting Action Item to approve MOA and Alternative Submittal
Nevada County	August 16, 2016	Board meeting Information Item on SGMA and Letter of Support for Alternative Submittal
Nevada County	November 8, 2016	Board meeting Action Item to approve MOA
Nevada County	December 13, 2016	Board meeting Action Item to approve Alternative Submittal
Placer County	August 9, 2016	Board meeting Information Item with update on SGMA
Placer County	December 6, 2016	Board meeting Action Item to approve MOA and Alternative Submittal
Truckee River Basin Working Group	November 2, 2016	Presentation on SGMA Alternative Submittal to Truckee River Basin stakeholders
General Public Meeting	November 14, 2016	Presentation on SGMA Alternative Submittal to public

Attachment B: Public Meetings on SGMA Alternative Submittal

Appendix B - GEI SGMA 10-Year Sustainability Report

Appendix C - GEI Seal page

TRUCKEE DONNER PUBLIC UTILITY DISTRICT
ALTERNATIVE SUBMITTAL HYDROGEOLOGIC SUPPORT STUDY
MARTIS VALLEY GROUNDWATER BASIN

Certifications and Seals

This report and analysis was prepared by the following GEI Consultants Inc. professional geologists.

Report sections contained herein pertaining to the geology, hydrogeologic conceptual model, hydrology, water quality, groundwater levels, water budget and sustainability criteria based on available data and were prepared by:

Date: 11/08/2016

R. Brent Cain
Senior Geologist

Date: 11/08/16

Richard W. Shatz
Principal Hydrogeologist
California Certified Hydrogeologist
C.H.G. No. 84

Appendix D – Local SGMA Agencies MOA

MEMORANDUM OF AGREEMENT FOR AN ALTERNATIVE TO A GROUNDWATER SUSTAINABILITY PLAN UNDER THE SUSTAINABLE GROUNDWATER MANAGEMENT ACT FOR MARTIS VALLEY GROUNDWATER BASIN

This Memorandum of Agreement ("MOA") for preparing and implementing an alternative to a groundwater sustainability plan for the Martis Valley Groundwater Basin pursuant to the Sustainable Groundwater Management Act is entered into by and among the County of Nevada, the County of Placer, the Town of Truckee, the Truckee Donner Public Utility District, the Placer County Water Agency and the Northstar Community Services District, collectively referred to as the "Parties" or each individually as a "Party." This MOA will take effect as of the date on which all of the Parties have approved this MOA.

RECITALS

A. The Sustainable Groundwater Management Act ("SGMA"), as amended and codified in California Water Code §§ 10720, *et seq*., applies to all groundwater basins in the State of California.

B. The legislative intent of SGMA is to provide sustainable management of groundwater basins, to enhance local management of groundwater, to establish minimum standards for the sustainable groundwater management, and to provide local groundwater agencies with the authority and the technical and financial assistance necessary to sustainably manage groundwater.

C. SGMA requires "sustainable groundwater management" for all groundwater basins or sub-basins that are designated as high- or medium-priority basins by the Department of Water Resources ("Department") in the Department's report entitled "California's Groundwater: Bulletin 118" ("Bulletin 118").

D. The Martis Valley Groundwater Basin ("MVGB") is located in both Nevada County and Placer County and has been designated by the Department as Basin No. 6-67 and is currently designated a medium-priority basin.

E. SGMA defines a "local agency" as a local public agency that has water supply, water management, or land use responsibilities within a groundwater basin. All Parties to this MOA fall within SGMA's definition of "local agency" for the MVGB.

F. SGMA provides that any local agency or combination of local agencies overlying a groundwater basin may decide to become a groundwater sustainability agency ("GSA") for that basin. The decision whether to become a GSA is discretionary under SGMA.

G. To meet the sustainability goal established under SGMA, SGMA requires that either: (1) a groundwater sustainability plan ("GSP") be developed and implemented for

each medium- or high-priority basin by a groundwater sustainability agency; OR (2) if a local agency or combination of local agencies believes that an alternative to a GSP satisfies the objectives of SGMA, the local agency may submit the alternative to the Department for evaluation and assessment no later than January 1, 2017, and every five years thereafter.

H. Under SGMA, the California Environmental Quality Act (Public Resources Code Section 21000 *et. seq.*) does not apply to the preparation and adoption of a GSP or an alternative to a GSP. *See* Wat. Code § 10728.6.

I. Under SGMA, an alternative to a GSP is any of the following: 1) an existing groundwater management plan; or 2) management pursuant to an adjudication action; or 3) an analysis of basin conditions that demonstrates that the basin has operated within its sustainable yield over a period of at least 10 years.

J. The Parties are interested in collectively developing and implementing a single alternative to a groundwater sustainability plan to sustainably manage the MVGB pursuant to Water Code section 10733.6.

K. All Parties have concluded that the MVGB is a good candidate for an alternative to a GSP because the Truckee River Operating Agreement and existing Federal law restrict and monitor groundwater use in the region, there is an existing groundwater management plan for the MVGB, and the available data shows that the basin has been operated within its sustainable yield over a period of at least 10 years.

L. All Parties have concluded that the MVGB can be effectively managed under an alternative to a GSP to achieve SGMA's objectives and sustainability goal.

M. Pursuant to SGMA, the Department has adopted regulations for evaluating groundwater sustainability plans and for evaluating alternatives to groundwater sustainability plans ("Regulations"). *See* 23 C.C.R. §§ 350 et seq.

N. The Regulations require that the entity that submits an alternative to a GSP shall demonstrate that the alternative applies to the entire basin and satisfies the requirements for an alternative under Water Code Section 10733.6.

O. The Regulations require that the entity submitting an alternative to a GSP must explain how the elements of the alternative are functionally equivalent to the elements of a groundwater sustainability plan required by Articles 5 and 7 of Subchapter 2 of Chapter 1.5, Division 2 of Title 23 of the California Code of Regulations.

P. The Regulations govern the Department's review of alternatives to GSPs and the Department's assessment of an approved alternative at least every five years. The Regulations provide that the Department's assessment of an alternative shall include a determination of the status of the alternative as one of the following: (1) "approved;" or (2) "incomplete;" or (3) disapproved as "inadequate."

Q. The Parties wish to implement SGMA within the MVGB by entering into this MOA to develop an alternative to a GSP for the MVGB ("Alternative"), and if that Alternative is approved by the Department, to implement the Alternative pursuant to this MOA.

R. If the submitted Alternative is approved by the Department, the Parties anticipate it could result in a collective savings of approximately $1,000,000 over the costs of forming a GSA and developing and implementing a GSP.

S. The Parties intend this MOA to outline the rights, benefits and obligations of the Parties for the development and implementation of the Alternative for the MVGB, with the goal of managing the MVGB effectively, efficiently, fairly and at the lowest reasonable cost and in compliance with SGMA.

THEREFORE, in consideration of the mutual promises set forth below and to implement the goals described above, the Parties agree as follows:

AGREEMENT

Section 1
Declaration of Parties

The Parties hereby elect to develop an Alternative for the Martis Valley Groundwater Basin pursuant to Water Code § 10733.6. The MVGB has been designated a medium-priority basin by the Department and therefore is subject to SGMA's requirements for development of either a groundwater sustainability plan or an alternative to a groundwater sustainability plan. The Parties have concluded that current designation of the MVGB as a medium-priority basin may be unwarranted but the Parties acknowledge that the current designation subjects the basin to certain requirements under the Sustainable Groundwater Management Act. The Parties shall submit the Alternative to the Department no later than January 1, 2017. If the Alternative submitted to the Department is approved by the Department, each Party to the MOA shall implement the Alternative so long as this MOA, as may be amended, remains in effect, and the MVGB continues to be required, by law, to be subject to either an alternative to a GSP or a GSP.

Section 2
Purpose

The primary purposes of this MOA are to (i) establish an agreement between the Parties regarding compliance with SGMA for the MVGB; (ii) develop and submit an Alternative for the MVGB; and (iii) facilitate a cooperative and ongoing working relationship among the Parties to develop and implement an Alternative to sustainably manage the MVGB that complies with the requirements set forth in SGMA. This MOA is intended to provide the management framework for the Alternative and define the roles and obligations of the Parties relative to the development of the Alternative, and if the submitted Alternative is approved by the Department, regarding the implementation of the Alternative.

Section 3
Definitions

The following terms, whether used in the singular or plural, and when used with initial capitalization, shall have the meanings specified herein.

"Administering Manager" is the employee or authorized representative appointed pursuant to Section 6 of this MOA.

"Alternative" is the alternative to a groundwater sustainability plan for the Martis Valley Groundwater Basin that the Parties to this MOA are seeking to develop and have approved by the Department and implement pursuant to Water Code section 10733.6 of SGMA and the applicable Regulations.

"Budget" refers to the budget that has been approved annually by the governing body for each and every Party, for the shared costs of implementation of the Alternative.

"Bulletin 118" means the California Department of Water Resources' report entitled "California's Groundwater: Bulletin 118".

"Confidential Information" includes copyrights, trade secrets, technical information, technology, and any and all other confidential and/or proprietary information provided by one Party to any other Party pursuant to this Memorandum of Agreement, marked or stamped "Confidential Information" on each page of document, relating to, among other items, the research, development, products, processes, business plans, customers, finances, suppliers, and personnel data or related to the business of each Party. Confidential Information shall also include all "non-public personal information" as defined in Title V of the Gramm-Leach-Bliley Act (15 U.S. C. Section 6801, et seq.) and the implementing regulations thereunder (collectively, the "GLB Act"), as the same may be amended from time to time. Confidential Information does not include any information: (1) A Party knew before another Party provided it; (2) which has become publicly known through no wrongful act of Party; (3) a Party developed independently, as evidenced by appropriate documentation; or, (4) of which Party becomes aware from any third person not bound by non-disclosure obligations to Party and with the lawful right to disclose such information. Notwithstanding the foregoing, specific information will not be

deemed to be within the foregoing exceptions merely because it is contained within more general information otherwise subject to such exceptions.

"Department" means the California Department of Water Resources.

"Fiscal Year" means the accounting period of July 1-June 30 for purposes of this MOA.

"Governing Body" or "Legislative Body" means the legislative bodies, i.e. governing boards, of the Parties to this MOA.

"Groundwater" has the same meaning as defined in Section 10721(g) of the California Water Code.

"GSP" refers to a groundwater sustainability plan, and has the same meaning as defined in Section 10721(k) of the California Water Code.

"Martis Valley Groundwater Basin" or "MVGB" means the groundwater basin that is the subject of this MOA, as designated as Basin No. 6-67 by the Department of Water Resources in Bulletin 118.

"Management Committee" refers to the working group created pursuant to Section 5 of this MOA.

"Memorandum of Agreement" or "MOA" means this agreement, as may be amended.

"Parties" refers collectively to the County of Nevada, the County of Placer, the Town of Truckee, the Truckee Donner Public Utility District, the Placer County Water Agency and the Northstar Community Services District. "Party" refers to any of the Parties individually.

"Regulations" refer to the Department of Water Resources' regulations regarding groundwater management and groundwater sustainability plans, California Code of Regulations Title 23, Division 2, Chapter 1.5, Subchapter 2, as may be amended.

"SGMA" refers to the Sustainable Groundwater Management Act, California Water Code Section 10720 *et seq*., as may be amended.

Section 4
Parties' Jurisdictional Boundaries and Legal Authorities

A. MVGB Boundaries and Parties' Jurisdictional Boundaries. A map of the boundaries of the MVGB and each Party's jurisdictional boundaries relative to the MVGB are depicted on the map attached as Exhibit "A".

B. Legal Authorities. Each Party has legal authority within its jurisdictional boundaries to implement the Alternative for the MVGB, consistent with the Party's respective statutory and constitutional powers.

Section 5
MVGB Management Committee Membership, Meetings and Duties

A. Committee Membership.

1. The Parties hereby establish the Martis Valley Groundwater Basin Management Committee ("Management Committee").
2. Each Party shall appoint a member to the Management Committee. Each Party shall appoint an alternate to serve in the member's capacity when the member is absent or unavailable.
3. Each Management Committee member's compensation, if any, and reimbursement of expenses for their service on the Management Committee, will the responsibility of the appointing Party.
4. Each Management Committee member and alternate shall serve at the pleasure of the appointing Party, and may be removed from the Management Committee by the appointing Party at any time. A Party must notify all other Parties and the Administering Manager in writing if that Party has removed and/or replaced their Management Committee member or alternate.

B. Committee Meetings.

1. The Management Committee will establish a meeting schedule for regular meetings to discuss Alternative implementation activities, the status of the MVGB, and ongoing work progress. All meetings of the Management Committee shall be conducted in compliance with the Ralph M. Brown Act, as applicable. *See* Gov. Code §§ 54950 et seq.
2. At a minimum, the Management Committee shall meet quarterly, at a time and location to be determined by the Management Committee members. The Management Committee members may agree to conduct such meetings by teleconference, at the convenience of the Committee members.
3. At a minimum, the Management Committee will hold at least one meeting annually, that is publicly noticed by each Party, and at which members of the public are provided with an opportunity to provide public comment regarding management of the MVGB.
4. The Management Committee may establish and schedule meetings of subcommittees as they see fit to coordinate development and implementation of the Alternative.
5. Attendance at the Management Committee meetings may be augmented to include staff or consultants to ensure that the appropriate expertise is available.
6. Each Management Committee member will report to the Party that they represent as needed to provide status updates and discuss matters covered in the MOA.

C. Duties.

1. Implementation of the Alternative. The Management Committee shall support execution and implementation of the Alternative. The Management Committee may coordinate activities to the extent those activities are within the scope of activities described in the Alternative approved by each Party's Governing Body.
2. Coordination with the Administering Manager. The Management Committee will strive to coordinate with the Administering Manager regarding implementation of the MOA and management of the MVGB. The Management Committee members may, by the mutual agreement of all of the Management Committee members, direct the Administering Manager to take actions in furtherance of this MOA and the Alternative, consistent with the terms of this MOA and the approved Budget.
3. Discussion of Management Activities. Each Management Committee member will strive to identify and discuss with the Management Committee any activities or plans of the Party they represent that relate to or may affect management the MVGB or implementation of this MOA.
4. Work Plan for the Alternative. After execution of this MOA, the Management Committee, in coordination with the Administering Manager, shall develop a plan, consistent with the approved Budget, that describes the anticipated tasks to be performed under this MOA and a schedule for performing said tasks. Each Management Committee member shall be responsible for sharing the work plan with their appointing Party, for the Party's review and consideration.
5. Annual Reports. The Management Committee shall be responsible, in coordination with the Administering Manager, for overseeing the development and submittal of annual reports to the Department regarding the MVGB, to the extent such annual reports are required by law.
6. Periodic Evaluation and Re-Submittal of Alternative. The Management Committee shall be responsible, in coordination with the Administering Manager, for overseeing the development and submittal of a periodic evaluation and re-submittal of the Alternative to the Department at least every five years, to the extent such periodic evaluations are required by law.
7. Correspondence by the Parties or Members of the Public Regarding the MVGB. The Management Committee shall review and consider any correspondence received by a Party or by the Management Committee regarding the MVGB or management of the MVGB, including complaints or comments submitted by a Party or the public. The Management Committee shall discuss any relevant correspondence received regarding the MVGB at a Management Committee meeting.

Section 6
Appointment and Actions of the Administering Manager

A. Appointment of Administering Manager. The Parties hereby initially appoint the Public Information & Conservation Manager of the Truckee Donner Public Utility District, to be the Administering Manager under this MOA. The Parties may change the Administering Manager from time to time by agreement of a majority of the Parties or by agreement of a majority of the Management Committee members. The Party that employs the Administering Manager may elect, upon at least thirty (30) days' notice to the other Parties, to withdraw the services of the Administering Manager.

B. Compensation for Administering Manager. The Party that employs the Administering Manager shall initially be responsible for the compensation, if any, of the Administering Manager. If the Party that employs the Administering Manager determines that the role of Administering Manager is too burdensome on the Party, the Party may elect, upon at least thirty (30) days' notice to the other Parties, to withdraw the services of the Administering Manager, or to request that the time of the Administering Manager for services under this MOA is included in the costs for administration of the Alternative within the approved Budget, and is equally shared by all of the Parties. Upon such notice, the Parties or the Management Committee may appoint a new Administering Manager employed by another Party. If no Party agrees to provide the services of an Administering Manager at the Party's own cost, then the costs for the Administering Manager's time in administration of the Alternative will be shared equally by all of the Parties, within the approved Budget.

C. Actions. The Administering Manager shall have the authority to take the following actions to the extent they are consistent with the approved Budget, the terms of this MOA, and the adopted Alternative:

1. To serve as the point of contact with the Department regarding the Alternative;
2. To submit the approved Alternative to the Department;
3. To submit annual reports regarding implementation of the Alternative and the status of the MVGB to the Department, to the extent required by law;
4. To submit a periodic assessment and re-submit the Alternative to the Department at least every five (5) years, to the extent required by law;
5. To determine and pay the costs incurred under this MOA consistent with the terms of this MOA and the approved Budget and to either: (1) receive and deposit funds into a designated Alterative Plan account, separate of the general fund; or (2) to pay for costs up-front and seek reimbursement from the other Parties for such costs paid by the employing Party of Administering Manager;
6. To make and enter into contracts reasonably necessary to carry out the purpose of this MOA, consistent with the MOA, the approved Budget, and the Alternative.

Any contractual obligations will be pursuant to the policies and procedures of the Procurement and Purchasing regulations of local, state, and federal laws, as applicable to the contracting Party;

7. To contract for legal and/or consulting services, and to employ such other persons or employees, as reasonably necessary for the purpose of this MOA as approved by the Management Committee;
8. To correspond and collaborate regarding the Alternative and management of the MVGB, in furtherance of the Alternative and this MOA;
9. To prepare and distribute invoices to the Parties for the costs and expenses incurred to administer and implement the approved Budget, the terms of this MOA, and the adopted Alternative;
10. To take other actions authorized or directed by the Management Committee, consistent with the terms of this MOA and the approved Budget.

D. Coordination with the Management Committee. The Administering Manager shall coordinate with the Management Committee regarding actions taken regarding implementation of the Alternative. The Administering Manager shall provide quarterly written reports to the Management Committee, providing a summary of the actions taken by the Administering Manager during the preceding quarter regarding implementation of the Alternative.

Section 7
Responsibilities, Cooperation and Communication of the Parties

A. General Responsibilities of the Parties.

1. The Parties will work jointly to meet the objectives of this MOA.
2. The Parties will appoint members and alternates to the Management Committee.
3. The Parties are each responsible for implementing the Alternative in their respective jurisdictional management areas. If any management areas overlap, the Parties agree to be jointly responsible for implementing the Alternative in the overlapping management area(s). Said joint responsibility is not intended nor shall it be construed to delegate or restrict any of the powers or authorities of the Parties.
4. The Parties will coordinate all activities related to fulfillment of the objectives of this MOA. The Parties shall cooperate with one another and work as efficiently as possible in the pursuit of all activities and decisions described in this MOA and those that are not particularly described but which are related to or arise out of the activities that are described.
5. The Parties will participate in public outreach and stakeholder engagement in the development and implementation of the Alternative.
6. The Parties will provide expertise, guidance and data on those matters for which they have specific expertise or authority, as needed to carry out the objectives of this MOA.

7. The Parties will provide support to the Alternative by contributing staff time, information, and facilities within available resources at the sole financial responsibility of each Party, except as otherwise provided for under this MOA.
8. The Parties will be equally responsible for the shared costs and expenses incurred consistent with the approved Budget, the terms of this MOA, and the adopted Alternative, and pay the invoices for such costs and expenses to the Party who employs the Administering Manager within sixty (60) days of receipt of each such invoice.

B. Information to the Management Committee Regarding Actions Related to the MVGB. Each Party will strive to provide the Management Committee with information regarding activities or plans of the Party, or within the Party's jurisdiction, that relate to or may affect management of the MVGB, the Alternative, or implementation of this MOA.

C. Annual Reports. Each Party will provide relevant data and information, available to the Party and requested by the Management Committee or the Administering Manager, for preparation of any necessary annual report to the Department regarding the MVGB.

D. Periodic Evaluation and Re-Submittal of Alternative. Each Party will provide relevant data **and** information, available to the Party and requested by the Management Committee or the Administering Manager, for preparation of any necessary periodic evaluation and re-submittal of the Alternative to the Department.

E. Ongoing Cooperation. The Parties acknowledge that activities under this MOA will require the frequent interaction between them in order to explore opportunities and resolve issues that arise. The Parties shall work cooperatively and in good faith. The goal of the Parties shall be to preserve flexibility with respect to the implementation of the Alternative in order to maximize the mutual benefits of that Alternative to the Parties.

F. Interagency Communication. To provide for consistent and effective communication between Parties, each Party agrees to designate their Management Committee member as their central point of contact on matters relating to this MOA. Additional representatives may be appointed to serve as point of contact on specific actions or issues.

Section 8
Dispute Resolution

If a dispute arises between any of the Parties regarding this MOA, implementation of the Alternative, or management of the MVGB, the Parties in dispute shall bring any such dispute to the Management Committee and seek resolution of the dispute. If the Management Committee is unable to identify a mutually agreeable resolution of the dispute, the disputing Parties shall participate in mediation, prior to proceeding with any formal legal action against another Party regarding this MOA or the Alternative.

Section 9
Approval of Alternative

A. Governing Body Approval of Alternative. The Parties agree that the Alternative to be submitted to the Department by January 1, 2017, will be considered for approval by each Party's Governing Body prior to that date. The Parties agree that the Alternative will be submitted to the Department after the Alternative is approved by each and every Party's Governing Body.

B. Governing Body Consideration of Revised Alternative, If Necessary Based on Department Review. The Parties acknowledge that the Department may determine that the Alternative is incomplete and that Alternative may need to be revised to address any deficiencies identified by the Department. The Parties agree that if the Alternative is revised to address any such deficiencies, consistent with Section 10.C below, the revised Alternative will be considered for approval by each Party's Governing Body. The Parties agree that any revised Alternative will be submitted to the Department after the revised Alternative is approved by each and every Party's Governing Body.

Section 10
MOA Funding

A. Party's Individual Costs. Each Party shall bear its individual costs related to attendance at meetings, including transportation, payment of staff time and costs and any technical support that the Party wishes to individually utilize regarding preparation and implementation of the Alternative.

B. Costs of Preparing the Alternative. The contractual cost of preparing the Alternative to be submitted by January 1, 2017, is up to $32,000. The costs for preparing the Alternative, up to $32,000, will be shared as follows: (1) the County of Placer agrees to be responsible for $5,000; (2) the Town of Truckee agrees to be responsible for $5,000; and (3) the Truckee Donner Public Utility District, Placer County Water Agency, and Northstar Community Services District, agree to be equally responsible for the remainder of the costs.

C. Potential Costs to Address Identified Deficiencies with the Alternative. The Parties acknowledge that the Department may determine that the Alternative is incomplete and that there may be additional costs associated with addressing any deficiencies identified by the Department. The Parties agree that if the Department identifies deficiencies with the Alternative, the Management Committee will be responsible for developing a cost estimate for addressing the identified deficiencies. The Parties agree that if the cost estimate for addressing the identified deficiencies is less than $30,000, then the Parties agree to be equally responsible for the costs to address the deficiencies identified by the Department. The Parties agree that if the cost estimate to address identified deficiencies exceeds $30,000, then the Management Committee will be responsible for developing a recommendation regarding how to proceed with compliance with the Sustainable Groundwater Management Act and each Party's Governing Body will have the opportunity to make a decision regarding how to proceed with SGMA compliance.

D. Budgets and Cost Sharing for Alternative Implementation.

1. Cost Sharing for Implementation. The Parties acknowledge that there will be costs associated with implementation of the Alternative that should be shared by the Parties. These costs include but are not limited to, costs incurred in hiring outside consultants or attorneys related to preparation of annual reports and periodic assessments for the Alternative. The Parties agree that for these shared implementation costs, each Party will be equally responsible for the shared implementation costs, consistent with the approved Budget.

2. Budget for January 1, 2017 – June 30, 2018 Period. The total Budget for shared implementation costs for the period following submittal of the Alternative to the Department by January 1, 2017 through the Fiscal Year ending June 30, 2018 (Fiscal Year 2017) is $30,000.00. Each of the six Parties agrees to contribute $5,000.00 for Fiscal Year 2017 within sixty (60) days following receipt of invoice from the Administering Manager. The Budget for Fiscal Year 2017 is intended to cover any shared implementation costs, including but not limited to consultant or legal costs, associated with preparation of the annual implementation report submitted to DWR, if required.

3. Future Budgets. At least ninety (90) days prior to the commencement of each Fiscal Year, the Management Committee in coordination with the Administering Manager, shall prepare a proposed annual budget for shared implementation of the Alternative, including retention of all necessary consultants, annual reporting, and periodic assessments of the Alternative. The Parties agree that once this proposed budget is completed, each Party may need to return to its respective Governing Body for funding authorization. The Parties agree to do so within sixty (60) days of receipt of the proposed budget. After adoption of the Budget by each and every Party's governing body, the Administering Manager will be authorized to make expenditures on behalf of the Parties consistent with the approved Budget.

4. Expenditures and Funding. The Party employing the Administering Manager shall be the depository and shall have custody of all funds received pursuant to this MOA, from whatever source. The Party employing Administering Manager shall maintain a separate accounting of all the costs and expenditures made for the shared costs of implementation of the Alternative, consistent with the approved Budget, and may either: (1) seek reimbursement from the Parties for their share of those costs, if paid in advance by the Party employing the Administering Manager; or (2) may request that the Parties provide funds for the budgeted shared costs of implementation and deposit those funds in an account separate from the employing Party's general fund. The Parties shall provide funding consistent with approved Budget within sixty (60 days) of receipt of an invoice or request for funding from the Administering Manager. Each and every Party has the right to request and receive an accounting of deposits and expenditures within ten (10) days of providing a written request to the Administering Manager.

Section 11
Notice

All notices, statements, or payments related to implementing the objectives of this MOA shall be deemed to have been duly given if given in writing and either delivered personally or mailed by first-class, registered or certified mail as follows:

If notice if given to the County of Nevada, it shall be given at the following address:

County of Nevada
Environmental Health Department
Attn: Director of Environmental Health
950 Maidu Avenue
Nevada City, CA 95959

If notice is given to the County of Placer, it shall be given at the following address:

County of Placer
Placer County Public Works and Facilities
Attn: Director of Public Works and Facilities
3091 County Center Drive, Suite 220
Auburn, CA 95603

If notice is given to the Town of Truckee, it shall be given at the following address:

Town of Truckee
Attn: Town Manager
10183 Truckee Airport Rd
Truckee, CA 96161

If notice is given to the Truckee Donner Public Utility District, it shall be given at the following address:

Truckee Donner Public Utility District
Attn: General Manager
11570 Donner Pass Road
Truckee, CA 96161

If notice is given to the Placer County Water Agency, it shall be given at the following address:

Placer County Water Agency
Attn: General Manager
PO Box 6570
Auburn, CA 95604

If notice is given to the Northstar Community Services District, it shall be given at the following address:

Northstar Community Services District
Attn: General Manager
900 Northstar Drive
Truckee, CA 96161

If notice or payment is given to the Administering Manger, it shall be given at the following address:

Truckee Donner Public Utility District
Attn: Public Information & Conservation Manager
11570 Donner Pass Road
Truckee, CA 96161

Section 12
Confidentiality

The Parties hereto acknowledge that information obtained about the other Parties pursuant to this MOA may include information that the providing Party deems to be confidential and proprietary information (hereinafter the "Confidential Information"). If a Party provides information that the Party has labeled as "Confidential Information," then each Party agrees not to use the Confidential Information except in accordance with the terms of this MOA, and not to disclose the Confidential Information to any third parties without the prior

written consent of the other Party, consistent with Section 13 below, except as required by law. These obligations of confidentiality shall survive the termination of this MOA.

Section 13
Compliance with Public Records Law

All information relating to this MOA will be disclosed upon receipt of a request for disclosure pursuant to the California Public Records Act; provided, however, that if any information is set apart and clearly marked "Confidential Information" pursuant to Section 12, above when it is provided to any Party, the Party subject to the request shall give notice to other Parties of any request for disclosure of such information. The Party who provided the Confidential Information that is the subject of the request shall then have five (5) days from the date it receives such notice to determine if it wants the Confidential Information to be withheld from disclosure and to notify the Party who received the request of that determination. If the Party who provided the Confidential Information requests that the information be withheld from disclosure, then that Party shall be responsible for the defense of, and complete indemnification and reimbursement for all costs (including plaintiff's attorney fees) incurred by any Party in any legal action to compel the disclosure of such information under the California Public Records Act. The Party who originally labeled the information as "Confidential Information" shall have sole responsibility for defense of the actual "Confidential" designation of such information.

The Parties understand and agree than any failure by a Party to respond to the notice provided by any other Party, and/or to enter into an agreement with any or all other Parties, in accordance with this Section, shall constitute a complete waiver by said Party of any rights regarding the information designated "Confidential" by the Party, and the other Parties shall disclose such information pursuant to applicable procedures required by the Public Records Act.

Section 14
Books of Record and Audit Provision

The Administering Manager shall maintain the records of the expenses incurred, costs paid, and funds received relating to this MOA for a period of five (5) years after the generation or receipt of said records by the Administering Manager. Said records shall be maintained in sufficient detail to establish the accuracy of charges and corresponding calculations regarding shared costs pursuant to this MOA. The Administering Manager shall permit any Party to audit said records. Said audit may be conducted on Administering Manager's premises, upon fifteen (15) days' notice to the Administering Manager.

Section 15
General Provisions

A. Termination.

1. This MOA may be terminated upon unanimous written consent of all the Parties. No Party or its Governing Body may unilaterally terminate this MOA.
2. This MOA is terminated if: (a) the Department determines that the Alternative is incomplete and the Parties decide not to submit a new or revised Alternative to the Department for approval, consistent with Sections 9.B and 10.C, above; OR (b) the Department determines that the Alternative is inadequate and the Department disapproves the Alternative; OR (c) if, pursuant to law, the MVGB is no longer required to be subject to either an alternative to a GSP or a GSP.
3. If this MOA is terminated, each Party shall remain obligated to pay its share of expenses and obligations as outlined in the approved Budget, incurred or accrued up to the date the MOA is terminated.

B. Withdrawal.

1. A Party may unilaterally withdraw from this MOA without causing or requiring termination of the MOA, effective upon thirty (30) days written notice to the remaining Parties' designated addresses as listed in Section 11. A Party that has withdrawn from this MOA shall remain obligated to pay its share of expenses and obligations as outlined in the approved Budget and incurred or accrued up to the date the Party provided notice of withdrawal.
2. Before providing notice of withdrawal from this MOA, each Party agrees to bring any disputes related to this MOA to the Management Committee in writing. If the Management Committee is unable to resolve the dispute, each Party agrees to participate in mediation prior to providing notice of withdrawal from this MOA.

C. Amendment. This MOA may be amended only by a subsequent writing, approved and signed by all Parties. Approval from a Party is valid only after the Party's Governing Body approves the amendment at a public meeting.

D. Assignment. No rights and obligations of any of the Parties under this MOA may be assigned or delegated without the express prior written consent of all the other Parties and any attempt to assign or delegate such rights or obligations without such consent shall be null and void.

E. Indemnification. No Party, nor any officer or employee of a Party, or the Administering Manager, shall be responsible for any damage or liability occurring by reason of anything done or omitted to be done by another Party or the Administering Manager under or in connection with this MOA. The Parties further agree, pursuant to California Government Code section 895.4, that each Party shall

fully indemnify and hold harmless each other Party and its agents, officers, employees and contractors from and against all claims, damages, losses, judgments, liabilities, expenses, and other costs, including litigation costs and attorney fees, arising out of, resulting from, or in connection with any work delegated to or action taken or omitted to be taken by such Party or the Administering Manager under this MOA.

F. Term of MOA. The term of this MOA is indefinite and will cease existence only upon termination of the MOA pursuant to subsection A.

G. Signatories' Authority. The signatories to this MOA represent that they have the authority to execute this MOA and to bind the Party on whose behalf they execute this MOA.

H. Choice of Law. This MOA is made in the State of California, under the Constitution and laws of such State and is to be so construed.

I. Severability. If any provision of this MOA is determined to be invalid or unenforceable, the remaining provisions will remain in force and unaffected to the fullest extent permitted by law and regulation.

J. Entire Agreement. This MOA constitutes the sole, entire, integrated and exclusive agreement between the Parties regarding the contents herein. Any other contracts, agreements, terms, understanding, promises or representations not expressly set forth or referenced in this writing are null and void and of no force and effect.

K. Construction and Interpretation. The Parties agree and acknowledge that this MOA has been developed through negotiation, and that each Party has had a full and fair opportunity to revise the terms of this MOA. Consequently, the normal rule of construction that any ambiguities are to be resolved against the drafting party shall not apply in construing or interpreting this MOA.

L. Execution in Counterparts. The Parties intend to execute this MOA in counterparts and on separate signature pages.

COUNTY OF NEVADA

DATED: _____ BY: _____

Title:
Name:

COUNTY OF PLACER

DATED: _____ BY: _____

Title:
Name:

CITY OF TRUCKEE

DATED: _____ BY: _____

Title:
Name:

TRUCKEE DONNER PUBLIC UTILITY DISTRICT

DATED: _____ BY: _____

Title:
Name:

PLACER COUNTY WATER AGENCY

DATED: _____ BY: _____

Title:
Name:

NORTHSTAR COMMUNITY SERVICES DISTRICT

DATED: _____ BY: _____

Title:
Name:

Appendix E – Local SGMA Agencies Resolutions for Alternative Submittal